AGENDA

CITY COUNCIL - REGULAR MEETING
CITY OF BANNING, CALIFORNIA

February 25, 2025
5:00 p.m.
In Chambers

Council Chambers
99 E. Ramsey Street
Banning, CA 92220

The following information comprises the agenda for the regular meeting of the Banning City Council, a joint meeting of the City Council and Banning Utility Authority, and the Banning City Council sitting in its capacity as the Banning Successor Agency Board.

This meeting is being held via Zoom so that members of the public may observe and participate in this meeting electronically. If you participate in this meeting via Zoom, you are agreeing to abide by the City's Zoom Community Standards for Public Meetings (provided in full on the last page of the agenda). *Esta reunión se lleva a cabo en la Cámara y a través de Video/Teleconferencia en Zoom para que los miembros del público puedan observar y participar en esta reunión de manera electrónica. Si elige participar en esta reunión a través de Zoom, acepta cumplir con los Estándares comunitarios de Zoom para reuniones públicas de la ciudad (que se proporcionan en su totalidad en la última página de la agenda).*

To observe and participate in the online video portion of the meeting through your personal computer or device, follow this link:
https://us02web.zoom.us/j/82012644588?pwd=RwqtJC8xehLDKZvr3LEKOf9u8uP2pt.1

Dial in: +1 669 900 9128

Meeting ID: 820 1264 4588
Password: 92220

Per the City of Banning Manual of Procedural Guidelines, matters taken up by the Council before 10 p.m. may be concluded, but no new matters shall be taken up except upon a majority vote of the council members present and voting. Such an extension shall only be valid for one hour and each hour thereafter shall require a renewed action for the meeting to continue.

1. CALL TO ORDER

1.1 **INVOCATION**
Performed by Pastor Nate Rodriguez of Infinite Center

1.2 **PLEDGE OF ALLEGIANCE**

1.3 **ROLL CALL**

2. AGENDA APPROVAL

2.1 **AGENDA APPROVAL**

3. PRESENTATIONS

3.1 Proclamation - Procurement Month
Recommendation: Proclaim March Procurement Month.

4. REPORT ON CLOSED SESSION

John Pinkney, Interim City Attorney

5. PUBLIC COMMENTS, CORRESPONDENCE, APPOINTMENTS, AND REPORTS

5.1 **PUBLIC COMMENTS**

5.2 **CORRESPONDENCE**

5.3 **APPOINTMENTS**

5.4 **CITY COUNCIL COMMITTEE REPORTS**

5.5 **CITY MANAGER'S REPORT**

5.6 **CITY ATTORNEY'S REPORT**

5.7 **CITY TREASURER'S REPORT**

6. CONSENT ITEMS

The following items have been recommended for approval and will be acted upon simultaneously, unless a member of the City Council/Banning Utility Authority/Successor Agency Board wishes to remove an item for separate consideration.

6.1 Approval of the Meeting Minutes for the February 11, 2025 City Council Meetings
Recommendation: Approve the minutes of the February 118, 2025 City Council Meetings.

6.2 Receive and File Accounts Payable and Payroll Warrants Issued in the Month of January 2025.
Recommendation: Receive and file the warrants for period ending January 31, 2025, per California Government Code Section 37208.

6.3 Receive and File Cash and Investments Report for the Month of January 2025
Recommendation: That City Council receive and file Cash and Investment Report for January 2025, in accordance with California Government Code 53646.

6.4 Receipts, Disbursements, & Fund Balances Reporting for Fiscal Year 2024-25, Periods 7, January 2025
Recommendation: Receive and file.

6.5 Receive and File Police Department Statistics for the Month of January 2025
Recommendation: Receive and file.

6.6 Receive and File Fire Protection Services Statistics for the Month of January 2025
Recommendation: Receive and file.

6.7 Public Works Capital Improvement Project Tracking List
Recommendation: Receive and file.

6.8 Receive and File Code Enforcement Statistics for the Month of January 2025

Recommendation: Receive and file.

6.9 Receive and File Contracts Approved Under the City Manager's Signature Authority and Inventory Reports for January 2025
Recommendation: Receive and file.

6.10 City Council Travel and Conference Expense Report Year to Date Through January 2025
Recommendation: Receive and file.

6.11 Community Cleanup and Compost Giveaway Event Update
Recommendation: This is informational only; receive and file report.

6.12 Consideration of Resolution 2025-24, Approving the Acceptance of the Distribution of the FY23 State Homeland Security Program (SHSP) Grant Award of $161,383
Recommendation: Adopt Resolution 2025-24.

6.13 Consideration of Resolution 2025-25, Approving an Agreement with Pyro Spectaculars, Inc. for Production of the Fourth of July Aerial Fireworks Display
Recommendation: Adopt Resolution 2025-25.

6.14 Consideration of Resolution 2025-26, Approving a Short-Term Rental Agreement with Orlando Cobos for Use of City-Owned Property located at 150 East Ramsey Street in Banning for a series of Acrobatic Shows
Recommendation: Adopt Resolution 2025-26.

6.15 Consideration of Resolution 2025-27, Approving Final Tract Maps 37389-4, 37389-6, and 37389 and Release the Maps for Recordation; Authorize Staff to Sign the Subdivision Improvement Agreements and Final Tract Maps; Accept Faithful Performance and Labor Bonds for Public Improvements
Recommendation: Adopt Resolution 2025-27.

6.16 Consideration of Resolution 2025-28, Approving a Sole Source Contract with Rick Engineering, Inc. for the Continuation of the Design of Ramsey Street Water Main Replacement in the Amount of $156,224.03
Recommendation: Adopt Resolution 2025-28.

7. PUBLIC HEARINGS

8. REPORTS OF OFFICERS

8.1 Consideration of Resolution 2025-29, Approving a Construction Agreement with Pacific Hydrotech Corporation for Project No. 2022-07W "M-12A Well Site Equipping and Improvements" in the Amount of $2,440,900 and Establishing a Total Project Budget of $2,684,990 and Rejecting All Other Bids
Recommendation: Adopt Resolution 2025-29.

8.2 Consideration of Resolution 2025-30, Awarding a Progressive Design-Build Agreement for Phase 1 to AECOM Lyles JV for Project No. 2022-01W "Wastewater Treatment Plant and Recycled Water Upgrades" in the Amount of $3,998,627, and Approving a 10% Contingency for a Total Project Budget of $4,398,490
Recommendation: Adopt Resolution 2025-30.

9. DISCUSSION ITEMS

9.1 Zencity Contract Presentation, Discussion and Direction
Recommendation: Provide direction to City Manager regarding Zencity contract.

9.2 Discussion of Next Steps in the Banning Electric Utility Financial Recovery Plan

Recommendation: City Council previously approved a strategy for recovering the Banning Electric Utility's (BEU) cash balance including a 13.9% rate increase each November 2024 and 2025, and $6 million debt issuance to replenish cash balance ("BEU Financial Recovery Plan"). Staff requests a discussion and confirmation of the next step (debt issuance) or alternative Council direction.

9.3 Discussion of a City of Banning Fire Hydrant Maintenance Program

Recommendation: Discuss the City's current fire hydrant maintenance activities and the development of a formal Fire Hydrant Maintenance Program.

10. ANNOUNCEMENTS FROM CITY COUNCIL MEMBERS

11. ITEMS FOR FUTURE AGENDAS

11.1 **NEW ITEMS**

11.2 **EXISTING ITEMS**

1. Update on Community Garden (Flynn)
2. Zencity Contract (Flynn)
3. Developer Presentation on Sunset Crossroads Project (Flynn)
4. Contracting Animal Services (Flynn)
5. Code Enforcement Department Citations Process (Miller)
6. Emergency Preparedness (Barrington)
7. Changes to the Banning Procedural Manual (Royce)
8. Report on Fire Hydrant Maintenance Program (Flynn)
9. Tree Trimming at Repplier Park and near Sun Lakes (Flynn)
10. Discussion of Reversing Decision to Close Airport (Royce)
11. Proposition 47 Workshop (Flynn)
12. Agenda Pagination, Reading Public Correspondence Aloud (Flynn)

12. ADJOURNMENT

Next Regular Meeting – March 11, 2025

Zoom Community Standards for Public Meetings

By participating in this meeting on Zoom, you are agreeing to abide by the City of Banning's Community Standards for Public Meetings. Zoom attendees that fail to adhere to these standards may be removed from the meeting room.

- Your microphone must remain on mute, and you may only unmute your microphone when/if you are recognized by the Mayor.
- Your camera must be turned off unless/until you are recognized by the Mayor.
- To indicate a desire to make Public Comment, you must use the Raise Hand function. The Mayor will not recognize those who have not used the Raise Hand function.
- Public Comment from Zoom attendees will immediately follow in-person comment from members of the public in Council Chambers.
- If you fail to adhere to these community guidelines, **you may be removed** for disrupting the meeting occurring in Council Chambers. You may rejoin the meeting but may be removed for each violation of these community standards.
- The chat function will be disabled for all City Council meetings on Zoom.

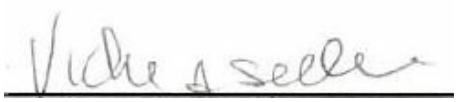
Estándares comunitarios de Zoom para Reuniones Públicas

Al participar en esta reunión en Zoom, usted acepta cumplir con los Estándares Comunitarios para Reuniones Públicas de la ciudad de Banning. Los que atienden por Zoom que no cumplan con estos estándares pueden ser retirados de la sala de reuniones.

- Su micrófono debe permanecer en silencio, y solo puede reactivar su micrófono cuando / si es reconocido por el alcalde.
- Su cámara debe estar apagada a menos que sea reconocido por el alcalde.
- Para indicar el deseo de hacer un Comentario Público, debe utilizar la función Levantar la mano. El alcalde no reconocerá a quienes no hayan utilizado la función Levantar la mano.
- Los comentarios públicos de lo que atienden por Zoom seguirán inmediatamente los comentarios en persona de los miembros del público en las Cámaras del Consejo.
- Si no cumple con estas pautas de la comunidad, es posible que lo destituyan por interrumpir la reunión que tiene lugar en las Cámaras del Consejo. Puede volver a unirse a la reunión, pero es posible que lo eliminen por cada violación de estos estándares de la comunidad.
- La función de chat estará deshabilitada para todas las Reuniones del Ayuntamiento en Zoom.

AFFIDAVIT • DECLARACIÓN JURADA

IT IS HEREBY CERTIFIED under the laws of the State of California that the above agenda was posted on the City's website (www.banningca.gov) as well as the Bulletin Board at Banning City Hall, located at 99 E Ramsey Street, Banning, CA 92220, at least 72 hours in advance of the meeting.



Vickie Sellers, Elected City Clerk
Secretaria Municipal Electa

PUBLIC NOTICE • NOTICIA PÚBLICA

Meeting Agendas and Notices

Interested in receiving email and/or text notifications of upcoming City Council meetings? Sign up for meeting notifications through the City's website. Pursuant to amended Government Code §54957.5(b), staff reports and other public records related to open session agenda items are available on the City's website (www.banningca.gov/).

Public Comment

Agenda Items

Any member of the public may address this meeting of the City Council on any item appearing on the agenda. A five-minute limitation shall apply to each member of the public and no member of the public shall be permitted to share their time with any other person.

Non-Agenda Items

Any member of the public may address this meeting of the City Council on any item which does not appear on the regular meeting agenda but is of interest to the general public and is an item upon which the City Council may act. A three-minute limitation shall apply to each member of the public and no member shall be permitted to share their time with any other person. No action shall be taken, nor discussion held by the City Council, on any item which does not appear on the agenda, unless the action is otherwise authorized in accordance with the provisions of subdivision (b) of §54954.2 of the Government Code.

Special Assistance/Accessibility Requests

In compliance with the Americans with Disabilities Act, any member of the public may request that the agenda and agenda packet be mailed to them. If you need special assistance to participate in this meeting (such as translation services), please contact the City Clerk's Office. Advanced notification of at least 48 hours prior to the meeting will allow the city to make arrangements to ensure your accessibility.

¿Necesita servicios de traducción para participar? Contacto Oficina del Secretario de la Ciudad.

CONTACT • CONTACTO

City Clerk's Office | 951-922-3102 | CityClerks@banningca.gov
99 East Ramsey Street, Banning, California 92220

CITY OF BANNING
STAFF REPORT

TO:	**CITY COUNCIL**
FROM:	**Robert Fisher, Acting City Manager**
PREPARED BY:	**Barbara Mason, Chief Procurement Officer** **Lincoln Bogard, Administrative Services Director**
MEETING DATE:	**February 25, 2025**
SUBJECT:	**Proclamation - Procurement Month**

RECOMMENDATION:
Proclaim March Procurement Month.

BACKGROUND:
March is Procurement Month

JUSTIFICATION:
None

FISCAL IMPACT:
None

ALTERNATIVES:
None

BUDGETED?:
No

CONTRACT/AGREEMENT:
No

ATTACHMENTS:
1. Proclamation - Procurement Month.docx

City of Banning
OFFICE OF THE MAYOR

Proclamation

WHEREAS *"Procurement Month" has been proclaimed by the National Institute for Governmental Purchasing (NIGP) and the National Procurement Institute (NPI) to recognize procurement professionals; and*

WHEREAS *contracting and procurement professionals play a vital role in the quality, efficiency and effectiveness of government; and*

WHEREAS *in addition to the purchase of goods and services, the public procurement professional adds value to the City of Banning by performing such functions as developing procurement strategies, cultivating collaborative relationships within their organization and greater community, consulting on best practices, and*

WHEREAS *these public procurement professionals recognize, support and practice the public procurement values and guiding principles of accountability, ethics, impartiality, professionalism, service, and transparency as fundamental tenets of their profession; and*

WHEREAS *Procurement Month provides the opportunity to further educate the general public, elected officials, and suppliers regarding the impact of public procurement, and celebrate the contributions of those individuals dedicated to the public procurement profession; and*

WHEREAS *City of Banning's purchasing employees serve the City with distinction and are deserving of public commendation and recognition,*

NOW THEREFORE*, the City Council of the City of Banning do hereby proclaim and designate the Month of March 2025, as*

Procurement Month

BE IT PROCLAIMED *this 25th day of February, 2025.*

Sheri Flynn

Sheri Flynn, Mayor

CITY OF BANNING
STAFF REPORT

TO:	**CITY COUNCIL**
FROM:	**Robert Fisher, Acting City Manager**
PREPARED BY:	**Caroline Patton, Administrative City Clerk**
MEETING DATE:	**February 25, 2025**
SUBJECT:	**Approval of the Meeting Minutes for the February 11, 2025 City Council Meetings**

RECOMMENDATION:

Approve the minutes of the February 118, 2025 City Council Meetings.

BACKGROUND:

After every meeting, the City Clerk's Office prepares meeting minutes. The City Council reviews and approves these minutes either as presented or with modifications.

JUSTIFICATION:

These minutes have been prepared as Action Minutes in accordance with City Council Resolution 1995-21 and Government Code Sections 36814, 40801, and 54953(c)(2).

FISCAL IMPACT:

None

ALTERNATIVES:

1. Approve as recommended.
2. Approve with modifications.

BUDGETED?:

No

CONTRACT/AGREEMENT:

No

ATTACHMENTS:

1. 2025 02 11_Minutes_Special Meeting - Closed Session.pdf
2. 2025 02 11_Minutes_Special Meeting - Workshop.pdf
3. 2025 02 11_Minutes_Regular Meeting.pdf

The following information comprises the minutes for a special meeting of the City Council, a joint meeting of the Banning City Council and Banning Utility Authority and a joint meeting of the Banning City Council and the Banning City Council sitting in its capacity as the Successor Agency Board.

MINUTES **2/11/2025**
CITY COUNCIL **SPECIAL MEETING**

COUNCIL MEMBERS PRESENT: Council Member Cynthia Barrington
Mayor Sheri Flynn
Council Member Leroy Miller
Mayor Pro Tem Richard Royce
Council Member Colleen Wallace

COUNCIL MEMBERS ABSENT: None

OTHERS PRESENT: Doug Schulze, City Manager
John Pinkney, Interim City Attorney
Vickie Sellers, City Clerk
Caroline Patton, Administrative City Clerk
Lincoln Bogard, Administrative Services Director
Brent Clemmer, City Counsel*
Robert Cutbirth, City Counsel
Michael Busch, City Counsel*

*Participated via video conference.

1. CALL TO ORDER

Mayor Flynn called the special meeting to order at 2:33 p.m.

1.1 Roll Call

COUNCIL MEMBER	PRESENT:	ABSENT
Barrington, Cynthia	✕	
Flynn, Sheri	✕	
Miller, Leroy	✕	
Royce, Richard	✕	
Wallace, Colleen	✕	

2. PUBLIC COMMENT – *Agenda Items*

None

3. CLOSED SESSION

John Pinkney, Interim City Attorney, read the closed session citations.

3.1 **CONFERENCE WITH LABOR NEGOTIATORS**

Pursuant to Government Code Section 54957.6
Agency Designated Representatives: Doug Schulze, City Manager; Art Vela, Director of Public Works; Lincoln Bogard, Administrative Services Director; Nicole Jews, Human Resources Manager; Oliver Yee, Liebert Cassidy and Whitmore (City Counsel)
Employee Organization: Banning Police Officers' Association (BPOA) and Banning Police Manager's Association (BPMA)

3.2 **CONFERENCE WITH LEGAL COUNSEL: EXISTING LITIGATION**
Pursuant to Government Code Section 54956.9(d)(1)
Name of Case: Sun Lakes Highland, LLC v. City of Banning (5:24-cv-02603DTB)

Motion to authorize a legal defense regarding the matter of Sun Lakes Highland, LLC v. City of Banning (5:24-cv-02603DTB).

Motion by Council Member Barrington
Seconded by Mayor Pro Tem Royce

COUNCIL MEMBER	YES	NO	ABSTAIN	RECUSE	ABSENT
Barrington, Cynthia	✕				
Flynn, Sheri	✕				
Miller, Leroy	✕				
Royce, Richard	✕				
Wallace, Colleen		✕			

Motion approved by a vote of 4-1.

3.3 **CONFERENCE WITH LEGAL COUNSEL: EXISTING LITIGATION**
Pursuant to Government Code Section 54956.9(d)(1)
Name of Case: Two Brothers 14 Corporation, Inc. v. City of Banning (CVRI2406468)

Motion to authorize a legal defense regarding the matter of Two Brothers 14 Corporation, Inc. v. City of Banning (CVRI2406468).

Motion by Mayor Pro Tem Royce
Seconded by Council Member Barrington

COUNCIL MEMBER	YES	NO	ABSTAIN	RECUSE	ABSENT
Barrington, Cynthia	✕				
Flynn, Sheri	✕				
Miller, Leroy	✕				
Royce, Richard	✕				
Wallace, Colleen	✕				

Motion approved by a vote of 5-0.

Administrative City Clerk was directed to exit the meeting. There are no minutes for the following 2 agenda items.

3.4 **PUBLIC EMPLOYEE PERFORMANCE EVALUATION**
Pursuant to Government Code Section 54957

Title: Interim City Attorney

3.5 **PUBLIC EMPLOYEE PERFORMANCE EVALUATION**
Pursuant to Government Code Section 54957
Title: City Manager

The City Council returned from closed session at 4:10 p.m.

4. ADJOURNMENT

The Special City Council meeting adjourned at 4:13 p.m.

Minutes Prepared by:



Caroline Patton, Administrative City Clerk

*These minutes have been prepared as **Action Minutes** in accordance with City Council Resolution 1995-21 and Government Code Sections 36814, 40801, and 54953(c)(2).*

This entire meeting and all associated documents may be viewed here:
https://banningca.granicus.com/ViewPublisher.php?view_id=1

The following information comprises the minutes for a special meeting of the City Council, a joint meeting of the Banning City Council and Banning Utility Authority and a joint meeting of the Banning City Council and the Banning City Council sitting in its capacity as the Successor Agency Board.

MINUTES **2/11/2025**
CITY COUNCIL **SPECIAL MEETING**

COUNCIL MEMBERS PRESENT: Council Member Cynthia Barrington
Mayor Sheri Flynn
Council Member Leroy Miller
Mayor Pro Tem Richard Royce
Council Member Colleen Wallace

COUNCIL MEMBERS ABSENT: None

OTHERS PRESENT: Laurie Sampson, Assistant City Manager
John Pinkney, Interim City Attorney
Vickie Sellers, City Clerk
Caroline Patton, Administrative City Clerk
John Garside, Multimedia Specialist

1. CALL TO ORDER

Mayor Flynn called the special meeting to order at 4:31 p.m.

1.1 Roll Call

COUNCIL MEMBER	PRESENT:	ABSENT
Barrington, Cynthia	✕	
Flynn, Sheri	✕	
Miller, Leroy	✕	
Royce, Richard	✕	
Wallace, Colleen	✕	

2. PUBLIC COMMENT – *Agenda Items*

None

3. WORKSHOP

3.1 Discuss the New California State Water Resources Control Board Hexavalent Chromium Regulation, Impacts to the City of Banning and Path to Compliance

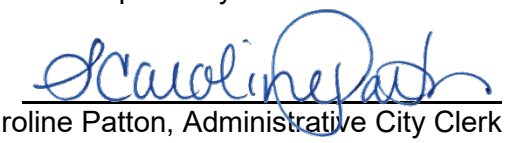
Art Vela, Director of Public Works, presented the staff report.

Public Comment
None

4. ADJOURNMENT

The Special City Council meeting was adjourned at 5:02 p.m.

Minutes Prepared by:



Caroline Patton, Administrative City Clerk

*These minutes have been prepared as **Action Minutes** in accordance with City Council Resolution 1995-21 and Government Code Sections 36814, 40801, and 54953(c)(2).*

This entire meeting and all associated documents may be viewed here:
https://banningca.granicus.com/ViewPublisher.php?view_id=1

ATTACHMENTS:

Exhibit A – Agenda Item 3.1: Staff Presentation

Hexavalent Chromium Regulation, Impacts to the City and Path to Compliance

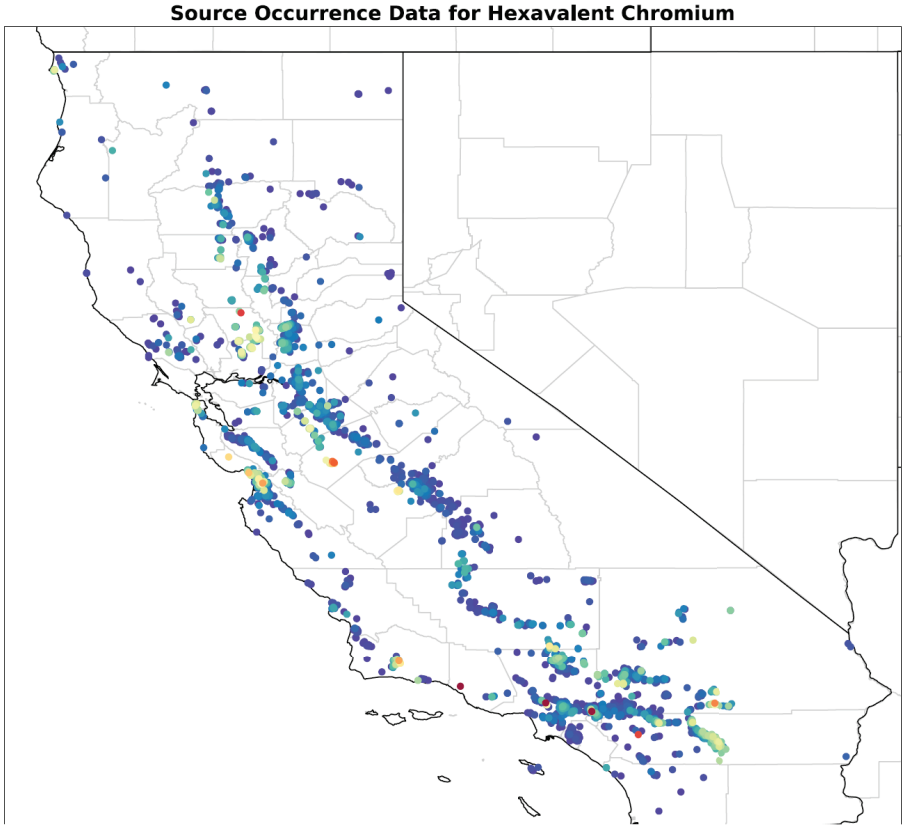
Department of Public Works

February 14, 2025

What is Hexavalent Chromium (Cr-6)

- Chromium
  - Metal found in natural deposits
  - Soils and plants
- Chromium-3
  - Most common natural form
  - Essential for human health
  - Present in foods
- Chromium-6
  - Toxic, classified as a carcinogen
  - Naturally occurring
  - Anthropogenic sources
    - Dyes, paint, wood preservatives, chrome-plating waste





Chromium Regulation - State

Maximum Contaminant Level = MCL

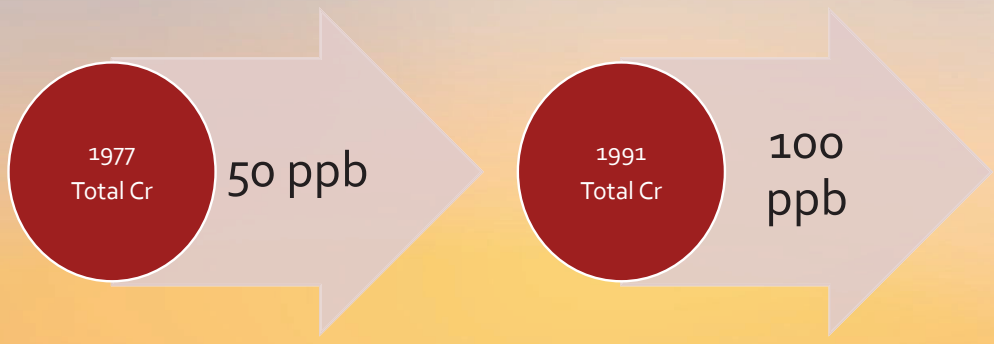
- 1977 Total Cr — 50 ppb
- 1991 Public Health Goal — .02 ppb
- 2014 Cr-6 — 10 ppb
- 2017 — Invalidated
- 2024 Cr-6 — 10 ppb

Superior Court: "..did not adequately document why the MCL was economically feasible"

Effective October 1, 2024

Chromium Regulation – Federal (EPA)

Maximum Contaminant Level = MCL



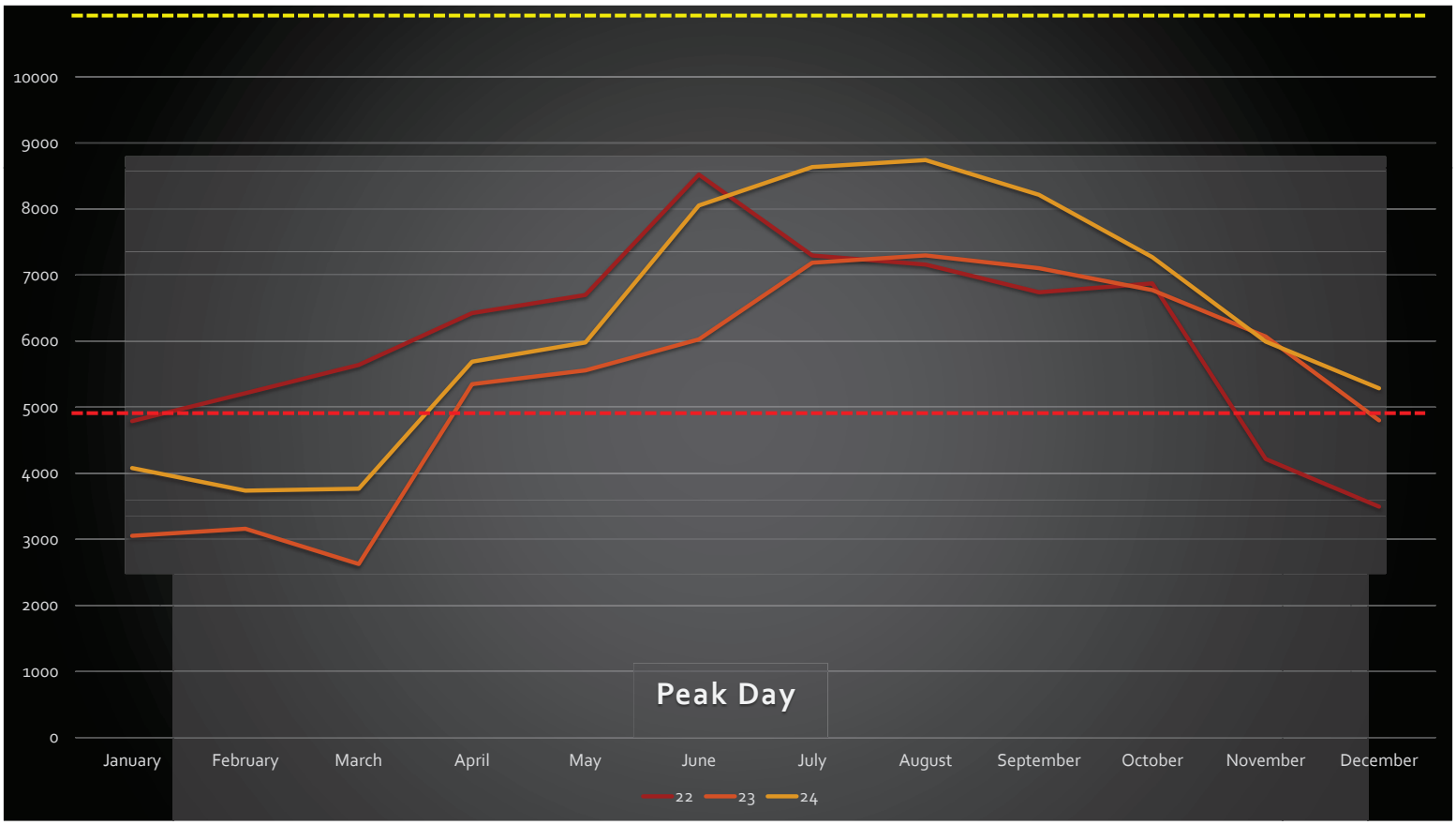
Cr-6 Regulation

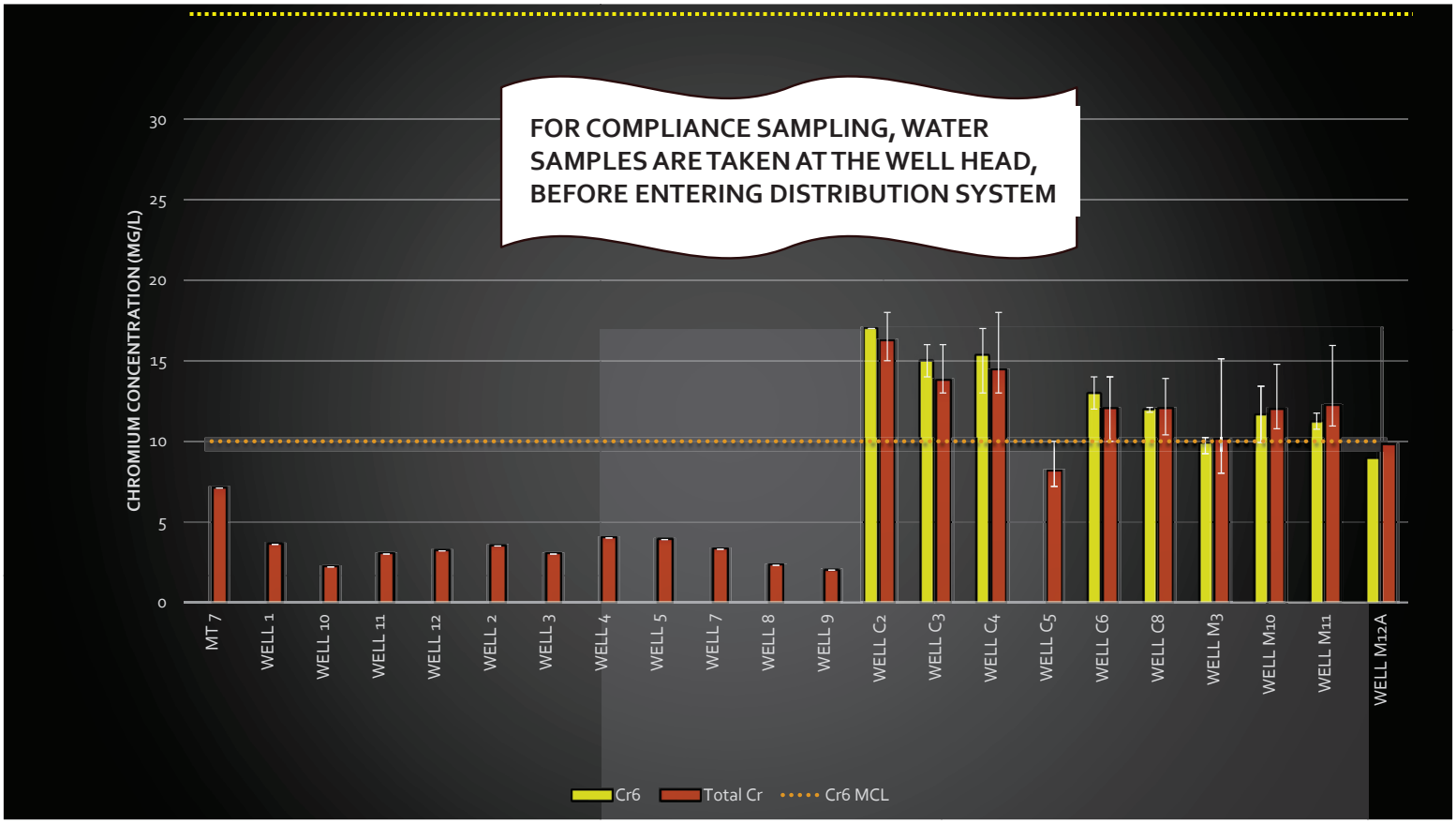
- Compliance Deadlines based on Service Connections:
  - Greater than 10,000
    - 2 years (10/1/26)
  - 1,000 to 10,000
    - 3 years (10/1/27)
  - Less than 1,000
    - 4 years (10/1/28)
- Sample all wells by April 1, 2025
- Develop a Compliance Plan
- Notify the Public of the exceedance of the MCL

Impacts to the City of Banning

- 9 of 21 production wells will likely exceed MCL
  - 9,900 gallons per minute
  - Range = 9.6 ppb to 17 ppb
- 2 of 3 co-owned production wells will exceed MCL
  - 2,200 gpm
  - Range = up to 13 ppb






FOR COMPLIANCE SAMPLING, WATER SAMPLES ARE TAKEN AT THE WELL HEAD, BEFORE ENTERING DISTRIBUTION SYSTEM
CHROMIUM CONCENTRATION (MG/L)
30
25
20
15
10
5
0
MT 7
WELL 1
WELL 10
WELL 11
WELL 12
WELL 2
WELL 3
WELL 4
WELL 5
WELL 7
WELL 8
WELL 9
WELL C2
WELL C3
WELL C4
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WELL M3
WELL M10
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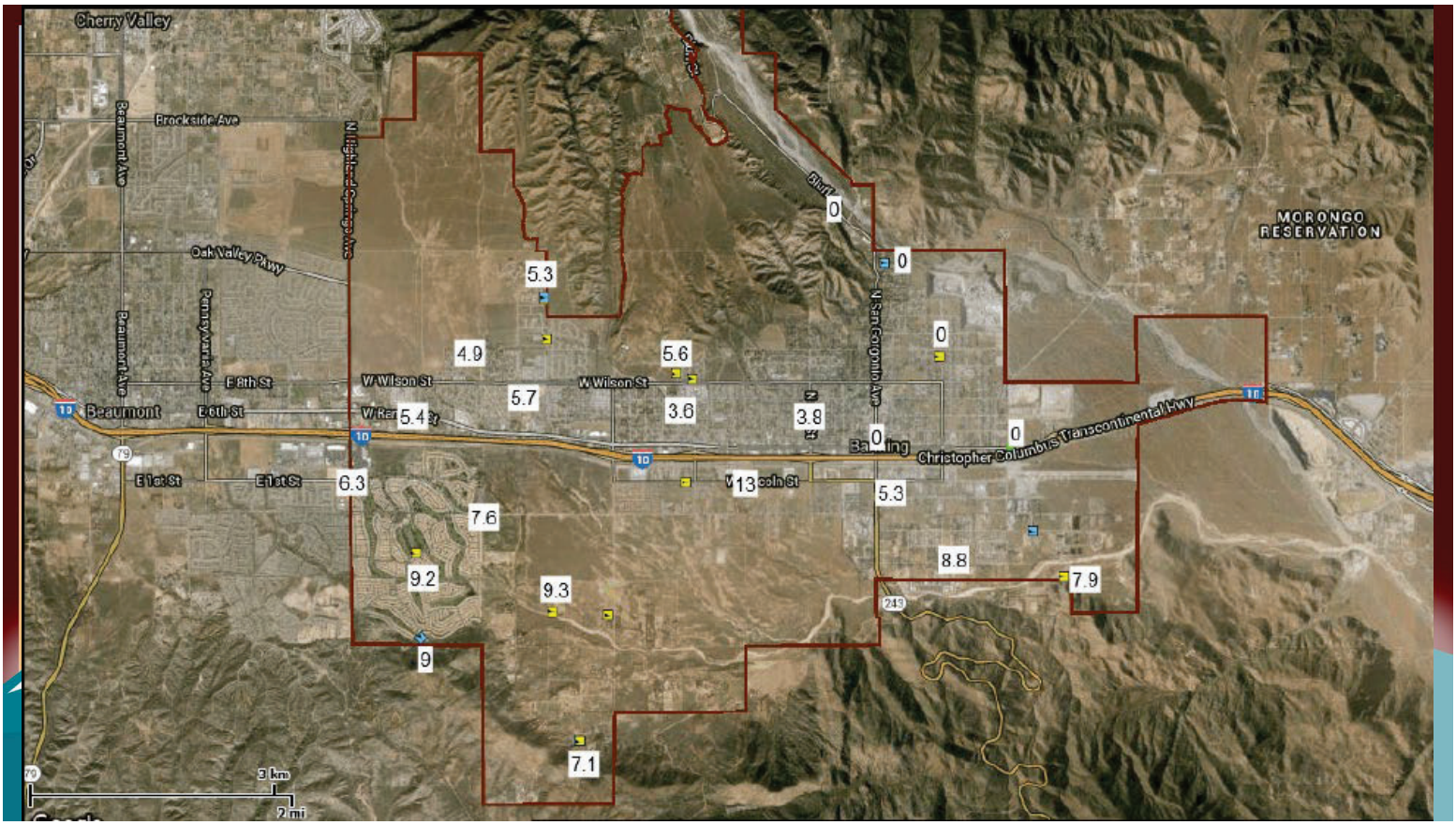
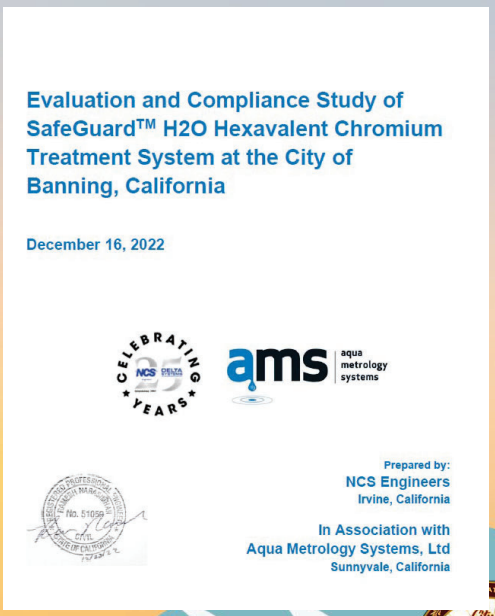
WELL M12A
Cr6
Total Cr
Cr6 MCL


Cherry Valley
Brockside Ave
Beaumont Ave
Oak Valley Pkwy
Cherry Valley Blvd
E 8th St
E 6th St
E 1st St
W Wilson St
Beaumont
Banning
Christopher Columbus Transcontinental Hwy
MORONGO RESERVATION
N San Gorgonio Ave
5.3
4.9
5.6
5.7
3.6
3.8
5.4
6.3
7.6
9.2
9.3
9
7.1
13
5.3
8.8
7.9
0
3 km
2 mi

Compliance Studies

- 2016 Cr-6 Compliance Study
  - Evaluation of treatment options and costs
- 2022 Cr-6 Compliance Study
  - Update to 2016 Study
  - Incorporating treatment technology advancements
  - Updating cost information
- 2024 Cr-6 Compliance Study (draft)
  - System wide update
  - Analysis based on costs and non-costs



Evaluation and Compliance Study of SafeGuard™ H2O Hexavalent Chromium Treatment System at the City of Banning, California

December 16, 2022

Prepared by:
NCS Engineers
Irvine, California

In Association with
Aqua Metrology Systems, Ltd
Sunnyvale, California

2024 Cr-6 Compliance Study

- Recommends Reduction, Coagulation and Filtration (RCF)
  - Beneficial if sewer collection system can handle backwash
- Provides wide range of capital costs: $23.2M to $84.7M
- Provide wide range of total annual costs: $2.4M to $7.1M

Financial Impacts

- Current rate structure insufficient for level of investment needed for compliance.
  - Estimated increases of 18% to 55% based on estimated annual costs
- Grant application submitted with an ask of $10M for an estimated $16.8M project.

Path to Compliance

- Analysis of sewer collection system capacity
- Pilot Study
- Consideration of non-treatment alternatives
  - New wells
  - Non-potable blending (WWTP)
- Development of refined cost estimates
- Finance Strategy/Rate Study
- Environmental/Design/Construction

WILL TAKE MORE THAN 2 YEARS !

Key Points

- Water quality has not changed; the regulation did
- Public Noticing and Public Concerns
- Will likely not comply by deadline
- Operate Wells in Violation vs. Significant Water User Restrictions
- Revenue needs = Rate Increases

Questions

Contact Information
Art Vela, Director of Public Works
avela@banningca.gov

The following information comprises the minutes for a regular meeting of the City Council, a joint meeting of the Banning City Council and Banning Utility Authority and a joint meeting of the Banning City Council and the Banning City Council sitting in its capacity as the Successor Agency Board.

MINUTES **2/11/2025**
CITY COUNCIL **REGULAR MEETING**

COUNCIL MEMBERS PRESENT: Council Member Cynthia Barrington
Mayor Sheri Flynn
Council Member Leroy Miller
Mayor Pro Tem Richard Royce
Council Member Colleen Wallace

COUNCIL MEMBERS ABSENT: None

OTHERS PRESENT: Laurie Sampson, Assistant City Manager
` John Pinkney, Interim City Attorney
Vickie Sellers, City Clerk
Caroline Patton, Administrative City Clerk
John Garside, Multimedia Specialist
Lincoln Bogard, Administrative Services Director
Art Vela, Director of Public Works
Barbara Mason, Purchasing Manager

1. CALL TO ORDER

Mayor Flynn called the regular meeting to order at 5:03 p.m.

1.1. Invocation – Pastor Todd Oldenburg led the invocation.

1.2. Pledge of Allegiance

1.3. Roll Call

COUNCIL MEMBER	PRESENT:	ABSENT
Barrington, Cynthia	✕	
Flynn, Sheri	✕	
Miller, Leroy	✕	
Royce, Richard	✕	
Wallace, Colleen	✕	

2. AGENDA APPROVAL

2.1. Approve Agenda

Motion to approve the agenda, moving item 9.2 to after the consent agenda and before Reports of Officers and table and continue item 8.4.

Motion by Mayor Flynn
Seconded by Council Member Barrington

COUNCIL MEMBER	YES	NO	ABSTAIN	RECUSE	ABSENT
Barrington, Cynthia	✕				
Flynn, Sheri	✕				
Miller, Leroy	✕				
Royce, Richard	✕				
Wallace, Colleen	✕				

Motion approved by a vote of 5-0.

3. PRESENTATIONS

3.1 Banning Library Black History Month Display

Elizabeth Fritz from Banning Library District introduced the Friends of the Banning Library display in the Council Chambers lobby. She shared information on two upcoming Friends of the Banning Library events.

4. REPORT ON CLOSED SESSION

John Pinkney, Interim City Attorney, reported that:

- For agenda item 3.1 there was discussion and direction provided to staff, with no final nor reportable action.
- For agenda item 3.2 there was a motion to defend against this legal action made by Council Member Barrington, seconded by Mayor Pro Tem Royce. Only Council Member Wallace voted against the motion.
- For agenda item 3.3 there was a motion to defend against this legal action made by Mayor Pro Tem Royce, seconded by Council Member Barrington. All members voted in favor.
- For agenda items 3.4. there was discussion and direction provided to staff, with no final nor reportable action
- For agenda item 3.5, there was a motion to place the City Manager on administrative leave made by Mayor Flynn, seconded by Mayor Pro Tem Royce. Council Members Wallace and Miller voted against the motion.

5. PUBLIC COMMENTS, CORRESPONDENCE, APPOINTMENTS, CITY COUNCIL COMMITTEE REPORTS, CITY MANAGER REPORT, AND CITY ATTORNEY REPORT

5.1. PUBLIC COMMENTS

The following individuals addressed City Council during Public Comment:

- Inge Schuler
- Clara Wooten-Thomas
- Frank Burgess
- Lynnea Hagen
- Diego Rose
- Laura Pippenger
- Bill Hobbs
- Max Diego
- Rick Rule
- Edward Espinosa

5.2. CORRESPONDENCE
Two items of correspondence of a general nature was received, along with two items of correspondence related to agenda item 9.2. All four items were provided to City Council in advance of the meeting.

5.3. APPOINTMENTS

John Pinkney recused himself due to his association with the City of Beaumont.

5.3.1 Appointment of City Council Members to 2 X 2 Committee with City of Beaumont to Discuss Truck Routes

Public Comments
None

Motion to appoint Mayor Flynn and Council Member Barrington to the Ad Hoc Truck Routes Committee.

Motion by Mayor Flynn
Seconded by Council Member Miller

COUNCIL MEMBER	YES	NO	ABSTAIN	RECUSE	ABSENT
Barrington, Cynthia	✕				
Flynn, Sheri	✕				
Miller, Leroy	✕				
Royce, Richard	✕				
Wallace, Colleen	✕				

Motion approved by a vote of 5-0.

5.4. CITY COUNCIL COMMITTEE REPORTS
Council Member Wallace responded to public comments made about her comments. She reported on a Regional Conservation Authority (RCA) meeting.

Mayor Pro Tem Royce reported on basic Councilmember training they had in January.

Council Member Miller reported on a Riverside Transit Authority (RTA) meeting.

Council Member Barrington had no report but said she also attended the basic Councilmember training.

Mayor Flynn also attended the basic Councilmember training. She reported on a Budget and Finance meeting, as well as a WRCOG meeting she attended.

5.5. CITY MANAGER REPORT
There was no report.

5.6. CITY ATTORNEY REPORT
Interim City Attorney Pinkney reminded the City Council of several procedural rules.

5.7. CITY TREASURER REPORT

City Treasurer Savage requested her full report be included in the meeting minutes and discussed having her signature on the City's checks. She stated she was addressing the utility billing issues and suggested the City hold a Treasurer workshop.

6. CONSENT AGENDA

6.1 Approval of the Meeting Minutes for the January 28, 2025 City Council Meetings
6.2 Receive and File Accounts Payable and Payroll Warrants Issued in the Month of December 2024
6.3 Receive and File Accounts Payable and Payroll Warrants Issued in the Month of November 2024
6.4 Receive and File Cash and Investments Report for the Month of November 2024
6.5 Receive and File Cash and Investments Report for the Month of December 2024
6.6 Receipts, Disbursements, & Fund Balances Reporting for Fiscal Year 2024-25, Periods 5-6, November and December 2024
6.7 Receive and File Parks and Recreation Report of Monthly Activities through the 1st Quarter of Fiscal Year 2024/2025
6.8 Consideration of Resolution 2025-16, Authorizing the Purchase of Four New Police Units Using Capital Expenditures/Vehicles Funds in an Amount Not-to-Exceed $252,54
6.9 Consideration of Resolution 2025-17, Amending the Classification and Compensation Plan to Reclassify the Senior Accountant Position
6.10 Consideration of Resolution 2025-18, Awarding a Construction Contract to Weaver Grading, Inc. in the Amount of $537,100 for the Banning Water Canyon Stormwater Percolation Basin Repairs and Approving a 20% Contingency for a Total Project Budget Not-to-Exceed $644,520
6.11 Consideration of Resolution 2025-21, Approving a Professional Services Agreement with Burke Williams & Sorensen, LLP to Represent the City of Banning as Co-Counsel in the Litigation Titled Sun Lake Highlands, LLC v. City of Banning, Case No. 5:24-cv-02603-DTB and Any Other Matters Requested By the City on an As Needed Basis

Public Comment
None

Motion to adopt consent agenda items 6.1, and 6.3 through 6.7.

Motion by Council Member Wallace
Seconded by Mayor Pro Tem Royce

COUNCIL MEMBER	YES	NO	ABSTAIN	RECUSE	ABSENT
Barrington, Cynthia	✕				
Flynn, Sheri	✕				
Miller, Leroy	✕				
Royce, Richard	✕				
Wallace, Colleen	✕				

Motion approved by a vote of 5-0.

6.2 Receive and File Accounts Payable and Payroll Warrants Issued in the Month of December 2024

Administrative Services Director, Lincoln Bogard, answered City Council questions.

Public Comment
- Diego Rose
- Sue Savage

6.8 Consideration of Resolution 2025-16, Authorizing the Purchase of Four New Police Units Using Capital Expenditures/Vehicles Funds in an Amount Not-to-Exceed $252,545

Police Chief Vincent Avila answered City Council questions.

Public Comment
- Diego Rose
- Harry Sullivan
- Oleg Ivaschuk
- Laura Leindecker
- Fran Hanratty
- Edward Espinosa
- Todd Oldenburg

Motion to adopt Resolution 2025-16.

Motion by Mayor Pro Tem Royce

Mayor Flynn proposed an amendment, approving the replacement of the 2007 car and two 2012 cars, but keeping the 2017 vehicle.

Mayor Flynn withdrew her motion.

Original motion seconded by Council Member Miller

COUNCIL MEMBER	YES	NO	ABSTAIN	RECUSE	ABSENT
Barrington, Cynthia	✕				
Flynn, Sheri	✕				
Miller, Leroy	✕				
Royce, Richard	✕				
Wallace, Colleen	✕				

Motion approved by a vote of 5-0.

6.9 Consideration of Resolution 2025-17, Amending the Classification and Compensation Plan to Reclassify the Senior Accountant Position

Administrative Services Director, Lincoln Bogard, answered City Council questions.

Public Comment
None

Motion to adopt Resolution 2025-17, amending the raise to T75

Motion by Council Member Barrington
Seconded by Council Member Miller

COUNCIL MEMBER	YES	NO	ABSTAIN	RECUSE	ABSENT
Barrington, Cynthia	✕				
Flynn, Sheri		✕			
Miller, Leroy	✕				
Royce, Richard		✕			
Wallace, Colleen	✕				

Motion approved by a vote of 3-2.

6.10 Consideration of Resolution 2025-18, Awarding a Construction Contract to Weaver Grading, Inc. in the Amount of $537,100 for the Banning Water Canyon Stormwater Percolation Basin Repairs and Approving a 20% Contingency for a Total Project Budget Not-to-Exceed $644,520

Public Comment
None

Motion to adopt Resolution 2025-18.

Motion by Council Member Wallace
Seconded by Mayor Pro Tem Royce

COUNCIL MEMBER	YES	NO	ABSTAIN	RECUSE	ABSENT
Barrington, Cynthia	✕				
Flynn, Sheri	✕				
Miller, Leroy	✕				
Royce, Richard	✕				
Wallace, Colleen	✕				

Motion approved by a vote of 5-0.

6.11 Consideration of Resolution 2025-21, Approving a Professional Services Agreement with Burke Williams & Sorensen, LLP to Represent the City of Banning as Co-Counsel in the Litigation Titled Sun Lake Highlands, LLC v. City of Banning, Case No. 5:24-cv-02603-DTB and Any Other Matters Requested By the City on an As Needed Basis

John Pinkney, Interim City Attorney, answered City Council questions.

Public Comment
- Laura Leindecker
- Frank Burgess

Motion to adopt Resolution 2025-21.

Motion by Mayor Pro Tem Royce
Seconded by Council Member Barrington

COUNCIL MEMBER	YES	NO	ABSTAIN	RECUSE	ABSENT
Barrington, Cynthia	✕				
Flynn, Sheri	✕				
Miller, Leroy	✕				
Royce, Richard	✕				
Wallace, Colleen		✕			

Motion approved by a vote of 4-1.

7. PUBLIC HEARING(S)

None

Mayor Flynn announced a recess at 6;56 P.M. The meeting was reconvened at 7:29 p.m.

9.2 City-Sponsored Low-Cost Spay/Neuter Clinic Days Proposal

Mayor Flynn stated there would be no staff report.

Public Comment

- Beth Barnhart
- Alexis Dolbee
- Diego Rose
- Georgia
- Juanita Diaz
- Ellen Carr
- Jacquelyn Schmidt
- Bailey Newman

Motion to table the item.

Motion by Council Member Miller
Seconded by Council Member Barrington

COUNCIL MEMBER	YES	NO	ABSTAIN	RECUSE	ABSENT
Barrington, Cynthia	✕				
Flynn, Sheri	✕				
Miller, Leroy	✕				
Royce, Richard	✕				
Wallace, Colleen	✕				

Motion approved by a vote of 5-0.

8. REPORTS OF OFFICERS

8.1 Consideration of Resolution 2025-19, Approving a Construction Agreement with RE Chaffee Construction, Inc. for Project No. 2018-02W "Well C-8 Site Equipping" in the Amount of $3,431,000 and Establishing a Total Project Budget of $3,774,100 and Rejecting All Other Bids

Art Vela, Director of Public Works, presented the staff report.

Public Comment
None

Motion to adopt Resolution 2025-19.

Motion by Council Member Wallace
Seconded by Mayor Pro Tem Royce

COUNCIL MEMBER	YES	NO	ABSTAIN	RECUSE	ABSENT
Barrington, Cynthia	✕				
Flynn, Sheri	✕				
Miller, Leroy	✕				
Royce, Richard	✕				
Wallace, Colleen	✕				

Motion approved by a vote of 5-0.

8.2 Consideration of Resolution 2025-20, Directing City Manager to Re-Establish Animal Shelter at Charles Street Facility and Authorizing Animal Shelter Staff

Mayor Flynn stated there would be no staff report.

Public Comment
- Beth Barnhart
- Alexis Dolbee
- Inge Schuler
- Gail Ousley
- Ellen Carr
- Janine Nielsen
- Diego Rose
- Juanita Diaz
- Frank Connolly

Motion to table this item.

Motion by Mayor Flynn
Seconded by Mayor Pro Tem Royce

COUNCIL MEMBER	YES	NO	ABSTAIN	RECUSE	ABSENT
Barrington, Cynthia	✕				
Flynn, Sheri	✕				
Miller, Leroy	✕				
Royce, Richard	✕				
Wallace, Colleen	✕				

Motion approved by a vote of 5-0.

8.3 Remote Public Participation Policy

Mayor Flynn stated there would be no staff report.

Public Comment
- Diego Rose
- Ellen Carr
- Juanita Diaz
- Frank Connolly

Motion to approve the Remote Public Participation Policy.

Motion by Mayor Pro Tem Royce
Seconded by Mayor Flynn

COUNCIL MEMBER	YES	NO	ABSTAIN	RECUSE	ABSENT
Barrington, Cynthia	✕				
Flynn, Sheri	✕				
Miller, Leroy	✕				
Royce, Richard	✕				
Wallace, Colleen	✕				

Motion approved by a vote of 5-0.

8.4 Receive and File Opportunity Village Update

Tabled under agenda item 2.1.

9. DISCUSSION ITEM(S)

9.1 Discussion of Options and Obtain Direction Regarding Landscape Maintenance District (LMD) No. 1

Nate Smith, Deputy Director of Public Works/City Engineer, presented the staff report.

Public Comment
- Lynnea Hagen
- Diego Rose
- Juanita Diaz
- Frank Connolly

9.2 City-Sponsored Low-Cost Spay/Neuter Clinic Days Proposal

Moved to follow agenda item 6.11 under agenda item 2.1.

Motion to continue the meeting past 10:00 p.m.

Motion by Mayor Flynn
Seconded by Mayor Pro Tem Royce

COUNCIL MEMBER	YES	NO	ABSTAIN	RECUSE	ABSENT
Barrington, Cynthia	✕				
Flynn, Sheri	✕				
Miller, Leroy	✕				
Royce, Richard	✕				
Wallace, Colleen	✕				

Motion approved by a vote of 5-0.

10. ANNOUNCEMENTS FROM CITY COUNCIL MEMBERS

Council Member Miller announced he would be holding a town hall meeting and an upcoming library event.

11. ITEMS FOR FUTURE AGENDAS

11.1. New Items:

1. Discussion of Reversing Decision to Close Airport (Royce)
2. Proposition 47 Workshop (Flynn)
3. Meeting Minutes, Agenda Pagination, Reading Aloud Public Correspondence (Flynn)

11.2. Pending Items:

1. Update on Community Garden (Flynn)
2. Zencity Contract (Flynn)
3. Developer Presentation on Sunset Crossroads Project (Flynn)
4. Contracting Animal Services (Flynn)
5. Code Enforcement Department Citations Process (Miller)
6. ~~Existing Public Benefits Fund Accounting (Royce)~~
7. Emergency Preparedness (Barrington)
8. Changes to the Banning Procedural Manual (Royce)
9. Report on a Policy and Program to Routinely Test All Fire Hydrants in the City (Flynn)
10. Tree Trimming at Repplier Park and near Sun Lakes (Flynn)

11. ADJOURNMENT

Motion to adjourn.

Motion by Mayor Pro Tem Royce

Seconded by Council Member Miller

COUNCIL MEMBER	YES	NO	ABSTAIN	RECUSE	ABSENT
Barrington, Cynthia	✕				
Flynn, Sheri	✕				
Miller, Leroy	✕				
Royce, Richard	✕				
Wallace, Colleen	✕				

Motion approved by a vote of 5-0.

The meeting was adjourned at 10:14 p.m.

Minutes Prepared by:

Caroline Patton, Administrative City Clerk

*These minutes have been prepared as **Action Minutes** in accordance with City Council Resolution 1995-21 and Government Code Sections 36814, 40801, and 54953(c)(2).*

This entire meeting and all associated documents may be viewed here:
https://banningca.granicus.com/ViewPublisher.php?view_id=1

ATTACHMENTS:

Exhibit A – Public Comment Received
Exhibit B – Agenda Item 9.2: Public Comment Received

Exhibit A

From: Edward Espinosa <nativepride951@gmail.com>
Sent: Sunday, February 2, 2025 5:42 PM
To: Caroline Patton
Subject: In reply to City councilwoman Wallace question about the transient problem she had asked at the last council meeting

Follow Up Flag: Follow up
Flag Status: Flagged

My name is Edward Espinosa
District 2
Attention: City of Banning City Council members District 1-5

Proposal to the City of Banning:

The City of Banning should create a plan to evaluate the mental health of all homeless individuals in the area. If someone is found to be mentally unstable or a potential danger to themselves or others, they should be moved to a facility outside of town for further assessment. To make this happen, the Banning Homeless Liaison and the Banning Police Department should work with a qualified medical professional to conduct these evaluations. If someone refuses to participate, they should be asked to leave, and any illegal campsites, like tents or makeshift shelters, should be removed according to state laws.

By helping those with mental health issues, the city can then focus on supporting local residents and people re-entering society after jail. Programs like Opportunity Village and the Set Free initiative can provide the necessary help, saving the city money in the long run. This approach will reduce the need for emergency services and grants often used to handle overdoses or other crises involving unstable individuals.

This plan will improve public safety, ensure resources are used wisely, and help build a healthier, more stable community.

OFFICIAL PETITION
TO
COUNCIL MEMBERS
BANNING, CA

RECEIVED
CITY OF BANNING

FEB - 5 2025

CITY MANAGER'S OFFICE
BY:

Banning City Hall
99 E Ramsey St
Banning, CA 92220-4837

To Members of the Banning City Council:

There is a national movement underway to cut back on quality-of-life policing methods such as making arrests for vandalism, littering, loitering, vagrancy, public intoxication, and other quality of life violations.

As a registered voter in Banning, I urge you to maintain all quality-of-life policing methods, vigorously defend these methods, support our police in enforcement of quality-of-life violations, and make sure our district attorney is fully behind quality-of-life policing methods.

Quality of life policing, as well as pro-active policing methods, have cleaned up and maintained order in many neighborhoods in our city and helped reduce more serious crime nationwide between 1985 and 2015 by over 50%.

E. Andrews

Ms Louella Riddle

Ms Georgeanne Shuey

Ms Marilyn Hoeberling

Ms Carol Miller

Ms Sally Hazell

Mr William Lucas , Jr.

Ms Joanene Baker

Mr John Michael

Mr James Kenzik

Mr James Holloway

Mr Gerhard Leschka

Exhibit B

From: C Marshall <ckb.email@gmail.com>
Sent: Monday, February 10, 2025 12:26 PM
To: Leroy Miller <lmiller@banningca.gov>; Cynthia Barrington <cbarrington@banningca.gov>; Sheri Flynn <sflynn@banningca.gov>; Richard Royce <rroyce@banningca.gov>; Colleen Wallace <cwallace@banningca.gov>; City Manager <citymanager@banningca.gov>; Doug Schulze <dschulze@banningca.gov>
Cc: Al Marshall <al@pnd1.com>
Subject: RE: City-Sponsored Low-Cost Spay/Neuter Clinic Days Proposal

Honorable Mayor Flynn
Distinguished Council Members
City Manager Schulze
City of Banning California
99 E. Ramsey Street
Banning, CA 92220

RE: City-Sponsored Low-Cost Spay/Neuter Clinic Days Proposal

Dear Mayor and Councilmembers:

As residents of Banning, we would like to voice our support for the above referenced item on the February 11, 2025 City Council Meeting Agenda. The proposal for city-sponsored low-cost spay/neutering clinic days as submitted by Debbie Fernandez Cram of Animals of the Pass and Lexi Peer of Cherry Tales Animal Shelter, requesting the city fund one or more additional low-cost clinic days through the Animal Action League ("AAL") mobile unit, is a necessary addition to city resources for control of the cities' animal population.

These additional clinic days, whether provided through Animal Action League (AAL) mobile unit or the Rivco Department of Animal Services or another public/private partnership, will contribute significantly to controlling the local animal population by reducing the number of unwanted litters. Over time, this will help reduce the burden on city shelters, improve public health, and decrease the overall financial strain on the city's animal services. It has long been reported that shelters throughout Riverside County are at capacity. Good samaritans and local rescue groups are stepping in to provide rescue, foster and adoption services at their own expense because nobody wants to see animals suffer on the streets or, worse yet, be euthanized in the shelters for lack of space. We are fortunate that people like Debbie Fernandez Cram, Lexi Peer and other rescue groups are working in our community but they cannot fix this problem alone.

It's clear that the City of Banning is currently working toward better Animal Services options, and while it may be tempting to wait and address funding of spay/neuter services as part of a future comprehensive Animal Welfare & Shelter Services plan, the activities proposed under this funding are critical to improving an overpopulation crisis that is here right now and growing. We can't afford to wait . A meaningful Animal Shelter & Services plan will most likely include community access to low and no-cost spay/neuter clinics for residents regardless; perhaps this emergency, stop-gap program gets folded into that future plan or maybe the spay/neuter services will come as part of a future contract with the County or other outside Animal Welfare agency. But it has to be done, and there is no good reason for waiting to allocate funding for this critical activity.

Supporting this proposal will have both immediate and long-term benefits for the City of Banning; it will help reduce the number of stray animals, ease the burden on shelters, and promote responsible pet ownership through the proposed education and community involvement. As concerned and responsible residents of Banning, we respectfully request that the City of Banning provide funding for the proposed Animal Welfare activities.

Appreciatively,

Al & Corinne Marshall

Caroline Patton

From: Cynthia Barrington
Sent: Tuesday, February 11, 2025 2:31 PM
To: Caroline Patton
Subject: Fw: Jessica Cook 2/11/25

Can you please print this to enter into the record for tonight's meeting?

Thank you

Cindy Barrington
City Council Member
District 2
City of Banning
Mobile: 909-253-2601
cbarrington@banningca.gov
99 E. Ramsey Street
Banning, CA 92220
www.banningca.gov

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and may contain information that is legally privileged and/or confidential. If the reader of this messa
recipient or the employee or agent responsible for delivering the message to the intended recipient, i
communication in error, please notify us immediately by telephone. Thank you.

From: CYNTHIA BARRINGTON <cyndib@aol.com>
Sent: Tuesday, February 11, 2025 2:27:42 PM
To: Cynthia Barrington <cbarrington@banningca.gov>
Subject: Jessica Cook 2/11/25

Jessica Cook 2/11/25

The Power of Spay & Neuter

One unspayed dog can have two litters per year, producing over 100 puppies in her lifetime. But one unfixed male can mate with multiple females daily, leading to thousands of puppies over his lifetime.

Statistics show that communities with strong spay and neuter programs decrease shelter intake by 30% to 50%.

Hi, my name is Jessica, and I'm the Executive Director of Right Fit Rescue. And I'm asking you today to please fund another day of clinic here in the Banning area.

As our rescue approaches its third anniversary, we're proud to have sterilized over 350 animals—but the need is far greater.

One of our biggest challenges is finding affordable spay and neuter services. In many cases, the cost of sterilization exceeds the adoption donation, making it difficult to continue saving lives.

Every month, we reach out to the Animal Action League, and in 2024, we were only able to secure one appointment. Meanwhile, every month, citizens stand by, hoping for a spot, only to be turned away. The demand is overwhelming, and the lack of access to affordable spay and neuter services continues to fuel the overpopulation crisis.

So I ask you once again, Council Members, please fund one more Animal Action League spay and neuter clinic day each month for the residents of Banning and the rescues that help animals in the Pass. This simple addition could mean 350 more animals sterilized each year—preventing thousands from ending up in shelters or on the streets.

It's time to invest in real solutions for our community.

CITY OF BANNING
STAFF REPORT

TO: **CITY COUNCIL**

FROM: **Robert Fisher, Acting City Manager**

PREPARED BY: **Lincoln Bogard, Administrative Services Director**

MEETING DATE: **February 25, 2025**

SUBJECT: **Receive and File Accounts Payable and Payroll Warrants Issued in the Month of January 2025.**

RECOMMENDATION:

Receive and file the warrants for period ending January 31, 2025, per California Government Code Section 37208.

BACKGROUND:

Staff compiles a monthly report to include accounts payable and payroll warrants issued.

JUSTIFICATION:

Description	Payment #	Amount	Total Amount
Checks:			
Checks Issued During Month	193995-194376	$3,375,902.91	
Voided/Reissue Checks		$ 214.31	
Check Total			**$3,375,688.60**
Wires Total	1162		**$1,565,002.49**
ACH Payments:	9008146-9008179		
Payroll Direct Deposit	01/10/2025	$ 632,613.70	
Payroll Direct Deposit	01/24/2025	$ 604,316.83	
Other Payments		$1,359,203.73	
ACH Total			**$2,596,134.26**
Payroll Checks:	13769-13792		
Payroll-Manual	01/03/2025	$ 489.70	
Payroll-Regular	01/10/2025	$ 2,347.48	
Payroll-Regular	01/24/2025	$ 3,112.38	
Payroll Check Total			**$ 5,949.56**

Total Warrants Issued for January 2025			**$ 7,542,774.91**

FISCAL IMPACT:
No fiscal impact.

ALTERNATIVES:
Receive and file the warrants for period ending January 31, 2025.

BUDGETED?:
No

CONTRACT/AGREEMENT:
No

ATTACHMENTS:
1. Attachment 1 - Fund List_Updated 10.11.23.pdf
2. Attachment 2-Warrant Report January 2025.pdf
3. Attachment 3-Warrant Report Detail January 2025.pdf
4. Attachment 4-Void Check Log, Payroll Log and Payroll Registers.pdf

Budget Processes, Policies & Fund Structure

The following depicts the City's budgeted funds and how they fit in the organization for budget and accounting purposes. Note that departments in the General Fund may also have budget responsibility for other funds.

Appropriated Funds

Black = Major - Blue = Non-Major - Red = Retired Funds FY 20-21

Governmental Funds			Proprietary Funds			Fiduciary Funds	
General Fund	Special Revenue Funds	Capital Improvement Funds	Enterprise Funds	Enterprise Funds-BUA	Internal Service Funds	Sucessor Agency Funds	Agency Funds
General Fund (001) Departments	(002) Developer Deposit	(400) Police Facilities Development	(670) Electric Fund	(660) Water	(702) Fleet Maintenance	(805) Redevelopment Obligation-Retirement	(221) ATWEL #2020-02 CFD
- (1000) City Council	(005) Successor Agency Admin	(410) Fire Facilities Development	- (7000) Electric	(661) Water Capital Facilities	(700) Risk Management	(810) Sucessor Housing Agency	(360) Sun Lakes CFD #86-1
- (1200) City Manager	(100) Gas Tax Street	(420) Traffic Control Facility	- (7010) Generation & Trans.	(662) Irrigation Water Fund	- (5020) Workers Compensation	(830) Debt Service Successor Agncy	(365) Wilson Street #91-1 AD
- (1210) Economic Development	(101) Measure A Street	(421) Ramsey/Highland Signal	(672) Rate Stability/Debt Service Reserve	(663) BUA Water Capital Project	- (5030) Unemployment Insur.	(840) Bond Exp. Agreement - (BEA) Project	(370) Area Police Computer
- (1220) Public Information	(102) RMRA (SB1) Gas Tax	(430) General Facilities	(673) Electric Improvement	(669) BUA Water Debt Service	- (5040) Liability Insurance	(841) Bond Exp. Agreement - (BEA) Low/Mod	(375 Fair Oaks #2004-01-AD
- (1300) Human Resources	(103) SB 300 Street	(444) Wilson Median Fund	(674) Electric Revenue Bond Project		- (5300) City Attorney		(376) Cameo Homes
- (1400) City Clerk	(104) Article 3 Sidewalk	(451) Park Development Fund	(675) Public Benefit	(680) Wastewater	(703) Information Systems Services		
- (1500) Elections	(110) CDBG	(470) Capital Improvement	(678) Electric Revenue Bond Debt Service	(681) Wastewater Capital Facility	(704) Building Maintenance		
- (1800) City Attorney	(111) Landscape Maintenance	(475) Fair Oaks #2004-01-AD		(682) Wastewater Tertiary	(705) Support Services		
- (1900) Fiscal Services	(132) Air Quality Improvement		(600) Airport Fund	(683) BUA Wastewater Capital Project	(761) Utility Billing Admin.		
- (1910) Purchasing & AP	(140) Asset Forfeiture/Police		(610) Transit Fund	(685) State Revolving Loan	- (3100) Account & Collections		
- (2060) TV Government Access	(148) Supplemental Law-Enforcement		- (5800) Fixed Route	(689) BUA Wastewater Debt Service	- (3110) Meter Reading		
- (2200) Police	(150) State Park Bond		- (5850) Dial A Ride				
- (2210) Dispatch	(190) Housing Authority		(690) Refuse Fund				
- (2300) Animal Control	(200) Special Donation						
- (2400) Fire	(201) Sr. Center Activities						
- (2700) Building Safety	(202) Animal Control Reserve						
- (2740) Code Enforcement	(203) Police Volunteer						
- (2800) Planning	(222) Federal Funds						
- (3000) Engineering	(300) City Administration-COP Debt Service						
- (3200) Building Maintenance							
- (3600) Parks							
- (4000) Recreation							
- (4010) Aquatics							
- (4020) Day care							
- (4050) Senior Center							
- (4060) Sr. Advisory Board							
- (4500) Central Services							
- (4800) Debt Service							
- (5400) Community Enhancement							

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Warrant Number	Vendor Name	Warrant Amount
1162	RIVERSIDE PUBLIC UTILITIES	1,565,002.49
193995	A.C. PROPANE	393.82
193996	AMAZON BUSINESS	1,541.62
193997	AMERICAN FIDELITY ASSURANCE	25,294.84
193998	AMERICAN FORENSIC NURSES	1,174.17
193999	ANIXTER, INC	34,776.04
194000	ARAGON GEOTECHNICAL, INC	4,356.25
194001	ARCE, PAUL	84.00
194002	ASSOCIATED BAG COMPANY	1,812.41
194003	AT&T MOBILITY LLC	2,110.10
194004	ATWORK PERSONNEL SERVICES	11,173.91
194005	AURIGA CORPORATION	1,400.00
194006	AUTOMATED GATE SERVICES, INC.	1,419.00
194007	AVILA, SOL	209.25
194008	BABCOCK LABORATORIES, INC	242.00
194009	BANNING GLASS MIRROR & SCREEN	519.62
194010	BANNING POLICE OFFICERS ASSOC.	2,910.30
194011	BANNING VETERINARY HOSPITAL	823.25
194012	BEAUMONT CHERRY VALLEY WATER	3,702.27
194013	BEAUMONT DO IT BEST HOME CENTER	445.87
194014	BEAUMONT SAFE & LOCK	170.11
194015	BENHAR, DIANA T	252.00
194016	BLUEBEAM, INC	5,640.00
194017	BOGARD, LINCOLN	285.48
194018	CALIFORNIA LAW ENFORCE ASSN	1,088.00
194019	CAMPBELL, DUSTIN	76.50
194020	CAMPBELL, GABRIELLE	321.10
194021	CANON FINANCIAL SERVICES, INC	385.32
194022	CASC ENGINEERING AND CONSULTING INC	2,532.00
194023	CASTILLO, ASHLEY	154.25
194024	CDW GOVERNMENT, LLC	1,227.78
194025	CELL BUSINESS EQUIPMENT (CBE)	583.21
194026	CHARTER COMMUNICATIONS	237.00
194027	CHARTER COMMUNICATIONS	119.75
194028	CHARTER COMMUNICATIONS	991.58
194029	CHARTER COMMUNICATIONS	102.30
194030	CHARTER COMMUNICATIONS	35.95
194031	CHARTER COMMUNICATIONS	35.52
194032	CHARTER COMMUNICATIONS	35.52
194033	CICCS	61.48
194034	CINTAS CORPORATION	1,352.69
194035	CITY OF BANNING (BNG)	766.66
194036	CONSOLIDATED ELECTRICAL	421.30
194037	COUTS HEATING & COOLING, INC	1,635.81
194038	CRAFCO INC	1,008.13
194039	CUSTOM TROPHIES & UNEEK AWARDS	1,240.20
194040	CYBERTIME NETWORK COMMUNICATIONS	2,599.00
194041	DOBBINS, DEANN LOUISE	138.60
194042	EFS WEST INC	36,091.26
194043	ENGINEERING RESOURCES OF SO CA	157,964.88
194044	ENTERPRISE RENT-A-CAR	384.15
194045	EXECUTIVE FACILTIES SERVICES INC	33,599.09
194046	FERRELLGAS LP	568.69

City of Banning
Warrant List January 2025

Warrant Number	Vendor Name	Warrant Amount
194047	FRONTIER COMMUNICATIONS	609.03
194048	FUN EXPRESS	157.21
194049	GAS COMPANY, THE	1,279.90
194050	GRAINGER	608.67
194051	GREYBAR PRINTING	536.09
194052	HALDIMAN, RENEE	3,000.00
194053	HERNANDEZ, CARLA	1,190.00
194054	HOME DEPOT #8987	529.81
194055	HUERTA JR., GILBERT	455.00
194056	HUERTA LOPEZ, TUNNIA A	385.00
194057	I.B.E.W. LOCAL 47	10,281.46
194058	I.B.E.W. LOCAL 47 (PAC)	48.00
194059	IBEW LOCAL 47 RETIREE MEDICAL TRUST	3,105.64
194060	IMEG CONSULTANTS CORP	1,932.50
194061	INFOSEND, INC	196.64
194062	KOLLER, MARIE	4.20
194063	LEXISNEXIS RISK SOLUTIONS	112.55
194064	MARIPOSA LANDSCAPES, INC	24,441.17
194065	MC CALL'S METER SALES	300.00
194066	MICHAEL BAKER INTERNATIONAL, INC	4,282.50
194067	MILSOFT UTILITY SOLUTIONS, INC	3,200.00
194068	MORGAN, DEIDRA J	157.50
194069	MYERS & SONS HI-WAY SAFETY INC.	2,370.45
194070	ONESOURCE DISTRIBUTORS	121.76
194071	ONLINE INFORMATION SERVICES	641.90
194072	PACKHAM & TOOMEY, INC	125.00
194073	PARS	534.66
194074	PARS	40.34
194075	PAYPRO ADMINISTRATORS	171.00
194076	PRESS-ENTERPRISE, THE	630.87
194077	PULVER, JODEANE V	136.50
194078	RIV. CO. DIV. OF WEIGHTS & MEASURES	148.20
194079	SAN BERNARDINO PUBLIC EMPLOYEES	2,498.86
194080	SATELLITE PHONE STORE	307.95
194081	SCA OF CA, LLC	12,159.00
194082	SCCI, INC DBA	250.00
194083	SCPPA	4,116.10
194084	SHRED-IT USA, LLC	222.44
194085	SOFTWARE ONE, INC	1,530.00
194086	SOUTHERN CALIFORNIA EDISON	187.19
194087	SOUTHERN CALIFORNIA WEST COAST ELEC	1,436.75
194088	STAPLES BUSINESS ADVANTAGE	2,241.89
194089	STATE OF CALIFORNIA DOJ	560.00
194090	STATE WATER RESOURCES CONTROL	50,841.00
194091	STC TRAFFIC INC	1,315.00
194092	VACA, YVETTE	770.50
194093	VEOLIA WATER CONTRACT OPERATIONS US	152,742.72
194094	VESTIS SERVICES LLC	201.50
194095	VIGILANT LLC	8,474.05
194096	VIRTUAL PROJECT MANAGER, LLC	1,000.00
194097	WALLACE, COLLEEN	85.50
194098	WASTE MANAGEMENT 0F THE IE	3,000.77
194099	WESTERN WATER WORKS SUPPLY CO	31,914.26

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Warrant Number	Vendor Name	Warrant Amount
194100	WILLDAN ENGINEERING	595.00
194101	ZENNER PERFORMANCE METERS, INC	23,294.99
194102	ABBOTT, CELIA	195.00
194103	AED ENERGY SERVICES LLC	9,672.50
194104	AMAZON BUSINESS	167.91
194105	ARIAS DE RAMIREZ, LEONILA	195.00
194106	AT&T CALNET 2	217.46
194107	ATBACKGROUNDS	88.06
194108	ATWORK PERSONNEL SERVICES	15,730.88
194109	AVILA, VINCENT	1,256.06
194110	BABCOCK LABORATORIES, INC	1,482.00
194111	BEAUMONT DO IT BEST HOME CENTER	342.93
194112	BEAUMONT SAFE & LOCK	20.00
194113	BECERRA, ELADIO	195.00
194114	BIO-TOX LABORATORIES	945.00
194115	BOIES, SANDRA DIANE	195.00
194116	BOSTON, LINDA	195.00
194117	CALIFORNIA DEPT OF TAX AND FEE ADMN	10,422.00
194118	CANON FINANCIAL SERVICES, INC	1,647.78
194119	CDW GOVERNMENT, LLC	193.37
194120	CHANDLER ASSET MANAGEMENT INC	2,115.53
194121	CHARTER COMMUNICATIONS	991.58
194122	CINTAS CORPORATION	1,191.96
194123	CITY OF BANNING (BNG)	395.14
194124	CLAYTON, NETA	195.00
194125	CORE & MAIN, LP	8,177.81
194126	COUNSELING TEAM INTERNATIONAL, THE	910.00
194127	CRABTREE, JEFFREY	195.00
194128	CUSTOM TROPHIES & UNEEK AWARDS	68.95
194129	DAVIS, RANDOLYN	195.00
194130	DELTA DENTAL INSURANCE COMPANY	924.12
194131	DELTA DENTAL OF CALIFORNIA	7,699.03
194132	DEWALT, RICK	195.00
194133	ECCLESTONE, CHERYL	195.00
194134	EIDE BAILLY LLP	4,464.20
194135	ELLIOTT, PATRICIA	195.00
194136	ENGINEERING SOLUTIONS SERVICES INC	34,379.00
194137	ENTERPRISE FM TRUST	39,304.28
194138	ESTERSON, LORI	195.00
194139	FALCON, ESTHER	32.50
194140	FALTO, CONSTANCE	195.00
194141	FINLEY ENGINEERING CO INC	22,772.70
194142	FLETCHER, CORAL	195.00
194143	FOSTER & FOSTER CONSULTING	16,500.00
194144	FRONTIER COMMUNICATIONS	4,489.01
194145	GARDA CL WEST INC	1,472.70
194146	HAMPTON, PATRICIA	390.00
194147	HARDEE, TIMOTHY	195.00
194148	HARRIS, ANNE	65.00
194149	HARVIN, ALLEN	100.00
194150	HERRERA, SANDRA	195.00
194151	HOME DEPOT #8987	1,434.92
194152	HOPKINS, VICKI	195.00

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Warrant Number	Vendor Name	Warrant Amount
194153	INFOSEND, INC	207.72
194154	INNOVATIVE FEDERAL STRATEGIES	4,750.00
194155	JEWS, NICOLE	92.75
194156	KAKISH, BISHARA	195.00
194157	KEMIRA WATER SOLUTIONS INC	4,819.74
194158	KEN GRODY FORD REDLANDS	3,282.32
194159	KIMLEY-HORN AND ASSOCIATES, INC	20,841.75
194160	LIEBERT CASSIDY WHITMORE	110,630.05
194161	LIEVANOS, MANUEL	390.00
194162	LINN-FURY, CAROL	162.50
194163	LOFTIS, MILDRED	195.00
194164	MACDONALD, DOUGLAS	195.00
194165	MARIPOSA LANDSCAPES, INC	17,662.49
194166	MC CALL'S METER SALES	300.00
194167	MENDOZA, SAMUEL	0.00
194168	MERAS, DAVID	195.00
194169	MIDDLETON, SHARON	195.00
194170	MILLER, NINA	195.00
194171	PARKHOUSE TIRE, INC.	414.18
194172	PAYPRO ADMINISTRATORS	115.00
194173	PETRUCCI, TERESA	195.00
194174	PRATT, DEREK	32.50
194175	PRUITT, CARMEN	195.00
194176	PUBLIC ENTITY RISK MANAGEMENT	241.00
194177	R.F. MACDONALD CO	1,597.49
194178	R&R ROOFING & WATERPROOFING INC	8,667.00
194179	RICHARDS WATSON GERSHON	59,036.76
194180	RIV. CO. FIRE DEPARTMENT	939,499.35
194181	RIVERA, KATHLEEN	195.00
194182	RIVERSIDE COUNTY SHERIFF-PSEC	6,699.80
194183	RIVERSIDE, COUNTY OF	245.00
194184	ROADWAY ASSET SERVICES LLC	14,015.04
194185	RODRIGUEZ, MANUEL	3,678.93
194186	RODRIGUEZ, SANDRA	195.00
194187	ROEBUCK, ALYSSA	792.50
194188	SIQUEIROS, JUANA	195.00
194189	SKRIPELI, DRAGO	400.00
194190	SMART & FINAL	393.53
194191	SO CAL JOINT POLE COMMITTEE	1,184.26
194192	SOFTWARE ONE, INC	2,999.98
194193	SORIANO, NATLLELY	42.00
194194	SOUTHERN CALIFORNIA EDISON	4,363.27
194195	SOUTHERN CALIFORNIA GAS CO	7,512.13
194196	STAPLES BUSINESS ADVANTAGE	497.53
194197	STATE WATER RESOURCES CONTROL	43,334.60
194198	STONE, PAMELA	42.00
194199	SUPERION, LLC	26,807.18
194200	TAPIA, SALOMON	195.00
194201	TRAN, LOAN	32.50
194202	UNDERGROUND SERVICE ALERT	143.37
194203	URIAS, JOSE ROSARIO	292.50
194204	VALDEZ JR, MARY ALICE & ANTONIO	195.00
194205	VALENCIA, MARIBEL	195.00

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Warrant Number	Vendor Name	Warrant Amount
194206	VERIZON WIRELESS SERVICES, LLC	9,728.07
194207	VESTIS SERVICES LLC	100.75
194208	VIRTUAL PROJECT MANAGER, LLC	1,000.00
194209	VISION SECURITY SYSTEMS	2,355.00
194210	WASTE MANAGEMENT OF THE IE	3,633.97
194211	WILLDAN ENGINEERING	525.00
194212	WRCOG	3,547.59
194213	YOUNG, CHRISTY	195.00
194214	ZENNER PERFORMANCE METERS, INC	212.74
194215	AED ENERGY SERVICES LLC	7,830.00
194216	ALBERT A. WEBB ASSOCIATES	15,889.42
194217	ALGIERS, LYNETTE	282.37
194218	AMAZON BUSINESS	920.19
194219	ASBURY ENVIRONMENTAL SERVICES DBA	743.48
194220	ATWORK PERSONNEL SERVICES	6,840.55
194221	AURIGA CORPORATION	800.00
194222	BARRINGTON, CINDY	131.25
194223	BEAUMONT DO IT BEST HOME CENTER	271.62
194224	BEAUMONT SAFE & LOCK	887.22
194225	BRAX COMPANY, INC	18,116.25
194226	BUDD-FALEN LAW OFFICES, LLC.	9,876.31
194227	CALACT	840.00
194228	CALIFORNIA WATER EFFICIENCY PARTNER	3,581.50
194229	CANON FINANCIAL SERVICES, INC	362.99
194230	CASC ENGINEERING AND CONSULTING INC	5,517.50
194231	CDW GOVERNMENT, LLC	2,641.89
194232	CELL BUSINESS EQUIP-LEASING	844.10
194233	CELL BUSINESS EQUIPMENT (CBE)	34.01
194234	CI SOLUTIONS	119.61
194235	CINTAS CORPORATION	2,353.84
194236	D&M JOB INC.	717.62
194237	DIAMOND ENVIRONMENTAL SERVICES	165.40
194238	DUDEK	31,288.50
194239	E.R. BLOCK PLUMBING	3,300.00
194240	FLYNN, SHERI	131.25
194241	FRONTIER COMMUNICATIONS	1,010.00
194242	GAS COMPANY, THE	1,928.42
194243	GRAINGER	1,005.34
194244	GREAT WESTERN RECREATION LLC	678.37
194245	HOME DEPOT #8987	116.84
194246	IBEW LOCAL 47 RETIREE MEDICAL TRUST	3,026.08
194247	INDEPENDENT REVIEW INVESTIGATIONS	3,835.72
194248	INFOSEND, INC	2,400.00
194249	INLAND EMPIRE MAGAZINE	895.00
194250	KEN GRODY FORD REDLANDS	2,239.82
194251	LEAGUE OF CA CITIES-RIVERSIDE DIV	14,798.00
194252	MARIPOSA LANDSCAPES, INC	11,241.85
194253	MILLER, LEROY	131.25
194254	MITSUBISHI ELECTRIC & ELECTRONICS	353.87
194255	MUNICIPAL CODE CORPORATION	7,696.75
194256	MUNOZ, MARIBEL	264.99
194257	MY COI LLC	8,400.00
194258	NEW GEN STRATEGIES AND SOLUTIONS	16,542.18

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Warrant Number	Vendor Name	Warrant Amount
194259	O'REILLY AUTO PARTS	404.97
194260	ONESOURCE DISTRIBUTORS	91,303.96
194261	ORACLE AMERICA INC	4,280.58
194262	PACKHAM & TOOMEY, INC	985.00
194263	PARKHOUSE TIRE, INC.	1,803.81
194264	PARS	447.32
194265	PARTS AUTHORITY	1,280.34
194266	PINNACLE PETROMLEUM INC	23,517.41
194267	PIONEER AMERICAS LLC	5,799.41
194268	PUBLIC AGENCY RETIREMENT SERVICES	1,200.00
194269	QUINN COMPANY	403.30
194270	RACEWAY FORD INC	4,125.00
194271	RAILROAD MANAGEMENT CO, LLC	1,409.34
194272	RIV CO OFFICE OF ECONOMIC DEV	4,000.00
194273	ROYCE, RICHARD	131.25
194274	SAN GORGONIO PASS WATER AGENCY	199,500.00
194275	SC FUELS	5,007.30
194276	SCCI, INC DBA	500.00
194277	SERVIAM BY WRIGHT LLP	16,371.98
194278	SGP DESIGN AND PRINT	129.30
194279	SITEONE LANDSCAPE SUPPLY	416.61
194280	SLOVAK BARON EMPEY MURPHY & PINKNEY	5,080.00
194281	SONSRAY MACHINERY LLC	2,572.55
194282	SOUTHERN CALIFORNIA WEST COAST ELEC	787.73
194283	STAPLES BUSINESS ADVANTAGE	188.13
194284	STATE OF CALIFORNIA DOJ	814.00
194285	SWIFTLY INC	2,585.00
194286	SYNAGRO-WWT, INC	15,928.95
194287	TEC EQUIPMENT, INC	472.48
194288	TELEPACIFIC COMMUNICATIONS	1,565.09
194289	TETRA TECH INC.	18,235.00
194290	TOP-LINE INDUSTRIAL SUPPLY, LCC	113.50
194291	VESTIS SERVICES LLC	100.75
194292	VIRTUAL PROJECT MANAGER, LLC	1,000.00
194293	VREF INC	6,000.00
194294	WALLACE, COLLEEN	131.25
194295	WILLDAN ENGINEERING	41,500.00
194296	ALL PHASE ELECTRIC SUPPLY	30,499.39
194297	ALL STAR ELITE SPORTS	70.91
194298	AMAZON BUSINESS	2,851.31
194299	AMERICAN FIDELITY ASSURANCE	25,294.84
194300	AMERICAN FORENSIC NURSES	846.33
194301	ANIXTER, INC	162,688.71
194302	AT&T CALNET 2	1,229.91
194303	ATWORK PERSONNEL SERVICES	6,640.29
194304	AVILA, SOL	4,922.12
194305	BABCOCK LABORATORIES, INC	7,681.01
194306	BANNING VETERINARY HOSPITAL	1,410.00
194307	BEAUMONT DO IT BEST HOME CENTER	296.27
194308	BEAUMONT SAFE & LOCK	15.00
194309	BENAVIDES, SUSIE	250.00
194310	BLOOMHUFF, NINA	315.00
194311	CALIFORNIA WATER ENVIRONMENT	239.00

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Warrant Number	Vendor Name	Warrant Amount
194312	CANO, ALONDRA	195.00
194313	CDW GOVERNMENT, LLC	1,804.56
194314	CELL BUSINESS EQUIPMENT (CBE)	3,031.78
194315	CHARTER COMMUNICATIONS	237.00
194316	CHARTER COMMUNICATIONS	990.58
194317	CHARTER COMMUNICATIONS	119.75
194318	CHARTER COMMUNICATIONS	990.58
194319	CICCS	1,204.57
194320	CINTAS CORPORATION	660.94
194321	CONCENTRA MEDICAL CENTERS	1,266.00
194322	COUTS HEATING & COOLING, INC	4,008.97
194323	DIAMOND HILLS CHEVROLET BUICK GMC	820.27
194324	EKBERG, STEVEN	1,800.00
194325	FAST LUBE & TUNE	67.47
194326	FEDEX	91.54
194327	FERRELLGAS LP	1,050.97
194328	FLYNN, SHERI	617.92
194329	FLYNN, SHERI	32.23
194330	FLYNN, SHERI	15.08
194331	FRONTIER COMMUNICATIONS	690.79
194332	GAS COMPANY, THE	2,019.06
194333	GONZALEZ, MARIA	390.00
194334	GRAINGER	309.32
194335	H&L CHARTER CO, INC	1,570.00
194336	HAWLEY, CAMERON	732.61
194337	HDL COREN & CONE	4,000.00
194338	HEMET VALLEY TOOL, INC	637.15
194339	HOME DEPOT #8987	178.77
194340	HOVIVIAN, AUSTIN	4,445.00
194341	IRON MOUNTAIN INFORMATION MGMT, LLC	193.29
194342	JOE A GONSALVES & SON	3,850.00
194343	KEN GRODY FORD REDLANDS	4,709.17
194344	LARA, TORIBIO	195.00
194345	LINCOLN FINANCIAL GROUP	11,656.16
194346	LINCOLN FINANCIAL GROUP	11,335.37
194347	MARIPOSA LANDSCAPES, INC	12,579.29
194348	MILSOFT UTILITY SOLUTIONS, INC	15,135.99
194349	MODEL 1 COMMERCIAL VEHICLES	443.50
194350	MORENO, ANGELA	195.00
194351	MORENO, MELBA	195.00
194352	MYERS & SONS HI-WAY SAFETY INC.	889.39
194353	NAPA AUTO PARTS	159.94
194354	OPENGOV, INC	96,369.00
194355	PARTS AUTHORITY	1,940.28
194356	PINNACLE PETROMLEUM INC	20,678.56
194357	PRE-PAID LEGAL SERVICES, INC	381.66
194358	RIOS, MARIA FRANCISCO	195.00
194359	ROADWAY ASSET SERVICES LLC	36,039.00
194360	SCCI, INC DBA	500.00
194361	SGP DESIGN AND PRINT	413.76
194362	SHRED-IT USA, LLC	152.40
194363	SMART & FINAL	116.21
194364	SMITH, HAROLD A	150.00

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Warrant Number	Vendor Name	Warrant Amount
194365	SOUTHERN CALIFORNIA EDISON	304.67
194366	STAPLES BUSINESS ADVANTAGE	429.97
194367	STATE OF CALIFORNIA DOJ	70.00
194368	T-MOBILE	115.00
194369	TASC	1,209.18
194370	TEXAS LIFE INSURANCE COMPANY	5,463.62
194371	THOMSON REUTERS - WEST	274.44
194372	TIMECLOCK PLUS, LLC	1,861.20
194373	TURBO DATA SYSTEMS INC	150.00
194374	VESTIS SERVICES LLC	100.75
194375	WEST COAST SAND & GRAVEL, INC.	591.68
194376	YUNEX, LLC	4,763.50
9008146	QUADIENT LEASING USA, INC	940.04
9008147	WELLS FARGO BANK	300.00
9008148	INTERNAL REVENUE SERVICE	15.60
9008149	WELLS FARGO CARD SERVICES INC	36,291.68
9008150	CA. ST. PUBLIC EMPLOYEES	157,393.69
9008151	AMERICAN FIDELITY ASSURANCE	7,601.38
9008152	CA. ST. PUBLIC EMPLOYEES	202,882.28
9008153	CA. ST. PUBLIC EMPLOYEES	7,207.17
9008154	CA. ST. PUBLIC EMPLOYEES	7,363.80
9008155	WELLS FARGO BANK	632,613.70
9008156	CORPORATION SERVICE COMPANY	160.00
9008157	CA. ST. EMPLOYMENT DEV. DEPT.	49,531.36
9008158	INTERNAL REVENUE SERVICE	274,581.86
9008159	WELLS FARGO BANK	300.00
9008160	TASC	546.91
9008161	EMPOWER ANNUITY INSURANCE COMPANY	114,245.66
9008162	CA. ST. PUBLIC EMPLOYEES	801.66
9008163	CORPORATION SERVICE COMPANY	76.00
9008164	WINDSTREAM SERVICES, LLC	1,098.47
9008165	WINDSTREAM SERVICES, LLC	5,267.31
9008166	WINDSTREAM SERVICES, LLC	1,097.96
9008167	CORPORATION SERVICE COMPANY	32.00
9008168	CA. ST. PUBLIC EMPLOYEES	151,596.21
9008169	CA. ST. BOARD OF EQUAL. - FUEL	943.00
9008170	CA. ST. BOARD OF EQUAL. - FUEL	623.00
9008171	WELLS FARGO BANK	604,316.83
9008172	CORPORATION SERVICE COMPANY	92.00
9008173	CA. ST. EMPLOYMENT DEV. DEPT.	45,531.24
9008174	INTERNAL REVENUE SERVICE	247,272.06
9008175	WELLS FARGO BANK	300.00
9008176	EMPOWER ANNUITY INSURANCE COMPANY	44,107.48
9008177	TASC	546.91
9008178	CA. ST. BOARD OF EQUALIZATION	340.00
9008179	CORPORATION SERVICE COMPANY	117.00
Grand Total		7,536,913.66

Less Voided / Reissued Checks from Prior Period	-
Less Voided Checks Prior Period	(88.31)
Add Payroll Checks	5,949.56
Total Remittance for Month	7,542,774.91

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1162	1/17/2025	RIVERSIDE PUBLIC UTILITIES	300		670-7000-331.20-01	INTEREST REVENUE REVENUE REC'D IN DEC 2024	(3,241.86)
					670-7000-356.38-17	CRR REVENUE REVENUE REC'D IN DEC 2024	(1,795.54)
					670-7000-356.38-20	TRANS REVENUE REVENUE REC'D IN DEC 2024	(63,979.10)
					670-7010-473.27-09	S&D EXPENSE PAID DURING DEC 2024	51,224.00
					670-7010-473.27-50	CAPACITY EXPENSE PAID DURING DEC 2024	1,075,143.67
					670-7010-473.27-60	ENERGY EXPENSE PAID DURING DEC 2024	104,717.28
					670-7010-473.27-70	TRANS EXPENSE PAID DURING DEC 2024	402,934.04
193995	1/9/2025	A.C. PROPANE	247791	033249	810-9700-490.90-59	PROPANE	393.82
193996	1/9/2025	AMAZON BUSINESS	119L-LCDF-4C3C	033045	705-4500-412.36-00	OFFICE SUPPLIES	162.01
			11XY-DPHG-1R3W	032929	702-3800-480.38-52	ELECTRICAL PRODUCTS	48.02
			134V-DN6J-HGKT	033002	761-3100-480.36-00	DECORATIONS	8.57
			13L4-VWCW-3PWC				61.41
			163C-47NH-19RR	033044	670-7000-473.45-05	FIBER OPTIC CABLE (5)	45.80
			17G6-D96Y-11FD	033045	001-1910-412.36-00	WIRED HEADSET	52.83
			19X1-FQ1X-1VW1	033215	001-2200-421.36-00	WATER DISPENSER-RETURNED	(344.79)
			1GR9-CDYJ-47XJ	033043	675-7020-473.41-46	SUPPLIES	105.04
			1J43-WKMV-KQPW	033121	001-4000-461.36-09	ALUMINUM SHEET PANS	55.94
			1J96-DY3N-7X4F	033032	660-6300-471.36-00	SHEET PROTECTORS/TAPE	15.85
			1KNK-VCMW-K7LF	033215	001-2200-421.36-00	SUPPLIES	344.79
			1QMP-RRRY-W4XW	033043	675-7020-473.41-46	LED LIGHT	42.64
			1RN4-M4MC-GPD6	033045	001-1900-412.36-00	MINAS ENVELOPE #10	160.50
			1TPW-94FL-JJ3T	032929	702-3800-480.38-52	BRACKETS (5)	81.10
			1WRN-LMHW-9WPW	033045	705-4500-412.36-00	PANEL WALL CLIPS	17.65
			1X3Q-TK6D-QYVK	032929	702-3800-480.30-19	TRAVEL KEYBOARD-RETURNED	(141.10)
			1XQQ-6KVJ-1KFV	033045	705-4500-412.36-00	CREDIT-CALENDAR	(33.87)
			1XTM-HRVV-WD3M	033046	001-3000-442.36-00	COMPUTER HARDWARE	128.76
			1YT7-QCHK-JWYJ	033045	705-4500-412.36-00	CHAIRS-SMALL CONF ROOM 3(4PK)	730.47
193997	1/9/2025	AMERICAN FIDELITY ASSURANCE	D788314		001-0000-204.30-00	WHOLE/TERM LIFE NOVEMBER 2024	7,444.88
					001-0000-204.80-02	CANCER POLICY NOVEMBER 2024	4,075.86
					001-0000-204.80-09	ACCIDENT POLICY NOVEMBER 2024	3,922.10
					001-0000-204.80-11	DISABILITY-SUPP STD NOVEMBER 2024	6,749.70
					001-0000-204.80-12	CRITICAL ILLNESS NOVEMBER 2024	1,905.00
					001-0000-204.80-16	GRP HOSP INDEMNITY NOVEMBER 2024	1,197.30
193998	1/9/2025	AMERICAN FORENSIC NURSES	79157	033079	001-2200-421.33-31	STAND BY FEE FEBRUARY 25	1,174.17
193999	1/9/2025	ANIXTER, INC	5846691-04		670-0000-131.00-00	1/C 750 61X ALUM FILLED PO NUM 033229	34,776.04
194000	1/9/2025	ARAGON GEOTECHNICAL, INC	9119		002-0000-222.30-27	2024 MINING INSP REPORT 10/27/24-11/21/24	4,356.25
					002-2800-351.36-01	2024 MINING INSP REPORT 10/27/24-11/21/24	(4,356.25)
				032768	002-2800-441.33-11	2024 MINING INSP REPORT 10/27/24-11/21/24	4,356.25
194001	1/9/2025	ARCE, PAUL	DECEMBER 2024		001-4000-461.23-15	GUITAR INSTRUCTION DEC 2024	84.00
194002	1/9/2025	ASSOCIATED BAG COMPANY	F332023	033322	670-7000-473.45-16	BLUE DISPOSABLE WIPER/TWL	1,812.41
194003	1/9/2025	AT&T MOBILITY LLC	992351038121924		001-2200-421.26-05	MONTHLY SVC 11/12/24-12/11/24	2,110.10
194004	1/9/2025	ATWORK PERSONNEL SERVICES	296155	033272	810-9700-490.90-59	REBELO 10/27/24	1,114.71
			299700	033334	001-2740-442.23-27	INZUNZA 11/24/24	1,363.65
			301317	033334	001-2740-442.23-27	INZUNZA 12/08/24	1,363.65
			302170	033146	001-2200-421.23-27	M BOND 12/15/24	142.56
			302171	033074	001-3000-442.23-27	SANTELLO 12/15/24	297.52
					660-6300-471.23-27	SANTELLO 12/15/24	446.29
					680-8000-454.23-27	SANTELLO 12/15/24	446.29
					702-3800-480.23-27	SANTELLO 12/15/24	297.52
			302878	033334	001-2740-442.23-27	INZUNZA 12/22/24	1,363.65
			302879	033146	001-2200-421.23-27	M BOND 12/22/24	320.77
			302880	033074	001-3000-442.23-27	SANTELLO 12/22/24	238.02
					660-6300-471.23-27	SANTELLO 12/22/24	357.03
					680-8000-454.23-27	SANTELLO 12/22/24	357.02
					702-3800-480.23-27	SANTELLO 12/22/24	238.02
			303653	033334	001-2740-442.23-27	INZUNZA 12/29/24	1,022.74
			303654	033074	001-3000-442.23-27	SANTELLO 12/29/24	178.51
					660-6300-471.23-27	SANTELLO 12/29/24	267.77
					680-8000-454.23-27	SANTELLO 12/29/24	267.77

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194004	1/9/2025	ATWORK PERSONNEL SERVICES	303654	033074	702-3800-480.23-27	SANTELLO 12/29/24	178.52
			303655	033263	761-3100-480.33-11	BURGER 12/29/24	911.90
194005	1/9/2025	AURIGA CORPORATION	8372	031498	673-7000-473.96-47	TASK 2- ELECTRICAL DESIGN	1,400.00
194006	1/9/2025	AUTOMATED GATE SERVICES, INC.	0051291	032951	704-3200-412.30-01	GATE INSPECTION-CITY YARD	394.00
			0052630	032951	704-3200-412.30-01	GATE REPAIR-WATER YARD	1,025.00
194007	1/9/2025	AVILA, SOL	MEALS 1/12-15		001-2200-421.23-06	EXECUTIVE ASSISTANT TRNG MEALS 1/12-15 S AVILA	209.25
194008	1/9/2025	BABCOCK LABORATORIES, INC	CI31173-0030	032373	660-6300-471.23-32	BACTERIALOGICAL ANALYSIS	242.00
194009	1/9/2025	BANNING GLASS MIRROR & SCREEN	12192024	032994	704-3200-412.30-02	GLASS REPLACEMENT	519.62
194010	1/9/2025	BANNING POLICE OFFICERS ASSOC.	DECEMBER 2024		001-0000-204.50-00	POLICE OFFICER ASSOC DUES DEC 2024	2,910.30
194011	1/9/2025	BANNING VETERINARY HOSPITAL	839664		001-2300-424.33-90	CREMATION #2412150034	147.75
			839820		001-2300-424.33-90	CREMATION #2412030024	527.75
			839845		001-2300-424.33-90	CREMATION #2412180056	147.75
194012	1/9/2025	BEAUMONT CHERRY VALLEY WATER	0005686		660-6300-471.27-14	WELL MAINT REIMBURSEMENT 10/22/2024-11/20/2024	3,702.27
194013	1/9/2025	BEAUMONT DO IT BEST HOME CENTER	547457	032952	100-4900-431.36-00	PADLOCK	26.39
			547512	032952	704-3200-412.30-02	SUPPLIES	25.34
			547567	032952	704-3200-412.30-02	SEALANT	18.31
			549403	032918	810-9700-490.90-59	SINGLE SIDED KEY (14)	27.76
			551152	032952	704-3200-412.30-02	3/BXSO' POLY TWIST ROPE	17.23
			551251	032952	704-3200-412.30-02	SUPPLIES	29.93
			551288	032952	704-3200-412.30-01	2" MAG X-LNG SHK PADLOCK	20.46
			551334	032952	704-3200-412.30-02	70W HP SODIUM BULB	29.62
			551367	032952	100-4900-431.36-00	GLOVES (3)	54.92
			551448	032952	704-3200-412.30-02	SUPPLIES	43.15
			551450	032952	704-3200-412.30-02	SUPPLIES	9.24
			551587	032918	810-9700-490.90-59	SUPPLIES	90.21
			551661	032952	704-3200-412.36-00	SUPPLIES	35.00
			551669	032952	704-3200-412.30-02	660M SGL CYL STN CHRM	18.31
194014	1/9/2025	BEAUMONT SAFE & LOCK	78159	033158	810-9700-490.90-60	RE-LOCKING	170.11
194015	1/9/2025	BENHAR, DIANA T	DECEMBER 2024		001-4000-461.23-15	ZUMBA INSTRUCTION DEC 2024	252.00
194016	1/9/2025	BLUEBEAM, INC	2178208	032589	705-4500-412.30-17	ANNUAL SUBSCRIPTION FEE 1/6/25-1/5/26	5,640.00
194017	1/9/2025	BOGARD, LINCOLN	TRAVEL 10/28-30		001-1900-412.23-05	24 CALPERS EDU FORUM TRAVEL 10/28-30 BOGARD	285.48
194018	1/9/2025	CALIFORNIA LAW ENFORCE ASSN	JANUARY 2025		001-0000-204.80-13	POLICE LTD PREMIUMS JANUARY 2025	1,088.00
194019	1/9/2025	CAMPBELL, DUSTIN	HOME DPT 311036		001-1000-411.41-86	GENERATOR RNTL PARADE PD IN ADV CAMPBELL	76.50
194020	1/9/2025	CAMPBELL, GABRIELLE	ENOVA 1125		001-1000-411.41-86	WINDOW CLINGS FOR PARADE PD IN ADV CAMPBELL	321.10
194021	1/9/2025	CANON FINANCIAL SERVICES, INC	37292417	033119	001-2200-421.32-06	COPIER LEASE 11/10/24-12/9/24	385.32
194022	1/9/2025	CASC ENGINEERING AND CONSULTING INC	0052594	032893	001-2800-441.33-42	LAND USE CIRCU ELEMENTS	2,532.00
194023	1/9/2025	CASTILLO, ASHLEY	MEALS 1/13-15		001-2200-421.23-06	IAPE TRIANING SEMINAR MEALS 1/13-15 CASTILLO	154.25
194024	1/9/2025	CDW GOVERNMENT, LLC	AB63P6B	032268	001-4000-461.89-48	DELL MONITOR/STAND	468.20
			AB9244D	032948	001-1000-411.89-48	LAPTOP-ROYCE #0B3389F24303GP	759.58
194025	1/9/2025	CELL BUSINESS EQUIPMENT (CBE)	IN2736184	033052	001-2200-421.32-06	COPY COUNT-RECORDS	90.59
			IN2765923	032562	001-1300-412.30-17	COPIER MAINTENANCE	81.60
			IN2783293	032562	001-1300-412.30-17	COPIER MAINTENANCE	26.60
			IN2791200	033052	001-2200-421.32-06	COPY COUNT-RECORDS	109.65
			IN2792279	032562	001-1300-412.30-17	COPIER MAINTENANCE	36.48
			IN2796037	033052	001-2200-421.32-06	COPY COUNT-RECORDS	77.15
			IN2800136	033052	001-2200-421.32-06	COPY COUNT-RECORDS	161.14
194026	1/9/2025	CHARTER COMMUNICATIONS	189282601122124		001-2400-422.26-09	3900 W WILSON 01/01/25-01/31/25	237.00
194027	1/9/2025	CHARTER COMMUNICATIONS	189283501122124		001-2060-446.26-09	CITY HALL 12/25/2024-01/24/2025	119.75
194028	1/9/2025	CHARTER COMMUNICATIONS	189283601122124		670-7000-473.26-07	CITY HALL FIBER 12/25/2024-01/24/2025	991.58
194029	1/9/2025	CHARTER COMMUNICATIONS	086811201010125		670-7000-473.26-09	CABLE SERVICE-CORP YARD 01/01/2025-01/31/2025	102.30
194030	1/9/2025	CHARTER COMMUNICATIONS	189284001010125		001-2400-422.26-09	172 N MURRAY ST 01/01/25-01/31/25	35.95
194031	1/9/2025	CHARTER COMMUNICATIONS	189284101010125		001-2060-446.26-09	COMMUNITY CENTER 01/01/25-01/31/25	35.52
194032	1/9/2025	CHARTER COMMUNICATIONS	189284201010125		001-2060-446.26-09	SENIOR CENTER 01/01/25-01/31/25	35.52
194033	1/9/2025	CICCS	2024-12		001-0000-204.62-00	PET INSURANCE NOVEMBER 2024	61.48
194034	1/9/2025	CINTAS CORPORATION	4213724061	033161	001-3600-461.25-02	UNIFORM-PARKS	52.32
			4214508043	033161	001-3600-461.25-02	UNIFORM-PARKS	52.32
			4214508132	033083	660-6300-471.25-02	UNIFORM-WATER	246.61
					680-8000-454.25-02	UNIFORM-WASTEWATER	46.78
			4215252355	032953	100-4900-431.25-02	UNIFORM-STREETS	79.77

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194034	1/9/2025	CINTAS CORPORATION	4215252355	032953	704-3200-412.25-02	UNIFORM-BUILD MAINT	11.03
			4215911655	032953	100-4900-431.25-02	UNIFORM-STREETS	79.77
					704-3200-412.25-02	UNIFORM-BUILD MAINT	11.03
			4215911737	033256	670-7000-473.25-02	UNIFORM-ELEC	343.21
			4216606145	032953	100-4900-431.25-02	UNIFORM-STREETS	79.77
					704-3200-412.25-02	UNIFORM-BUILD MAINT	11.03
			4216606334	033256	670-7000-473.25-02	UNIFORM-ELEC	339.05
194035	1/9/2025	CITY OF BANNING (BNG)	FC A&E JAN25		001-2200-421.32-02	FC A&E HANGAR JANUARY 2025	383.20
			FC B-5 JAN25		705-4500-412.32-06	FC B-5 HANGAR JANUARY 2025	185.89
			FC D-2 JAN25		001-3000-442.32-02	FC D-2 HANGAR JANUARY 2025	197.57
194036	1/9/2025	CONSOLIDATED ELECTRICAL	0954-1036474	032967	704-3200-412.30-02	4FT LED	210.65
			0954-1037384	032967	704-3200-412.30-02	4FT LEDS	210.65
194037	1/9/2025	COUTS HEATING & COOLING, INC	11275	032968	704-3200-412.30-21	SERVICE-WILLIAMS PARK	1,295.81
			11323	032968	704-3200-412.30-21	SERVICE-CITY HALL	340.00
194038	1/9/2025	CRAFCO INC	9403356265	033105	100-4900-431.38-58	COLD PATCH BAG (60)	1,008.13
194039	1/9/2025	CUSTOM TROPHIES & UNEEK AWARDS	005918	032949	001-1000-411.41-86	PLAQUES (30)	1,240.20
194040	1/9/2025	CYBERTIME NETWORK COMMUNICATIONS	1521-25021	032557	660-6300-471.26-07	CITYWIDE LOOPED MICROWAVE	1,900.00
			1522-25022	032558	703-3700-480.30-19	INT CIRCUIT-CITY HALL	699.00
194041	1/9/2025	DOBBINS, DEANN LOUISE	DECEMBER 2024		001-4000-461.23-15	SPECIAL NEEDS INSTRUCTION DEC 2024	138.60
194042	1/9/2025	EFS WEST INC	240167	032650	610-0000-232.00-00	CNG FUELING STATION	(1,899.54)
					610-5800-434.90-56	CNG FUELING STATION	37,990.80
194043	1/9/2025	ENGINEERING RESOURCES OF SO CA	60838	032559	001-3000-442.33-53	PLAN CHECK SERVICES THRU 10/1/24	68,648.15
			60925	032559	001-3000-442.33-53	INSPECTION SERVICES THRU 11/30/24	58,220.08
			60964	032559	001-3000-442.33-53	PLAN CHECK SERVICES THRU 11/30/24	17,336.65
			60980	032552	660-6300-471.33-11	STAFF AUGMENTATION THRU 11/30/24	9,632.00
					680-8000-454.33-11	STAFF AUGMENTATION THRU 11/30/24	4,128.00
194044	1/9/2025	ENTERPRISE RENT-A-CAR	37846069		001-1000-411.23-05	LOCC LEADERSHIP 12/3-7 WALLACE TV25A1	261.83
			37846069A		001-1900-412.23-05	LOCC MUNICIPAL FIN INST 12/10-12 BOGARD	122.32
194045	1/9/2025	EXECUTIVE FACILTIES SERVICES INC	33019	032334	704-3200-412.33-18	JANITORIAL SERVICES NOV 2024	15,760.20
			33235	032334	704-3200-412.33-18	JANITORIAL SERVICES DEC 2024	15,760.20
			33236	032334	704-3200-412.33-18	JANITORIAL SUPPLIES DEC 2024	2,078.69
194046	1/9/2025	FERRELLGAS LP	1128395082	033261	660-6300-471.36-08	PROPANE	568.69
194047	1/9/2025	FRONTIER COMMUNICATIONS	2131817186DEC24		703-3700-480.30-17	213-181-7186 12/19/24-01/18/25	478.88
			9518491595DEC24		001-2200-421.26-05	951-849-1595 12/13/24-01/12/25	130.15
194048	1/9/2025	FUN EXPRESS	73473780501	033110	001-4020-461.36-09	CRAFT SUPPLIES	116.28
			73473780502	033110	001-4020-461.36-09	CONSTRUCTION PAPER	40.93
194049	1/9/2025	GAS COMPANY, THE	03292684002DC24		001-4000-461.26-06	COMMUNITY CENTER 11/15/24-12/16/24	91.61
			03442480665DC24		704-3200-412.26-06	2401 W NICOLET ST 11/12/24-12/12/24	57.14
			05192710001DC24		001-3600-461.26-06	PARKS & REC 11/15/24-12/16/24	22.07
			05602682006DC24		001-2400-422.26-06	172 N MURRAY ST 11/15/24-12/16/24	522.95
			09142474007DC24		001-4050-461.26-06	SENIOR CENTER 11/15/24-12/16/24	408.75
			13392459007DC24		600-5100-435.26-06	408 S HATHAWAY ST 11/21/24-12/20/24	94.19
			15684815176DC24		705-4500-412.26-06	99 E RAMSEY 11/15/24-12/16/24	54.33
			16108344439DC24		001-4010-461.26-06	AQUATICS 11/15/24-12/16/24	28.86
194050	1/9/2025	GRAINGER	9361907034	032922	704-3200-412.30-02	FILTER CARTRIDGE	608.67
194051	1/9/2025	GREYBAR PRINTING	7015	033362	001-2200-421.23-02	BUSINESS CARDS-JIMENEZ	24.24
			7016	033362	001-2200-421.23-02	FTP VOL 1	86.81
			7030	033362	001-2200-421.23-02	BUSINESS CARDS-OERTEL	24.24
			7056	033362	001-2200-421.23-02	BUSINESS CARDS-STONE	24.24
			7174	033362	001-2200-421.23-02	DHCS 1801 FORM	143.52
			7175	033362	001-2200-421.23-02	PROPERTY/EVIDENCE RECEIPT	80.16
			7176	033362	001-2200-421.23-02	DETENTION CERTIFICATE	80.16
			8054	033362	001-2200-421.23-02	BUSINESS CARDS-RODRIGUEZ	24.24
			8349	033362	001-2200-421.23-02	BUSINESS CARDS-MUNOZ	24.24
			8350	033362	001-2200-421.23-02	BUSINESS CARDS-HERNANDEZ	24.24
194052	1/9/2025	HALDIMAN, RENEE	90711-50128 AC		675-7020-473.42-35	RESIDENTIAL AC REBATE	3,000.00
194053	1/9/2025	HERNANDEZ, CARLA	DECEMBER 2024		001-4000-461.23-15	KARATE INSTRUCTION DEC 2024	1,190.00
194054	1/9/2025	HOME DEPOT #8987	2204562	033134	001-3600-461.25-02	JACKETS (2) RETURNED	(150.59)
			3371541	032957	100-4900-431.36-00	SUPPLIES	96.94

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Warrant Number	Warrant Date	Vendor Name	Invoice Number	P.O. Number	Account Number	Payment Description	Warrant Amount
194054	1/9/2025	HOME DEPOT #8987	3371541	032957	704-3200-412.30-02	SUPPLIES	53.71
			3902830	033027	660-6300-471.30-02	TOOLS/SUPPLIES	85.86
			6371515	032957	704-3200-412.30-02	PAINT	197.00
			902068	033027	680-8000-454.30-04	TOOLS/SUPPLIES	246.89
194055	1/9/2025	HUERTA JR., GILBERT	DECEMBER 2024		001-4000-461.23-15	KUNG-FU & TAICHI DEC 2024	455.00
194056	1/9/2025	HUERTA LOPEZ, TUNNIA A	DECEMBER 2024		001-4000-461.23-15	DANZA FOLKLOR DEC 2024	385.00
194057	1/9/2025	I.B.E.W. LOCAL 47	DECEMBER 2024		001-0000-204.53-00	GEN/UTILITY UNION DUES DEC 2024	10,281.46
194058	1/9/2025	I.B.E.W. LOCAL 47 (PAC)	DECEMBER 2024		001-0000-204.80-01	PAC DUES DEC 2024	48.00
194059	1/9/2025	IBEW LOCAL 47 RETIREE MEDICAL TRUST	20250110		001-0000-204.80-10	PAYROLL SUMMARY	3,105.64
194060	1/9/2025	IMEG CONSULTANTS CORP	24000102.00-8	032682	810-9700-490.90-60	SOUND WALL THRU 12/1/2024	1,932.50
194061	1/9/2025	INFOSEND, INC	278819	032788	761-3100-480.23-02	UB BILL SVC 01/03/25	16.27
					761-3100-480.23-04	UB BILL SVC 01/03/25	138.71
					761-3100-480.33-11	UB BILL SVC 01/03/25	41.66
194062	1/9/2025	KOLLER, MARIE	DECEMBER 2024		001-4000-461.23-15	DRAMA INSTRUCTION DEC 2024	4.20
194063	1/9/2025	LEXISNEXIS RISK SOLUTIONS	1100079549	032332	001-2200-421.30-17	SOFTWARE/MONTHLY	112.55
194064	1/9/2025	MARIPOSA LANDSCAPES, INC	110012	033041	111-4900-432.23-29	LANDSCAPE MAINTENANCE SEP 2024	6,517.60
			110899	030833	001-3600-461.23-29	PARK MAINT NOV 24	8,517.45
					001-4000-461.23-29	PARK MAINT NOV 24	499.99
					001-4010-461.23-29	PARK MAINT NOV 24	1,090.80
					001-4050-461.23-29	PARK MAINT NOV 24	481.73
			111457	033041	111-4900-432.23-29	LANDSCAPE MAINTENANCE DEC 2024	6,517.60
			111707	033041	111-4900-432.23-29	REPAIR ZONE 5 DEC 2024	816.00
194065	1/9/2025	MC CALL'S METER SALES	37181	033195	660-6300-471.45-06	CERTIFIED FLOW TEST	300.00
194066	1/9/2025	MICHAEL BAKER INTERNATIONAL, INC	1225495		002-0000-222.31-42	SUNSET CROSSROADS PM	4,282.50
					002-2800-361.41-02	SUNSET CROSSROADS PM	(4,282.50)
				030874	002-2800-441.33-11	MBI SUNSET CROSSROADS PM	4,282.50
194067	1/9/2025	MILSOFT UTILITY SOLUTIONS, INC	20250009	033231	761-3100-480.30-17	IXP HOSTED MONTHLY FEB 2025	3,200.00
194068	1/9/2025	MORGAN, DEIDRA J	DECEMBER 2024		001-4000-461.23-15	TOT TIME INSTRUCTION DEC 2024	157.50
194069	1/9/2025	MYERS & SONS HI-WAY SAFETY INC.	165629	032956	100-4900-431.89-54	STREET SIGNS	1,664.47
			166092	032956	100-4900-431.89-54	TRAFFIC CONTROL SUPPLIES	705.98
194070	1/9/2025	ONESOURCE DISTRIBUTORS	S007674395.001	033306	670-7000-473.45-16	HASTINGS C-208	121.76
194071	1/9/2025	ONLINE INFORMATION SERVICES	1302514	033181	761-3100-480.23-51	UB CREDIT CHECK THRU 12-31-2024	641.90
194072	1/9/2025	PACKHAM & TOOMEY, INC	2024553	033101	600-5100-435.30-06	MONTHLY SPCC INSPECTION DEC 2024	125.00
194073	1/9/2025	PARS	20250110		001-0000-204.25-00	PAYROLL SUMMARY	534.66
194074	1/9/2025	PARS	20250103		001-0000-204.25-00	PAYROLL SUMMARY	40.34
194075	1/9/2025	PAYPRO ADMINISTRATORS	044315		001-1300-412.33-11	COBRA ADMIN SERVICES NOVEMBER 2024	171.00
194076	1/9/2025	PRESS-ENTERPRISE, THE	0011705584	033090	680-8000-454.23-01	NOTICE FOR BIDS AD 12/1/24	126.17
			0011708056	033090	680-8000-454.23-01	NOTICE FOR BIDS AD 12/18/24 12/25/24	252.35
			0011709039	033090	680-8000-454.23-01	NOTICE FOR BIDS AD 12/22/24 12/29/24	252.35
194077	1/9/2025	PULVER, JODEANE V	DECEMBER 2024		001-4000-461.23-15	YOGA INSTRUCTION DEC 2024	136.50
194078	1/9/2025	RIV. CO. DIV. OF WEIGHTS & MEASURES	MA00344/2025		600-5100-435.41-04	BANNING AIRPORT FUEL DEV 01/01/2025-12/31/2025	148.20
194079	1/9/2025	SAN BERNARDINO PUBLIC EMPLOYEES	DECEMBER 2024		001-0000-204.51-00	TEAMSTER DUES DEC 2024	2,498.86
194080	1/9/2025	SATELLITE PHONE STORE	9408-1343820	032428	703-3700-480.30-19	IRIDIUM MONTHLY EMERGENCY USAGE DEC2024 SVC JAN2025	307.95
194081	1/9/2025	SCA OF CA, LLC	158959PS	031802	100-4900-431.33-11	STREET SWEEPING SERVICES DEC 2024	11,559.00
			159049PS	031802	100-4900-431.33-11	SPECIAL STRT SWEEPING SVC 12/7/2024	360.00
			159052PS	031802	100-4900-431.33-11	SPECIAL STRT SWEEPING SVC 12/5/2024	240.00
194082	1/9/2025	SCCI, INC DBA	243066	033337	660-6300-471.23-06	SAFETY MEETING 12/12/24	250.00
194083	1/9/2025	SCPPA	0125	032766	675-7020-473.42-58	SYNERGY COB RESDI 11-2024	4,116.10
194084	1/9/2025	SHRED-IT USA, LLC	8009262460	033351	001-2200-421.23-07	SHREDDING SERVICES 11/25/24 PD	162.44
			8009262754	033351	670-7000-473.33-11	DELIVER SIT CONTAINER 12/6/24 CITY YARD	60.00
194085	1/9/2025	SOFTWARE ONE, INC	US-PSI-1531589	032564	703-3700-480.30-17	BACKUP SIMPLE STANDARD DEC 2024	1,530.00
194086	1/9/2025	SOUTHERN CALIFORNIA EDISON	360580366DEC24		660-6300-471.26-04	DEL RITA BOOSTER STATION 11/12/24-12/10/24	95.20
			360828122DEC24		670-7000-473.26-04	HIGHLAND HOME/WESTWARD 12/01/2024-12/31/2024	91.99
194087	1/9/2025	SOUTHERN CALIFORNIA WEST COAST ELEC	49597	033057	704-3200-412.30-02	MAINTENANCE/INSPECTION	1,436.75
194088	1/9/2025	STAPLES BUSINESS ADVANTAGE	6018045435	033055	001-3600-461.33-18	LINERS	691.32
			6018891710	033055	001-4000-461.36-03	SUPPLIES	374.24
			6018988927	033055	001-4000-461.36-03	SUPPLIES	70.81
			6019192838	033267	670-7000-473.36-00	OFFICE SUPPLIES	129.35
			6019787347	033056	001-1200-412.36-00	HP TONER	976.17

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194088	1/9/2025	STAPLES BUSINESS ADVANTAGE	6019856300	033010	705-4500-412.36-00	CALENDAR-CREDIT	(40.04)
			6019856302	033010	705-4500-412.36-00	CITYWIDE CALENDARS	40.04
194089	1/9/2025	STATE OF CALIFORNIA DOJ	782450		001-1300-412.35-99	FINGERPRINTS NOVEMBER 2024	490.00
			785894	033226	001-2200-421.33-31	BLOOD ANALYSIS NOV 2024	70.00
194090	1/9/2025	STATE WATER RESOURCES CONTROL	WD-0283676		680-8000-454.41-04	AN PERMIT FEE #7SSO20023 07/01/24-06/30/25	3,926.00
			WD-0283793		680-8000-454.41-04	AN PERMIT FEE #7A33010001 07/01/24-06/30/25	46,915.00
194091	1/9/2025	STC TRAFFIC INC	7584	033117	100-4900-431.90-10	DESIGN OF TS HARDWARE NOV 2024	1,315.00
194092	1/9/2025	VACA, YVETTE	MEALS 1/13-24		001-2200-421.23-06	POST SUPERVISOR COURSE MEALS 1/13-24 VACA	770.50
194093	1/9/2025	VEOLIA WATER CONTRACT OPERATIONS US	9000188884	031245	680-8000-454.23-38	O&M FEE DEC 2024	76,371.36
			9000193560	031245	680-8000-454.23-38	O&M FEE JAN 2025	76,371.36
194094	1/9/2025	VESTIS SERVICES LLC	5880808610	033216	761-3110-480.25-02	UNIFORM-FSR	100.75
			5880814543	033216	761-3110-480.25-02	UNIFORM-FSR	100.75
194095	1/9/2025	VIGILANT LLC	23279	032607	703-3700-480.33-11	MEDR: CONTRACTED AMOUNT	3,109.71
			23289	032607	703-3700-480.33-11	MNDR: CITY HALL & PD	5,364.34
194096	1/9/2025	VIRTUAL PROJECT MANAGER, LLC	12-4292	032629	100-4900-431.30-17	WEB BASED PRJCT MGMT SYST DEC 2024	200.00
					660-6300-471.30-17	WEB BASED PRJCT MGMT SYST DEC 2024	400.00
					680-8000-454.30-17	WEB BASED PRJCT MGMT SYST DEC 2024	300.00
					704-3200-412.30-17	WEB BASED PRJCT MGMT SYST DEC 2024	100.00
194097	1/9/2025	WALLACE, COLLEEN	MEALS 1/23-24		001-1000-411.23-05	LOCC POLICY MEETING MEALS 1/23-24 TV25E5	85.50
194098	1/9/2025	WASTE MANAGEMENT 0F THE IE	7967090-0149-2		670-7000-473.23-54	40 YD SPCL WST BIN 12/01/24-12/15/24	3,000.77
194099	1/9/2025	WESTERN WATER WORKS SUPPLY CO	1154724-00		660-0000-131.00-00	INVENTORY PO NUM 033013	72.41
			1410138-00		660-0000-131.00-00	INVENTORY PO NUM 033013	27,248.46
			1410613-00		660-0000-131.00-00	CREDIT PO NUM 033013	(1,163.70)
			1410686-00		660-0000-131.00-00	INVENTORY PO NUM 033013	5,757.09
194100	1/9/2025	WILLDAN ENGINEERING	002-33538	030055	001-3000-442.33-11	PW PERMIT TECH STARLING NOV 2024	198.38
					660-6300-471.33-11	PW PERMIT TECH STARLING NOV 2024	198.31
					680-8000-454.33-11	PW PERMIT TECH STARLING NOV 2024	198.31
194101	1/9/2025	ZENNER PERFORMANCE METERS, INC	0096923-IN		660-0000-131.00-00	INVENTORY PO NUM 033042	23,294.99
194102	1/16/2025	ABBOTT, CELIA	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194103	1/16/2025	AED ENERGY SERVICES LLC	44001220	032755	702-3800-480.33-11	PHASE 1 & BID SUPPORT-CNG 11/2/24-11/29/24	9,672.50
194104	1/16/2025	AMAZON BUSINESS	13NK-9Y36-WKTP	033045	001-1910-412.36-00	CALENDAR & PPE	37.11
					705-4500-412.36-00	CALENDAR & PPE	34.80
			19WR-MTR9-HMX9	032945	001-1200-412.36-00	INVERTED TIP MARKER	36.54
			1GNX-KY1C-RTYW	032945	001-1200-412.36-00	INVERTED TIP MARKER RETURNED	(36.54)
			1KT9-CN4F-W4HF	033045	705-4500-412.36-00	RESTOCKING SUPPLY CABINET	52.92
			1MPQ-3XXJ-MVY1	032945	001-1400-412.36-00	SPACE HEATER	43.08
194105	1/16/2025	ARIAS DE RAMIREZ, LEONILA	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194106	1/16/2025	AT&T CALNET 2	000022777057		001-2200-421.26-05	MONTHLY SVC 11/22/24-12/21/24	217.46
194107	1/16/2025	ATBACKGROUNDS	4391		001-1300-412.33-11	BACKGROUND SCREENING NOVEMBER 2024	88.06
194108	1/16/2025	ATWORK PERSONNEL SERVICES	296946	033272	810-9700-490.90-59	REBELO/PRIEST 11/03/24	1,486.28
			297907	033272	810-9700-490.90-59	REBELO/PRIEST 11/10/24	1,349.39
			298818	033272	810-9700-490.90-59	REBELO 11/17/24	156.45
			300466	033272	810-9700-490.90-59	PRIEST 12/01/24	860.48
			301321	033272	810-9700-490.90-59	PRIEST 12/08/24	1,564.50
			302173	033272	810-9700-490.90-59	PRIEST 12/15/24	1,564.50
			302882	033272	810-9700-490.90-59	PRIEST 12/22/24	1,564.50
			303656	033272	810-9700-490.90-59	PRIEST 12/29/24	2,385.94
			304481	033334	001-2740-442.23-27	INZUNZA 01/05/25	681.82
			304483	033074	001-3000-442.23-27	SANTELLO 01/05/24	178.52
					660-6300-471.23-27	SANTELLO 01/05/24	267.77
					680-8000-454.23-27	SANTELLO 01/05/24	267.77
					702-3800-480.23-27	SANTELLO 01/05/24	178.51
			304484	033263	761-3100-480.33-11	BURGER 01/05/25	799.47
			304485	033272	810-9700-490.90-59	REBELO/PRIEST 01/05/25	2,424.98
194109	1/16/2025	AVILA, VINCENT	UNIFORMS-FY25		001-2200-421.25-02	UNIFORM ALLOWANCE V AVILA	1,256.06
194110	1/16/2025	BABCOCK LABORATORIES, INC	CK41340-0030	032373	680-8000-454.23-32	WATER ANALYSIS	1,482.00
194111	1/16/2025	BEAUMONT DO IT BEST HOME CENTER	550984	032918	810-9700-490.90-59	SINGLE SIDED KEY (10)	19.29
			551385	033144	001-4000-461.30-02	PEST CONTROL	43.05
			551418	033114	001-3600-461.30-01	SUPPLIES	32.81

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194111	1/16/2025	BEAUMONT DO IT BEST HOME CENTER	551530	033114	001-3600-461.30-01	SUPPLIES	40.92
			551604	032918	810-9700-490.90-59	CREDIT FOR PLASTIC SEAT	(14.55)
			551836	032952	704-3200-412.30-02	GARBAGE DISPOSER	169.15
			551892	032918	810-9700-490.90-59	SINGLE SIDED KEY (16)	14.40
			551906	032952	704-3200-412.30-02	2.5" AS OC POLY BRUSH	23.68
			551926	032918	810-9700-490.90-59	SINGLE SIDED KEY (4) C-CLIP (3)	14.18
194112	1/16/2025	BEAUMONT SAFE & LOCK	77860	033157	660-6300-471.36-00	RE-KEY (2)	20.00
194113	1/16/2025	BECERRA, ELADIO	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194114	1/16/2025	BIO-TOX LABORATORIES	46779	033232	001-2200-421.33-31	BLOOD ANALYSIS	232.00
			46780	033232	001-2200-421.33-31	BLOOD ANALYSIS	226.00
			46860	033232	001-2200-421.33-31	BLOOD ANALYSIS	487.00
194115	1/16/2025	BOIES, SANDRA DIANE	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194116	1/16/2025	BOSTON, LINDA	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194117	1/16/2025	CALIFORNIA DEPT OF TAX AND FEE ADMN	OCT-DEC 2024		670-7010-473.27-08	QUARTERLY ENERGY TAXES OCT-DEC 2024	10,422.00
194118	1/16/2025	CANON FINANCIAL SERVICES, INC	37712632	032336	705-4500-412.32-06	PROPERTY TAX JAN 2025	1,647.78
194119	1/16/2025	CDW GOVERNMENT, LLC	AB8TD7A	033116	001-2200-421.89-48	DELL MONITOR MUNOZ	193.37
194120	1/16/2025	CHANDLER ASSET MANAGEMENT INC	2412BANNING	032081	001-4500-412.33-11	ASSET AND INVESTMENT MGMT DEC 2024	2,115.53
194121	1/16/2025	CHARTER COMMUNICATIONS	189283801122124		670-7000-473.26-07	CORPORATE YARD 12/25/2024-01/24/2025	991.58
194122	1/16/2025	CINTAS CORPORATION	4215252298	032901	702-3800-480.25-02	UNIFORM-FLEET	61.26
			4215252369	032937	610-5800-434.25-02	UNIFORM-TRANSIT	111.17
					610-5850-434.25-02	UNIFORM-DAR	7.84
			4215252422	033161	001-3600-461.25-02	UNIFORM-PARKS	52.32
			4215911710	032937	610-5800-434.25-02	UNIFORM-TRANSIT	111.17
					610-5850-434.25-02	UNIFORM-DAR	7.84
			4215911723	032901	702-3800-480.25-02	UNIFORM-FLEET	61.26
			4215911794	033161	001-3600-461.25-02	UNIFORM-PARKS	52.32
			4216606302	032937	610-5800-434.25-02	UNIFORM-TRANSIT	111.17
					610-5850-434.25-02	UNIFORM-DAR	7.84
			4217410783	032953	100-4900-431.25-02	UNIFORM-STREETS	79.77
					704-3200-412.25-02	UNIFORM-BUILD MAINT	11.03
			4217410811	032901	702-3800-480.25-02	UNIFORM-FLEET	61.26
			4217410871	033256	670-7000-473.25-02	UNIFORM-ELEC	336.70
			4217410940	032937	610-5800-434.25-02	UNIFORM-TRANSIT	111.17
					610-5850-434.25-02	UNIFORM-DAR	7.84
194123	1/16/2025	CITY OF BANNING (BNG)	FC C-2 DEC24		001-3600-461.32-02	FC C-2 HANGAR DECEMBER 2024	197.57
			FC C-2 JAN25		001-3600-461.32-02	FC C-2 HANGAR JANUARY 2025	197.57
194124	1/16/2025	CLAYTON, NETA	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194125	1/16/2025	CORE & MAIN, LP	W053897		660-0000-131.00-00	INVENTORY PO NUM 033011	5,300.88
			W158049		660-0000-131.00-00	INVENTORY PO NUM 033011	2,876.93
194126	1/16/2025	COUNSELING TEAM INTERNATIONAL, THE	INV102528		700-5040-480.23-07	EMPLOYEE SUPPORT SERVICES DECEMBER 2024	910.00
194127	1/16/2025	CRABTREE, JEFFREY	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194128	1/16/2025	CUSTOM TROPHIES & UNEEK AWARDS	005957	032949	001-1400-412.36-00	BRASS PLATE-SANCHEZ ID PLATE-FLYNN/ROYCE/CAST	54.41
			005987	032949	001-1400-412.36-00	2X10 ID PLATE PINKNEY-CITY ATTORNEY	14.54
194129	1/16/2025	DAVIS, RANDOLYN	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194130	1/16/2025	DELTA DENTAL INSURANCE COMPANY	BE006331869		001-0000-204.32-00	DENTAL-HMO DECEMBER 2024	924.12
194131	1/16/2025	DELTA DENTAL OF CALIFORNIA	BE006330950		001-0000-204.32-00	DENTAL-PPO DECEMBER 2024	7,743.48
						DENTAL-PPO DECEMBER 2024 ADJ	(44.45)
194132	1/16/2025	DEWALT, RICK	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194133	1/16/2025	ECCLESTONE, CHERYL	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194134	1/16/2025	EIDE BAILLY LLP	EI01790424	032876	001-1900-412.33-11	YEAR END CLOSING DEC 2024	4,464.20
194135	1/16/2025	ELLIOTT, PATRICIA	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194136	1/16/2025	ENGINEERING SOLUTIONS SERVICES INC	2404-174A	033039	001-1230-412.33-11	STRATEGY & NEED ASSESSMNT AUG 2024	4,848.00
			2404-174B	033039	001-1230-412.33-11	TASK 3 GRANT SERVICES	20,343.00
			2404-174C	033039	001-1230-412.33-11	TASK 3 GRANT SERVICES	6,788.00
			2404-174D	033039	001-1230-412.33-11	TASK 2 GRANT RESEARCH SVC	1,200.00
			2404-174E	033039	001-1230-412.33-11	TASK 2 GRANT RESEARCH SVC	1,200.00
194137	1/16/2025	ENTERPRISE FM TRUST	FBN5222639		001-2200-421.32-06	PD #40 JANUARY 2025	558.53
					001-2300-424.32-06	ANIMAL CONTROL #80 JANUARY 2025	927.47
					001-2400-422.32-06	FIRE #110 JANUARY 2025	442.06

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Warrant Number	Warrant Date	Vendor Name	Invoice Number	P.O. Number	Account Number	Payment Description	Warrant Amount
194137	1/16/2025	ENTERPRISE FM TRUST	FBN5222639		001-2740-442.32-06	CODE ENF #431 JANUARY 2025	509.83
						CODE ENF #437 438 JANUARY 2025	1,029.39
					001-3000-442.32-06	ENGINEERING #1201 JANUARY 2025	661.46
					001-3600-461.32-06	PARKS #701-704 JANUARY 2025	14,843.01
					100-4900-431.32-06	STREETS #600 620 624-628 JANUARY 2025	4,962.21
					660-6300-471.32-06	WATER #800-802 804 817 JANUARY 2025	10,835.26
					670-7000-473.32-06	ELEC 302 310 314 317 318 JANUARY 2025	3,495.95
					702-3800-480.32-06	FLEET #204 JANUARY 2025	314.77
					761-3110-480.32-06	METER #505 JANUARY 2025	441.65
					810-9700-490.90-59	OPP VIL #205 JANUARY 2025	282.69
194138	1/16/2025	ESTERSON, LORI	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194139	1/16/2025	FALCON, ESTHER	OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT OCT24 PAYMENTS	32.50
194140	1/16/2025	FALTO, CONSTANCE	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194141	1/16/2025	FINLEY ENGINEERING CO INC	0202837-00001-2	033287	673-7000-473.33-11	ELECTRIC MASTER PLAN NOV 2024	22,772.70
194142	1/16/2025	FLETCHER, CORAL	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194143	1/16/2025	FOSTER & FOSTER CONSULTING	33652	033236	700-5040-480.33-11	GASB75 REPORT & VALUATION	16,500.00
194144	1/16/2025	FRONTIER COMMUNICATIONS	2091885918DEC24		001-2200-421.26-05	209-060-5278 12/28/24-01/27/25	43.23
					001-2400-422.26-05	209-188-5918/951-849-1147 12/28/24-01/27/25	682.88
					001-4000-461.26-05	951-849-0152 12/28/24-01/27/25	405.11
					610-5800-434.26-05	951-849-0641 12/28/24-01/27/25	456.39
					660-6300-471.26-05	951-922-3281/951-922-3283 12/28/24-01/27/25	525.51
					670-7000-473.26-05	951-922-3260/951-922-3294 12/28/24-01/27/25	342.58
					705-4500-412.26-05	951-849-1550 12/28/24-01/27/25	132.25
			9511970620JAN25		001-2200-421.26-05	FIBER OPTIC INTERNET 12/27/24-01/26/25	576.68
			9519220196DEC24		001-2200-421.23-42	951-922-0196 LATE FEE	19.83
					001-2200-421.26-05	951-922-0196 12/16/24-01/15/25	1,304.55
194145	1/16/2025	GARDA CL WEST INC	10802855	033241	761-3100-480.23-43	ARMORED SVCS JAN 2025	1,271.32
			20624977	033241	761-3100-480.23-43	ARMORED SVCS-EXCESS TIME DEC 2024	201.38
194146	1/16/2025	HAMPTON, PATRICIA	NOV23-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT NOV23-OCT24 PAYMENTS	390.00
194147	1/16/2025	HARDEE, TIMOTHY	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194148	1/16/2025	HARRIS, ANNE	SEP24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT SEP24-OCT24 PAYMENTS	65.00
194149	1/16/2025	HARVIN, ALLEN	REF#2024068931		001-2400-351.35-14	REFUND-OVERPMT 11/4/2024 INCIDENT 2024068931	100.00
194150	1/16/2025	HERRERA, SANDRA	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194151	1/16/2025	HOME DEPOT #8987	6972056	033027	660-6300-471.30-02	TOOLS/SUPPLIES	1,434.92
194152	1/16/2025	HOPKINS, VICKI	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194153	1/16/2025	INFOSEND, INC	279055	032788	761-3100-480.23-02	UB BILL SVC 01/10/25	17.34
					761-3100-480.23-04	UB BILL SVC 01/10/25	142.96
					761-3100-480.33-11	UB BILL SVC 01/10/25	47.42
194154	1/16/2025	INNOVATIVE FEDERAL STRATEGIES	COB122024	032524	705-4500-412.33-11	FEDERAL LOBBYING SERVICES DEC 2024	4,750.00
194155	1/16/2025	JEWS, NICOLE	MEALS 1/30-31		001-1300-412.23-05	2025 LCW ANNUAL CONF MEALS 1/30-31 JEWS	92.75
194156	1/16/2025	KAKISH, BISHARA	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194157	1/16/2025	KEMIRA WATER SOLUTIONS INC	9017867127	033122	680-8000-454.36-08	FERRIC SULFATE SOLUTION	4,819.74
194158	1/16/2025	KEN GRODY FORD REDLANDS	290802	033188	702-3800-480.30-05	TRANSMISSION REPAIR #27	3,282.32
194159	1/16/2025	KIMLEY-HORN AND ASSOCIATES, INC	194392004-1224	032872	681-8000-454.90-78	BANNING WWTP UPGRADE THRU 12/31/24	20,841.75
194160	1/16/2025	LIEBERT CASSIDY WHITMORE	279656		700-5300-480.33-04	PROF SVCS-OCT 2024 BA060-00001	152.50
			280702		700-5300-480.33-04	PROF SVCS-OCT 2024 BA060-00048	4,476.00
			280755		700-5300-480.33-04	PROF SVCS-OCT 2024 BA060-00055	26,534.90
			280756		700-5300-480.33-04	PROF SVCS-OCT 2024 BA060-00056	5,913.65
			280768		700-5300-480.33-04	PROF SVCS-OCT 2024 BA060-00058	510.00
			280769		700-5300-480.33-04	PROF SVCS-OCT 2024 BA060-00057	10,350.00
			280779		700-5300-480.33-04	PROF SVCS-OCT 2024 BA060-00060	3,051.50
			280780		700-5300-480.33-04	PROF SVCS-OCT 2024 BA060-00061	1,170.00
			280792		700-5300-480.33-04	PROF SVCS-OCT 2024 BA060-00063	2,400.00
			280793		700-5300-480.33-04	PROF SVCS-OCT 2024 BA060-00062	5,013.00
			280802		700-5300-480.33-04	PROF SVCS-OCT 2024 BA060-00064	2,847.50
			280803		700-5300-480.33-04	PROF SVCS-OCT 2024 BA060-00065	1,412.50
			280816		700-5300-480.33-04	PROF SVCS-OCT 2024 BA060-00066	780.50
			281844		700-5300-480.33-04	PROF SVCS-NOV 2024 BA060-00055	11,313.50
			281845		700-5300-480.33-04	PROF SVCS-NOV 2024 BA060-00066	1,849.50

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194160	45673	LIEBERT CASSIDY WHITMORE	281846		700-5300-480.33-04	PROF SVCS-NOV 2024 BA060-00048	3,947.50
			281847		700-5300-480.33-04	PROF SVCS-NOV 2024 BA060-00001	2,140.00
			281848		700-5300-480.33-04	PROF SVCS-NOV 2024 BA060-00057	5,940.00
			281849		700-5300-480.33-04	PROF SVCS-NOV 2024 BA060-00060	135.00
			281850		700-5300-480.33-04	PROF SVCS-NOV 2024 BA060-00056	13,890.50
			281851		700-5300-480.33-04	PROF SVCS-NOV 2024 BA060-00063	1,948.00
			281852		700-5300-480.33-04	PROF SVCS-NOV 2024 BA060-00065	1,398.00
			281853		700-5300-480.33-04	PROF SVCS-NOV 2024 BA060-00067	1,800.00
			281854		700-5300-480.33-04	PROF SVCS-NOV 2024 BA060-00058	765.00
			281855		700-5300-480.33-04	PROF SVCS-NOV 2024 BA060-00062	891.00
194161	1/16/2025	LIEVANOS, MANUEL	NOV23-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT NOV23-OCT24 PAYMENTS	390.00
194162	1/16/2025	LINN-FURY, CAROL	JUN24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT JUN24-OCT24 PAYMENTS	162.50
194163	1/16/2025	LOFTIS, MILDRED	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194164	1/16/2025	MACDONALD, DOUGLAS	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194165	1/16/2025	MARIPOSA LANDSCAPES, INC	110737	030833	001-3600-461.30-16	REPLACE/REPAIR IRRIGATION EXTRA WORK OCT 2024	440.89
			111149	030833	001-3600-461.30-16	REPLACE/REPAIR IRRIGATION EXTRA WORK NOV 2024	2,881.63
			111447	030833	001-3600-461.23-29	PARK MAINT DEC 24	8,517.45
					001-4000-461.23-29	PARK MAINT DEC 24	499.99
					001-4010-461.23-29	PARK MAINT DEC 24	1,090.80
					001-4050-461.23-29	PARK MAINT DEC 24	481.73
			111722	030833	001-3600-461.23-17	TREE REMOVAL EXTRA WORK DEC 2024	3,750.00
194166	1/16/2025	MC CALL'S METER SALES	37241	033195	660-6300-471.45-06	CERTIFIED FLOW TEST	300.00
194167	1/16/2025	MENDOZA, SAMUEL	MEALS 1/27-31		001-2200-421.23-06	INFORMANT DEV & MAINT MEALS 1/27-31 MENDOZA	0.00
194168	1/16/2025	MERAS, DAVID	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194169	1/16/2025	MIDDLETON, SHARON	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194170	1/16/2025	MILLER, NINA	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194171	1/16/2025	PARKHOUSE TIRE, INC.	2010919131	032932	702-3800-480.30-06	TIRE REPAIR #615	414.18
194172	1/16/2025	PAYPRO ADMINISTRATORS	044684		001-1300-412.33-11	COBRA ADMIN SERVICES DECEMBER 2024	115.00
194173	1/16/2025	PETRUCCI, TERESA	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194174	1/16/2025	PRATT, DEREK	OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT OCT24 PAYMENTS	32.50
194175	1/16/2025	PRUITT, CARMEN	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194176	1/16/2025	PUBLIC ENTITY RISK MANAGEMENT	INV343		700-0000-101.20-00	ADDTL ADP PROGRAM FY2024-25	241.00
194177	1/16/2025	R.F. MACDONALD CO	I238978		660-0000-131.00-00	INJECTION VALVE PO NUM 032998	1,380.81
			I239096		660-0000-131.00-00	EPDM O RING PO NUM 032998	216.68
194178	1/16/2025	R&R ROOFING & WATERPROOFING INC	1554	032832	680-0000-232.00-00	FINAL RETENTION 1849 RECLAMATION FACILITY	8,667.00
194179	1/16/2025	RICHARDS WATSON GERSHON	251135		700-5300-480.33-04	0001 GENERAL SVCS NOV 2024	6,910.80
			251136		700-5300-480.33-04	0003 CITY MANAGER NOV 2024	618.30
			251137		700-5300-480.33-04	0004 CITY CLERK NOV 2024	355.68
						0005 COMMUNITY DEV NOV 2024	91.60
						0010 POLICE DEPARTMENT NOV 2024	366.40
			251138		700-5300-480.33-04	0005 COMMUNITY DEV NOV 2024	11,876.32
						0007 ELECTRIC UTILITY NOV 2024	114.50
			251139		700-5300-480.33-04	0007 ELECTRIC UTILITY NOV 2024	274.80
			251140		700-5300-480.33-04	0008 ADMIN SVCS NOV 2024	4,854.80
			251141		700-5300-480.33-04	0010 POLICE DEPARTMENT NOV 2024	6,762.19
			251142		700-5300-480.33-04	0011 PUBLIC WORKS NOV 2024	320.60
						0012 WATER/WASTEWATER NOV 2024	778.60
			251143		700-5300-480.33-04	0012 WATER/WASTEWATER NOV 2024	5,198.30
			251144		700-5300-480.33-04	0013 PERSONNEL MATTERS NOV 2024	2,647.70
			251145		002-0000-222.34-01	0014 BUTTERFIELD NOV 2024	2,310.00
					002-2800-361.41-02	0014 BUTTERFIELD NOV 2024	(2,310.00)
					002-2800-441.33-04	0014 BUTTERFIELD NOV 2024	2,310.00
			251146		700-5300-480.33-04	0021 CODE ENFORCEMENT NOV 2024	739.50
			251147		700-5300-480.33-04	0022 POLICE PERSONNEL NOV 2024	1,052.70
			251148		700-5300-480.33-04	0040 THE FLUME NOV 2024	210.00
			251149		002-0000-222.34-01	0062 CFD NO2020-02 ATWELL NOV 2024	1,244.10
					002-2800-361.41-02	0062 CFD NO2020-02 ATWELL NOV 2024	(1,244.10)
					002-2800-441.33-04	0062 CFD NO2020-02 ATWELL NOV 2024	1,244.10
			251150		002-0000-222.31-37	0068 SUNSET CROSSROADS NOV 2024	4,544.57

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194179	1/16/2025	RICHARDS WATSON GERSHON	251150		002-2800-361.41-02	0068 SUNSET CROSSROADS NOV 2024	(4,544.57)
					002-2800-441.33-04	0068 SUNSET CROSSROADS NOV 2024	4,544.57
			251151		700-5300-480.33-04	0076 BANNING POINT APPEAL NOV 2024	175.00
			251152		700-5300-480.33-04	0078 AVD PASS ACTION GRP NOV 2024	1,357.20
			251153		700-5300-480.33-04	0080 PEOPLE VS R CARTER NOV 2024	3,910.75
			251154		700-5300-480.33-04	0089 2244 CHARLES ARE NOV 2024	2,322.35
194180	1/16/2025	RIV. CO. FIRE DEPARTMENT	235494		001-0000-219.00-00	1ST QTR JUL-SEP 24/25 JUL - SEP 2024	939,499.35
194181	1/16/2025	RIVERA, KATHLEEN	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194182	1/16/2025	RIVERSIDE COUNTY SHERIFF-PSEC	PE0000002240		001-2200-421.26-07	CNTY RIV PUBLIC SAFETY EC 11/01/2024-11/30/2024	6,699.80
194183	1/16/2025	RIVERSIDE, COUNTY OF	OCT-DEC 2024		001-2200-321.18-06	PARKING CITATION ASSESMNT OCT-DEC 2024	245.00
194184	1/16/2025	ROADWAY ASSET SERVICES LLC	RAS821204	033069	101-4900-431.93-16	FIXED ASSET INSPECTION DEC 2024	14,015.04
194185	1/16/2025	RODRIGUEZ, MANUEL	GUN LOAN FY25		001-0000-116.21-01	EMPLOYEE GUN LOAN M RODRIGUEZ	3,678.93
194186	1/16/2025	RODRIGUEZ, SANDRA	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194187	1/16/2025	ROEBUCK, ALYSSA	MEALS 1/20-31		001-2200-421.23-06	DRE SCHOOL-CHP MEALS 1/20-31 TV25B4	792.50
194188	1/16/2025	SIQUEIROS, JUANA	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194189	1/16/2025	SKRIPELI, DRAGO	REF#2024161076		001-2400-351.35-14	REFUND-OVERPMT 11/15/2024 INCIDENT 2024161076	400.00
194190	1/16/2025	SMART & FINAL	099888	033136	001-4020-461.36-09	JUICE/SNACKS	128.63
			726155	033136	001-4020-461.36-09	FOOD ITEMS	133.69
			888322	033136	001-4020-461.36-09	FOOD ITEMS	131.21
194191	1/16/2025	SO CAL JOINT POLE COMMITTEE	22417		670-7000-473.27-11	OPERATING EXPENSES DECEMBER 2024	1,184.26
194192	1/16/2025	SOFTWARE ONE, INC	US-PSI-1532136	032564	703-3700-480.30-17	AZURE SIMPLE SOFTWARE DEC 2024	2,999.98
194193	1/16/2025	SORIANO, NATLLELY	MEALS 1/28-29		001-2200-421.23-06	MAGNUS OVEA LEADERSHIP MEALS 1/28-29 SORIANO	42.00
194194	1/16/2025	SOUTHERN CALIFORNIA EDISON	181920312JAN25		660-6300-471.26-04	WELL 11 12/11/24-01/10/25	282.11
			181978512JAN25		660-6300-471.26-04	WELL 9 12/11/24-01/10/25	3,252.85
			183084312DEC24		660-6300-471.26-04	WELL 12 11/12/24-12/10/24	413.39
			183084312JAN25		660-6300-471.26-04	WELL 12 12/11/24-01/10/25	414.92
194195	1/16/2025	SOUTHERN CALIFORNIA GAS CO	09242310481DC24		702-3800-480.36-61	NATUAL GAS VEHICLE FUEL 12/01/2024-01/01/2025	7,512.13
194196	1/16/2025	STAPLES BUSINESS ADVANTAGE	6017419544	033267	670-7000-473.36-00	OFFICE SUPPLIES	16.65
			6017579400	033267	670-7000-473.36-00	STORAGE BOXES	22.37
			6017984388	033267	670-7000-473.36-00	OFFICE SUPPLIES	84.22
			6018155273	033267	670-7000-473.36-00	OFFICE SUPPLIES	45.74
			6018691931	033267	670-7000-473.36-00	OFFICE SUPPLIES	44.33
			6019192839	033267	670-7000-473.36-00	PERMANENT MARKERS	45.26
			6020303815	033017	761-3100-480.36-00	OFFICE SUPPLIES	119.54
			6021609905	033137	705-4500-412.36-00	RESTOCKING SUPPLY CABINET	119.42
194197	1/16/2025	STATE WATER RESOURCES CONTROL	LW-1049486		680-8000-454.41-04	COMM WA SYSTEM # 3310006 07/01/24-06/30/25	43,334.60
194198	1/16/2025	STONE, PAMELA	MEALS 1/28-29		001-2200-421.23-06	MAGNUS OVEA LEADERSHIP MEALS 1/28-29 STONE	42.00
194199	1/16/2025	SUPERION, LLC	424077	033219	705-4500-412.30-17	NAVILINE ANNUAL MAINT FEE 7/1/24-6/30/25 (3OF4)	26,807.18
194200	1/16/2025	TAPIA, SALOMON	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194201	1/16/2025	TRAN, LOAN	OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT OCT24 PAYMENTS	32.50
194202	1/16/2025	UNDERGROUND SERVICE ALERT	1220240056		100-4900-431.30-13	48 NEW TICKETS JANUARY 2025	32.93
					660-6300-471.45-08	48 NEW TICKETS JANUARY 2025	32.93
					670-7000-473.45-05	48 NEW TICKETS JANUARY 2025	32.94
			24-251952		100-4900-431.30-13	CA STATE FEE-REG COSTS JANUARY 2025	14.85
					660-6300-471.45-08	CA STATE FEE-REG COSTS JANUARY 2025	14.86
					670-7000-473.45-05	CA STATE FEE-REG COSTS JANUARY 2025	14.86
194203	1/16/2025	URIAS, JOSE ROSARIO	FEB24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT FEB24-OCT24 PAYMENTS	292.50
194204	1/16/2025	VALDEZ JR, MARY ALICE & ANTONIO	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194205	1/16/2025	VALENCIA, MARIBEL	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194206	1/16/2025	VERIZON WIRELESS SERVICES, LLC	6102588722		001-1000-411.26-05	CITY COUNCIL CELL PHONE 12/2/24-1/1/25	252.84
					001-1000-411.89-48	CITY COUNCIL NEW PHONE R ROYCE	81.14
					001-1200-412.26-05	CITY MANAGER CELL PHONE 12/2/24-1/1/25	126.15
						OPPORTUNITY VILLAGE 12/2/24-1/1/25	232.87
					001-1210-412.26-05	ECONOMIC DEV CELL PHONE 12/2/24-1/1/25	50.99
					001-1220-412.26-05	PUBLIC INFORM CELL PHONE 12/2/24-1/1/25	41.57
					001-1230-412.26-05	GRANTS CELL PHONE 12/2/24-1/1/25	35.09
					001-1300-412.26-05	HR CELL PHONE 12/2/24-1/1/25	129.71
					001-1400-412.26-05	CITY CLERK CELL PHONE 12/2/24-1/1/25	44.14
					001-1400-412.89-48	CITY CLERK PHONE UPGRADE C.PATTON	89.22

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194206	1/16/2025	VERIZON WIRELESS SERVICES, LLC	6102588722		001-1900-412.26-05	FINANCE CELL PHONE 12/2/24-1/1/25	227.85
					001-1910-412.26-05	PURCHASING CELL PHONE 12/2/24-1/1/25	46.57
					001-2060-446.26-05	GOV ACCESS CELL PHONE 12/2/24-1/1/25	26.31
					001-2200-421.26-05	POLICE CELL PHONE 12/2/24-1/1/25	1,942.69
					001-2210-421.26-05	DISPATCH CELL PHONE 12/2/24-1/1/25	68.18
					001-2300-424.26-08	ANIMAL CONTROL CELL PHONE 12/2/24-1/1/25	46.57
					001-2740-442.26-05	CODE ENFORCE CELL PHONE 12/2/24-1/1/25	61.59
					001-2800-441.26-05	PLANNING CELL PHONE 12/2/24-1/1/25	417.08
					001-3000-442.26-05	ENGINEERING CELL PHONE 12/2/24-1/1/25	251.30
					001-3200-412.26-05	BUILDING MAINT CELL PHONE 12/2/24-1/1/25	83.14
					001-3600-461.26-05	PARKS CELL PHONE 12/2/24-1/1/25	114.67
					001-4000-461.26-05	RECREATION CELL PHONE 12/2/24-1/1/25	270.88
					001-4000-461.36-09	OEP GRANT CELL PHONE 12/2/24-1/1/25	41.57
					001-4050-461.26-05	SENIOR CENTER CELL PHONE 12/2/24-1/1/25	41.57
					100-4900-431.26-05	STREETS CELL PHONE 12/2/24-1/1/25	290.99
					610-5800-434.26-05	TRANSIT CELL PHONE 12/2/24-1/1/25	952.57
					610-5850-434.26-05	DIAL-A-RIDE CELL PHONE 12/2/24-1/1/25	193.73
					660-6300-471.26-05	WATER CELL PHONE 12/2/24-1/1/25	1,092.31
					670-7000-473.26-05	ELECTRIC CELL PHONE 12/2/24-1/1/25	1,809.05
					680-8000-454.26-05	WASTEWATER CELL PHONE 12/2/24-1/1/25	166.28
					702-3800-480.26-05	FLEET CELL PHONE 12/2/24-1/1/25	77.12
					703-3700-480.26-05	INFO SERVICES CELL PHONE 12/2/24-1/1/25	186.28
					761-3100-480.26-05	UTILITY BILLING CELL PHON 12/2/24-1/1/25	46.57
					761-3110-480.26-05	METER SERVICES CELL PHONE 12/2/24-1/1/25	189.48
194207	1/16/2025	VESTIS SERVICES LLC	5880820522	033216	761-3110-480.25-02	UNIFORM-FSR	100.75
194208	1/16/2025	VIRTUAL PROJECT MANAGER, LLC	12-4260		100-4900-431.30-17	WEB BASED PRJCT MGMT SYST NOV 2024	200.00
					660-6300-471.30-17	WEB BASED PRJCT MGMT SYST NOV 2024	400.00
					680-8000-454.30-17	WEB BASED PRJCT MGMT SYST NOV 2024	300.00
					704-3200-412.30-17	WEB BASED PRJCT MGMT SYST NOV 2024	100.00
194209	1/16/2025	VISION SECURITY SYSTEMS	21368	032697	704-3200-412.23-19	ALARM MONITORING SERVICE FEB-APR 2025	2,355.00
194210	1/16/2025	WASTE MANAGEMENT OF THE IE	080924	033051	001-9600-453.41-46	BIG BELLY SOLAR COMPACTOR	3,633.97
194211	1/16/2025	WILLDAN ENGINEERING	002-33725	030055	001-3000-442.33-11	PW PERMIT TECH DEC 2024	175.04
					660-6300-471.33-11	PW PERMIT TECH DEC 2024	174.98
					680-8000-454.33-11	PW PERMIT TECH DEC 2024	174.98
194212	1/16/2025	WRCOG	1936		001-1000-411.23-03	ANNUAL DUES 7/1/24-6/30/25	3,547.59
194213	1/16/2025	YOUNG, CHRISTY	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194214	1/16/2025	ZENNER PERFORMANCE METERS, INC	0097325-IN		660-0000-131.00-00	1/4" SELF WRAPPING CABLE PO NUM 033042	212.74
194215	1/23/2025	AED ENERGY SERVICES LLC	44001330	032755	702-3800-480.33-11	PHASE 1 & BID SUPPORT-CNG 11/30/24-1/3/25	7,830.00
194216	1/23/2025	ALBERT A. WEBB ASSOCIATES	ARIV0006580	032633	681-8000-454.95-12	EQUALIZATION BASIN 11/24/24-12/28/24	8,047.13
			ARIV0006598	033234	661-6300-471.33-11	BANNING NP-2 11/24/24-12/28/24	2,106.79
			ARIV0006710	030269	101-4900-431.93-16	SUN LAKES BLVD EXT DESIGN 11/24/24-12/28/24	5,735.50
			ARIV0006710 ADJ		101-4900-431.93-16	SUN LAKES BLVD EXT DESIGN 11/24/24-12/28/24	5,735.50
			ARIV0006710-ADJ		101-4900-431.93-16	SUN LAKES BLVD EXT DESIGN 11/24/24-12/28/24	(5,735.50)
194217	1/23/2025	ALGIERS, LYNETTE	TRAVEL 1/11-15		001-1910-412.23-05	CAPPO CONF 2025 TRAVEL 1/11-15 ALGIERS	282.37
194218	1/23/2025	AMAZON BUSINESS	164P-KH6P-1VH1	032929	702-3800-480.36-00	PRIVACY SCREEN PROTECTOR	32.65
			16R6-WYRD-MNG3	032929	702-3800-480.38-52	BRAKE PADS	193.84
			19NG-PN1P-61M1	032381	001-2700-442.36-00	USB SPLITTER	10.76
			1HFY-VDYH-CMJM	033046	001-9600-453.41-46	REFLECTIVE SAFE VEST (2)	36.62
			1HV3-M6GY-H9D7	032381	001-2700-442.36-00	LAPTOP CHARGER	24.45
			1LJG-9K1G-F36X	033046	001-3000-442.36-00	COFFEE	45.96
			1MJ1-RQMK-FYKW	033046	001-3000-442.36-00	KEYBOARD	414.77
			1MVF-1VM9-YQ1J	033046	001-3000-442.36-00	REFLECTIVE SAFE VEST (2)	40.90
			1T4R-QVFJ-TFH4	033121	001-4000-461.36-00	SUPPLIES	21.42
			1YJL-6FDG-Q7HM	032945	001-1200-412.36-00	COFFEE/SUPPLIES	98.82
194219	1/23/2025	ASBURY ENVIRONMENTAL SERVICES DBA	I500-01168228	033247	001-9600-453.45-15	30 GALLON POLY DRUM (5)	743.48
194220	1/23/2025	ATWORK PERSONNEL SERVICES	304482	033146	001-2200-421.23-27	M BOND 01/05/25	106.92
			305218	033334	001-2740-442.23-27	INZUNZA 01/12/25	1,363.65
			305220	033074	001-3000-442.23-27	SANTELLO 01/12/25	297.52
					660-6300-471.23-27	SANTELLO 01/12/25	446.29

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194220	1/23/2025	ATWORK PERSONNEL SERVICES	305220	033074	680-8000-454.23-27	SANTELLO 01/12/25	446.29
					702-3800-480.23-27	SANTELLO 01/12/25	297.52
			305221	033263	761-3100-480.33-11	BURGER 01/12/25	1,457.38
			305222	033272	810-9700-490.90-59	PRIEST/REBELO 01/12/25	2,424.98
194221	1/23/2025	AURIGA CORPORATION	8399	031498	673-7000-473.96-47	TASK 2-ELECTRICAL DESIGN	800.00
194222	1/23/2025	BARRINGTON, CINDY	MEALS 1/29-31		001-1000-411.23-05	COUNCIL MEMBER ACADEMY MEALS 1/29-31 TV25D3	131.25
194223	1/23/2025	BEAUMONT DO IT BEST HOME CENTER	547585	032916	610-5800-434.36-00	32 GAL TRASH CAN	28.00
			548019	032918	810-9700-490.90-59	SUPPLIES	52.26
			549076	032918	810-9700-490.90-59	SAW CHAIN	49.54
			549294	032918	810-9700-490.90-59	SUPPLIES	8.07
			551272	032916	610-5800-434.36-00	DUCT TAPE	14.96
			551744	033114	001-3600-461.30-01	SUPPLIES	29.07
			552110	032918	810-9700-490.90-59	CLEANING SUPPLIES	89.72
194224	1/23/2025	BEAUMONT SAFE & LOCK	77767	033156	704-3200-412.30-02	1500 ELEC STRIKE	878.64
			77879	033156	704-3200-412.30-02	SINGLE SIDED DUPL (2)	4.29
			77884	033156	704-3200-412.30-02	SINGLE SIDED DUPL (2)	4.29
194225	1/23/2025	BRAX COMPANY, INC	54314	033257	680-8000-454.30-06	ROTO KWIK SUCTION & DISCHARGE	18,116.25
194226	1/23/2025	BUDD-FALEN LAW OFFICES, LLC.	34771	029829	660-6300-471.90-78	FLUME LEGAL SERVICES DEC 2024	9,876.31
194227	1/23/2025	CALACT	2025-108		610-5800-434.23-03	2025 LOCAL/REGIONAL GOVT 01/01/25-12/31/25	840.00
194228	1/23/2025	CALIFORNIA WATER EFFICIENCY PARTNER	MD-2025-1099		660-6300-471.30-17	CALWEP MEMBERSHIP 2025 DUES	3,581.50
194229	1/23/2025	CANON FINANCIAL SERVICES, INC	37979946	033119	001-2200-421.32-06	COPIER LEASE 1/10/25-2/9/25	362.99
194230	1/23/2025	CASC ENGINEERING AND CONSULTING INC	0052654	032079	100-4900-431.90-10	DESIGN OF SAN G & RLROAD	5,517.50
194231	1/23/2025	CDW GOVERNMENT, LLC	AA2BZ1R	033143	001-1900-412.89-48	DELL LAPTOP - FLINT 3XBR814	1,882.31
			AC3TP7W	033143	001-1900-412.89-48	DELL LAPTOP - SAVAGE	759.58
194232	1/23/2025	CELL BUSINESS EQUIP-LEASING	5032814118	032588	670-7000-473.32-06	5000 FOLDER INSERTER	844.10
194233	1/23/2025	CELL BUSINESS EQUIPMENT (CBE)	IN2800216	032562	001-2740-442.32-06	COPIER MAINTENANCE 11/20/24-12/19/24	34.01
194234	1/23/2025	CI SOLUTIONS	00025482	033345	705-4500-412.36-00	RIBBON (CITY WIDE) YMCKO	119.61
194235	1/23/2025	CINTAS CORPORATION	4207219139	033083	660-6300-471.25-02	UNIFORM-WATER	240.89
					680-8000-454.25-02	UNIFORM-WASTEWATER	59.47
			4207957505	033083	660-6300-471.25-02	UNIFORM-WATER	240.89
					680-8000-454.25-02	UNIFORM-WASTEWATER	59.47
			4208656696	033083	660-6300-471.25-02	UNIFORM-WATER	240.89
					680-8000-454.25-02	UNIFORM-WASTEWATER	59.47
			4210845874	033083	660-6300-471.25-02	UNIFORM-WATER	246.61
					680-8000-454.25-02	UNIFORM-WASTEWATER	60.88
			4213069510	033083	660-6300-471.25-02	UNIFORM-WATER	246.61
					680-8000-454.25-02	UNIFORM-WASTEWATER	47.42
			4216606128	032901	702-3800-480.25-02	UNIFORM-FLEET	61.26
			4216606266	033161	001-3600-461.25-02	UNIFORM-PARKS	52.32
			4216606363	033162	001-4000-461.36-03	CLEANING CHEMICALS	77.57
			4217410986	033161	001-3600-461.25-02	UNIFORM-PARKS	52.32
			4218137313	032901	702-3800-480.25-02	UNIFORM-FLEET	61.26
			4218137348	032937	610-5800-434.25-02	UNIFORM-TRANSIT	111.17
					610-5850-434.25-02	UNIFORM-DAR	7.84
			4218137354	032953	100-4900-431.25-02	UNIFORM-STREETS	79.77
					704-3200-412.25-02	UNIFORM-BUILD MAINT	11.03
			4218137493	033256	670-7000-473.25-02	UNIFORM-ELEC	336.70
194236	1/23/2025	D&M JOB INC.	16523	032914	610-5800-434.23-02	BUS PASS STICKERS (12)	491.34
			16533	033015	761-3100-480.23-02	SINGLE SHEET AR SLIPS (6)	226.28
194237	1/23/2025	DIAMOND ENVIRONMENTAL SERVICES	0005957164	032191	001-9600-453.41-46	RESTROOM & HANDWASHING BULKY ITEM DAY	165.40
			0005957164 ADJ		001-9600-453.41-46	RESTROOM & HANDWASHING BULKY ITEM DAY	165.40
			0005957164-ADJ		001-9600-453.41-46	RESTROOM & HANDWASHING BULKY ITEM DAY	(165.40)
194238	1/23/2025	DUDEK	202410753	031985	660-0000-232.00-00	WELL M12A DESIGN 10/26/24-11/22/24	(3,113.00)
					660-6300-471.95-08	WELL M12A DESIGN 10/26/24-11/22/24	31,130.00
			202411374	031985	660-0000-232.00-00	WELL M12A DESIGN 11/23/24-12/27/24	(363.50)
					660-6300-471.95-08	WELL M12A DESIGN 11/23/24-12/27/24	3,635.00
194239	1/23/2025	E.R. BLOCK PLUMBING	142657	030133	660-6300-471.33-11	BACKFLOW TESTING	3,300.00
194240	1/23/2025	FLYNN, SHERI	MEALS 1/29-31		001-1000-411.23-05	COUNCIL MEMBER ACADEMY MEALS 1/29-31 TV25C8	131.25
194241	1/23/2025	FRONTIER COMMUNICATIONS	9511970006JAN25		670-7000-473.26-07	FIBER OPTIC INTERNET 01/05/25-02/04/25	1,010.00

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194242	1/23/2025	GAS COMPANY, THE	03442480665JA25		704-3200-412.26-06	2401 W NICOLET ST 12/12/24-01/13/25	67.58
			07702683751JA25		001-2200-421.26-06	125 E RAMSEY ST 12/16/24-01/16/25	1,072.70
			12662493001JA25		001-2400-422.26-06	3900 W WILSON 12/10/24-01/09/25	114.48
			19499362408NV24		100-4900-431.26-06	176 E LINCOLN ST 10/23/24-11/22/24	87.58
					660-6300-471.26-06	176 E LINCOLN ST 10/23/24-11/22/24	195.36
					670-7000-473.26-06	176 E LINCOLN ST 10/23/24-11/22/24	195.36
					702-3800-480.26-06	176 E LINCOLN ST 10/23/24-11/22/24	195.36
194243	1/23/2025	GRAINGER	9349379959	032942	702-3800-480.38-52	SUPPLIES	17.42
			9351693503	032942	702-3800-480.38-52	SADDLE BOX #318	899.21
			9366901982	032942	702-3800-480.38-52	BATTERY #061	88.71
			9371039422	032942	702-3800-480.38-52	BATTERY-CREDIT	(88.71)
			9371523003	032942	702-3800-480.38-52	BATTERY	88.71
194244	1/23/2025	GREAT WESTERN RECREATION LLC	2412022	033338	001-3600-461.30-06	ZINK COATED LINK CHAIN	678.37
194245	1/23/2025	HOME DEPOT #8987	2192402	032957	704-3200-412.30-02	GARBAGE DISPOSAL-RETURNED	(149.77)
			4340173	033131	001-3600-461.30-01	SUPPLIES	116.84
			5972581	032957	704-3200-412.30-02	GARBAGE DISPOSAL	149.77
194246	1/23/2025	IBEW LOCAL 47 RETIREE MEDICAL TRUST	20250124		001-0000-204.80-10	PAYROLL SUMMARY	3,026.08
194247	1/23/2025	INDEPENDENT REVIEW INVESTIGATIONS	24-010.2	032853	001-2200-421.33-11	IA INVESTIGATIONS IA#24-005	3,835.72
194248	1/23/2025	INFOSEND, INC	279504	032788	761-3100-480.33-11	PROGRAMMING FEE	2,400.00
194249	1/23/2025	INLAND EMPIRE MAGAZINE	INV52714		001-1210-412.23-01	AD PLACEMENT FEBRUARY 2025	895.00
194250	1/23/2025	KEN GRODY FORD REDLANDS	294177	033188	702-3800-480.30-05	BATTERY/FUSE REPLACE #36	834.10
			294625	033188	702-3800-480.30-05	BRAKE/SHOCK REPAIR #36	1,405.72
194251	1/23/2025	LEAGUE OF CA CITIES-RIVERSIDE DIV	INV-26854-C9Q6H		001-1000-411.23-03	MEMBERSHIP DUES 01/01/25-12/31/25	14,798.00
194252	1/23/2025	MARIPOSA LANDSCAPES, INC	111448	032405	704-3200-412.23-29	LANDSCAPE MAINTENANCE DEC 2024	9,775.85
			111708	032405	704-3200-412.23-29	IRRIGATION VALVE REPLCMNT EXTRA WORK DEC 2024	512.00
			111709	032405	704-3200-412.23-29	REPLACED IRRIGATION VALVE EXTRA WORK DEC 2024	954.00
194253	1/23/2025	MILLER, LEROY	MEALS 1/29-31		001-1000-411.23-05	COUNCIL MEMBER ACADEMY MEALS 1/29-31 TV25D1	131.25
194254	1/23/2025	MITSUBISHI ELECTRIC & ELECTRONICS	512642	032960	704-3200-412.30-02	REGULAR SERVICE-PD JAN 2025	353.87
194255	1/23/2025	MUNICIPAL CODE CORPORATION	319474	033048	001-1400-412.33-72	CODIFICATION SVC 12/8/24-12/7/25	6,546.75
			319525	033048	001-1400-412.33-72	MUNICIPAL CODE HOSTING 12/1/24-11/30/25	1,150.00
194256	1/23/2025	MUNOZ, MARIBEL	TRAVEL 1/11-15		001-1910-412.23-05	CAPPO CONF 2025 TRAVEL 1/11-15 MUNOZ	264.99
194257	1/23/2025	MY COI LLC	1412566486	032646	705-4500-412.33-11	2025 ANNUAL ACCESS & SUPP	11,600.00
			1412566486CR	032646	705-4500-412.33-11	CREDIT-PREV INVOICES PAID $800 EA (4)	(3,200.00)
194258	1/23/2025	NEW GEN STRATEGIES AND SOLUTIONS	20499	033332	673-7000-473.33-11	COST OF SVC & RATE DESIGN	16,542.18
194259	1/23/2025	O'REILLY AUTO PARTS	6117-228945	032976	702-3800-480.38-52	BRAKE ROTORS #41	251.96
			6117-233506	032976	702-3800-480.38-52	DISK PADS #30	153.01
194260	1/23/2025	ONESOURCE DISTRIBUTORS	S007434429.001		670-0000-131.00-00	PADMOUNT PO NUM 033193	75,263.38
			S007481129.001	032862	670-7000-473.45-16	HPS PSC4004372	2,386.66
			S007568028.001	033169	670-7000-473.45-16	MILW MXF041	2,839.21
			S007568028.002	033169	670-7000-473.45-16	MILW MXF315-2XC	2,553.68
			S007656009.001		670-0000-131.00-00	HENDRIX HPI PO NUM 033289	2,322.01
			S007670204.001		670-0000-131.00-00	MOUNTING BRACKET (30) PO NUM 033307	821.06
			S007674395.003	033306	670-7000-473.45-16	HASTINGS HV-208	754.25
			S007674833.001		670-0000-131.00-00	PWC 2-03ALUMG PO NUM 033308	4,137.60
			S007702318.001		670-0000-131.00-00	RAINBOW CLEANERS PO NUM 033347	226.11
194261	1/23/2025	ORACLE AMERICA INC	101565297	032099	705-4500-412.33-11	SUBSCRIPTION-NETSUITE 9/29/24-12/28/24	17,548.50
			101594241	032099	222-0001-410.90-49	TIME AND MATERIALS CREDIT	(13,267.92)
194262	1/23/2025	PACKHAM & TOOMEY, INC	2024554	033266	702-3800-480.30-06	MONTHLY INSPECTION	135.00
			2024574	033266	702-3800-480.30-06	MONITORING SYSTEM TEST	850.00
194263	1/23/2025	PARKHOUSE TIRE, INC.	2010930181	032932	702-3800-480.30-06	TIRE REPAIR #362	274.50
			2010930192	032932	702-3800-480.38-52	TIRES #439	515.58
			2010932304	032932	702-3800-480.38-52	TIRE #310	58.07
			2010932629	032932	702-3800-480.38-52	TIRES #242	590.25
			2010933290	032932	702-3800-480.38-52	TIRES #93	365.41
194264	1/23/2025	PARS	20250124		001-0000-204.25-00	PAYROLL SUMMARY	447.32
194265	1/23/2025	PARTS AUTHORITY	062-886415	032939	702-3800-480.38-52	PARTS/SUPPLIES	32.48
			062-909297	032939	702-3800-480.38-52	AIR FILTER #839	23.19
			062-938468	032939	702-3800-480.38-52	BATTERY #62	51.24
			062-970548	032939	702-3800-480.38-52	ROTORS #30	975.44

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194265	1/23/2025	PARTS AUTHORITY	062-980913	032939	702-3800-480.38-52	OIL BATH SEAL #349	33.18
			062-982323	032939	702-3800-480.38-52	AXLE SHAFT #09	136.24
			062-982360	032939	702-3800-480.38-52	OIL BATH SEAL #349	33.18
			062-994802	032939	702-3800-480.38-52	NEW STARTER #806	117.33
			065-426802	032939	702-3800-480.38-52	BEARING #09	30.26
			091-061769	032939	702-3800-480.38-52	BATTERY CORE CREDIT	(174.56)
			091-061805	032939	702-3800-480.38-52	BATTERY CORE CREDIT	(122.84)
			091-062030	032939	702-3800-480.38-52	BATTERY CORE CREDIT #26	(9.70)
			091-062115	032939	702-3800-480.38-52	BATTERY CORE CREDIT	(19.40)
			091-062150	032939	702-3800-480.38-52	BATTERY CORE CREDIT	(19.40)
			091-062218	032939	702-3800-480.38-52	PROACT DISK PAD-RETURNED	(279.16)
			091-343941	032939	702-3800-480.38-52	WIPER BLADES	71.55
			091-344321	032939	702-3800-480.38-52	FUEL FILTER	7.61
			091-344531	032939	702-3800-480.38-52	OIL FILTER #318	5.31
			091-345418	032939	702-3800-480.38-52	PARTS #817	230.32
			091-345575	032939	702-3800-480.38-52	OIL FILTER #360	5.31
			091-345661	032939	702-3800-480.38-52	BATTERY #625	147.68
			091-345984	032939	702-3800-480.38-52	SUPPLIES	3.00
			091-346139	032939	702-3800-480.38-52	SUPPLIES	2.08
194266	1/23/2025	PINNACLE PETROMLEUM INC	0357775	033189	702-3800-480.36-11	87 REG UNLEADED FUEL	23,517.41
194267	1/23/2025	PIONEER AMERICAS LLC	900510213	033205	660-6300-471.36-08	12.5% BLEACH SODIUM HYPO	5,799.41
194268	1/23/2025	PUBLIC AGENCY RETIREMENT SERVICES	56523		001-1900-412.33-11	PARS PLN ID#PH-ARS05A SVC PERIOD 8/31/24	300.00
			56716		001-1900-412.33-11	PARS PLN ID#PH-ARS05A SVC PERIOD 9/30/24	300.00
			56930		001-1900-412.33-11	PARS PLN ID#PH-ARS05A SVC PERIOD 10/31/24	300.00
			57132		001-1900-412.33-11	PARS PLN ID#PH-ARS05A SVC PERIOD 11/30/24	300.00
194269	1/23/2025	QUINN COMPANY	WOA00061007	032944	702-3800-480.30-06	SERVICE/REPAIR #825	403.30
194270	1/23/2025	RACEWAY FORD INC	3759117	032940	702-3800-480.23-06	FORD EV-TRAINING	4,125.00
194271	1/23/2025	RAILROAD MANAGEMENT CO, LLC	509166		660-6300-471.41-04	8" WELDED PIPE & WA BOX 11/27/24-11/26/25	1,409.34
194272	1/23/2025	RIV CO OFFICE OF ECONOMIC DEV	2025-101		001-1210-412.41-46	TEAM RIV CO PARTNERSHIP ICSC LAS VEGAS MAY 2025	4,000.00
194273	1/23/2025	ROYCE, RICHARD	MEALS 1/29-31		001-1000-411.23-05	COUNCIL MEMBER ACADEMY MEALS 1/29-31 TV25C9	131.25
194274	1/23/2025	SAN GORGONIO PASS WATER AGENCY	24-00299		660-6300-471.27-14	STATE PROJECT WATER DECEMBER 2024 DELIVERY	199,500.00
194275	1/23/2025	SC FUELS	IN-0000036844	033211	702-3800-480.36-14	BULK OIL GALS	5,007.30
194276	1/23/2025	SCCI, INC DBA	242726	033337	660-6300-471.23-06	SAFETY MEETING 11/14/24	250.00
			243329	033337	660-6300-471.23-06	SAFETY MEETING 12/16/24	250.00
194277	1/23/2025	SERVIAM BY WRIGHT LLP	32839	032119	700-5300-480.33-04	GENERAL CODE ENFORCEMENT NOV/DEC 2024	16,371.98
194278	1/23/2025	SGP DESIGN AND PRINT	13222	032974	702-3800-480.38-52	VINYL NUMBER SETS	129.30
194279	1/23/2025	SITEONE LANDSCAPE SUPPLY	149219986-001	033127	001-3600-461.30-16	SUPPLIES	416.61
194280	1/23/2025	SLOVAK BARON EMPEY MURPHY & PINKNEY	91197		700-5300-480.33-04	GENERAL SVCS THRU 12/31/2024	1,829.00
			91198		700-5300-480.33-04	LITIGATION SVCS THRU 12/31/2024	3,251.00
194281	1/23/2025	SONSRAY MACHINERY LLC	SWO062805	033179	702-3800-480.30-06	REPAIRS #619	2,572.55
194282	1/23/2025	SOUTHERN CALIFORNIA WEST COAST ELEC	49407	033057	704-3200-412.30-02	REPLACE GENERATOR BATTERY	787.73
194283	1/23/2025	STAPLES BUSINESS ADVANTAGE	6021776419	033034	001-2800-441.36-00	OFFICE SUPPLIES	188.13
194284	1/23/2025	STATE OF CALIFORNIA DOJ	788699		001-1300-412.35-99	FINGERPRINTS DECEMBER 2024	814.00
194285	1/23/2025	SWIFTLY INC	3606	032713	610-5800-434.33-11	GPS TRACKER LICENSES 8/4/24-10/3/25	2,585.00
194286	1/23/2025	SYNAGRO-WWT, INC	54507	033260	680-8000-454.23-36	BIOSOLIDS TO AZ SOILS	15,928.95
194287	1/23/2025	TEC EQUIPMENT, INC	1811902F	032941	702-3800-480.38-52	PARTS #242	30.21
			1819811F	032941	702-3800-480.38-52	PARTS #349	848.49
			CM1786154F	032941	702-3800-480.38-52	CREDIT FOR 1786154F	(406.22)
194288	1/23/2025	TELEPACIFIC COMMUNICATIONS	183969450-0		705-4500-412.26-05	CENTRAL SVCS PHONE SRV JAN 2025	1,565.09
194289	1/23/2025	TETRA TECH INC.	52354080	032926	660-6300-471.33-11	SCADA SUPPORT THRU 11/30/24	18,235.00
194290	1/23/2025	TOP-LINE INDUSTRIAL SUPPLY, LCC	472713	032923	702-3800-480.38-52	SUPPLIES #820	113.50
194291	1/23/2025	VESTIS SERVICES LLC	5880826496	033216	761-3110-480.25-02	UNIFORM-FSR	100.75
194292	1/23/2025	VIRTUAL PROJECT MANAGER, LLC	12-4328	032629	100-4900-431.30-17	WEB BASED PRJCT MGMT SYST JAN 2025	200.00
					660-6300-471.30-17	WEB BASED PRJCT MGMT SYST JAN 2025	400.00
					680-8000-454.30-17	WEB BASED PRJCT MGMT SYST JAN 2025	300.00
					704-3200-412.30-17	WEB BASED PRJCT MGMT SYST JAN 2025	100.00
194293	1/23/2025	VREF INC	2962-CM	033367	001-1210-412.33-11	APPRAISAL REVIEWS	6,000.00
194294	1/23/2025	WALLACE, COLLEEN	MEALS 1/29-31		001-1000-411.23-05	COUNCIL MEMBER ACADEMY MEALS 1/29-31 TV25C7	131.25
194295	1/23/2025	WILLDAN ENGINEERING	002-33723	030055	001-2700-442.33-11	PLAN REVIEW/INSPECTION DEC 2024	25,535.00

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194295	1/23/2025	WILLDAN ENGINEERING	002-33724	030055	001-2700-442.33-11	PLAN REVIEW/INSPECTION DEC 2024	15,965.00
194296	1/30/2025	ALL PHASE ELECTRIC SUPPLY	0946-1104145	033196	673-7000-473.96-41	ELECTRIC EQUIP.& HARDWARE	30,499.39
194297	1/30/2025	ALL STAR ELITE SPORTS	4743	033100	001-3600-461.25-02	EMBROIDERY	70.91
194298	1/30/2025	AMAZON BUSINESS	14XT-NTVM-419D	033108	001-4050-461.36-00	DECORATIONS/SUPPLIES	245.49
			16R6-WYRD-Q7NQ	033121	001-4000-461.36-09	AUDIO CORD	17.77
			1K4N-V3QR-YKVM	033046	001-9600-453.41-46	REFLECTIVE SAFETY VESTS	292.96
			1LY4-P17L-QRNP	033108	001-4050-461.36-65	SUPPLIES	119.48
			1MTY-7D66-RPNF	033121	001-4000-461.89-46	STORAGE CABINETS	503.39
			1N37-PC7N-GT9M	033121	001-4000-461.36-09	ACRYLIC SIGN HOLDER	15.07
			1Y9N-GWJD-71NL	033121	001-4000-461.36-09	PA SYSTEM/MIC & CABLES	1,060.46
			1YQR-4GDF-3Q4H	033045	001-1910-412.36-00	OFFICE SUPPLIES & TONER	465.12
					703-3700-480.36-00	OFFICE SUPPLIES & TONER	7.37
			1YQV-7QWY-CJGC	033121	001-4000-461.36-09	SUPPLIES	124.20
194299	1/30/2025	AMERICAN FIDELITY ASSURANCE	D798024		001-0000-204.30-00	WHOLE/TERM LIFE DECEMBER 2024	7,444.88
					001-0000-204.80-02	CANCER POLICY DECEMBER 2024	4,075.86
					001-0000-204.80-09	ACCIDENT POLICY DECEMBER 2024	3,922.10
					001-0000-204.80-11	DISABILITY-SUPP STD DECEMBER 2024	6,749.70
					001-0000-204.80-12	CRITICAL ILLNESS DECEMBER 2024	1,905.00
					001-0000-204.80-16	GRP HOSP INDEMNITY DECEMBER 2024	1,197.30
194300	1/30/2025	AMERICAN FORENSIC NURSES	79198	033079	001-2200-421.33-31	BLOOD DRAWS	616.56
			79217	033079	001-2200-421.33-31	CHP BLOOD DRAWS	229.77
194301	1/30/2025	ANIXTER, INC	5977226-01		670-0000-131.00-00	220 MIL 15KV PO NUM 033174	133,636.94
			6189738-00		670-0000-131.00-00	J0521 PO NUM 033361	206.94
			6231071-00	033321	670-7000-473.45-16	FCH048	413.91
			6233318-00		670-0000-131.00-00	ELEC UTIL OVERHEAD HDWARE PO NUM 033330	956.82
						ELECTRIC EQUIP.& HARDWARE PO NUM 033330	27,474.10
194302	1/30/2025	AT&T CALNET 2	000022831338		001-2200-421.26-05	MONTHLY SVC 12/01/24-12/31/24	909.47
			000022832185		001-2200-421.26-05	MONTHLY SVC 12/01/24-12/31/24	103.59
			000022832441		001-2200-421.26-05	MONTHLY SVC 12/01/24-12/31/24	216.85
194303	1/30/2025	ATWORK PERSONNEL SERVICES	306021	033334	001-2740-442.23-27	INZUNZA 01/19/25	1,363.65
			306022	033074	001-3000-442.23-27	SANTELLO 01/19/25	215.70
					660-6300-471.23-27	SANTELLO 01/19/25	323.56
					680-8000-454.23-27	SANTELLO 01/19/25	323.56
					702-3800-480.23-27	SANTELLO 01/19/25	215.70
			306023	033263	761-3100-480.33-11	BURGER 01/19/25	1,499.36
			306024	033272	810-9700-490.90-59	PRIEST/REBELO 01/19/25	2,698.76
194304	1/30/2025	AVILA, SOL	COMP LOAN FY25		001-0000-116.21-00	EMPLOYEE COMPUTER LOAN S AVILA	4,922.12
194305	1/30/2025	BABCOCK LABORATORIES, INC	CA50067-0030	032373	680-8000-454.23-32	TDS ANALYSIS	39.34
			CA50074-0030	032373	660-6300-471.23-32	GENERAL PHYSICAL ANALYSIS	86.94
			CA50077-0030	032373	660-6300-471.23-32	COLIFORMS	261.91
			CA50273-0030	032373	660-6300-471.23-32	COLIFORMS	261.91
			CA50274-0030	032373	680-8000-454.23-32	TDS ANALYSIS	39.34
			CA50275-0030	032373	660-6300-471.23-32	GENERAL PHYSICAL ANALYSIS	86.94
			CA50616-0030	032373	660-6300-471.23-32	COLIFORMS	261.91
			CA50617-0030	032373	660-6300-471.23-32	GENERAL PHYSICAL ANALYSIS	57.96
			CA50618-0030	032373	680-8000-454.23-32	TDS ANALYSIS	39.34
			CL40859-0030	032373	660-6300-471.23-32	WATER ANALYSIS	5,728.65
			CL41474-0030	032373	660-6300-471.23-32	COLIFORMS	428.58
			CL41535-0030	032373	660-6300-471.23-32	GENERAL PHYSICAL ANALYSIS	86.94
			CL41538-0030	032373	680-8000-454.23-32	TDS ANALYSIS	39.34
			CL41541-0030	032373	660-6300-471.23-32	COLIFORMS	261.91
194306	1/30/2025	BANNING VETERINARY HOSPITAL	840484		001-2300-424.33-90	CREMATION #2501060033	147.75
			840728		001-2300-424.33-90	CREMATION #2501090027	147.75
						EUTHANASIA #2412300025	243.75
						EUTHANASIA #2412300049	243.75
			840761		001-2300-424.33-90	CREMATION #2501090070	147.75
			840857		001-2300-424.33-90	EXAMINATION #2412040081	183.75
			840927		001-2300-424.33-90	CREMATION #2501130029	147.75
			840995		001-2300-424.33-90	CREMATION #2501140056	147.75

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194307	1/30/2025	BEAUMONT DO IT BEST HOME CENTER	550427	033144	001-4000-461.30-02	AIR FILTER	5.38
			551929	033114	001-3600-461.36-00	12" MEASURING WHEEL	86.19
			551967	033114	001-3600-461.30-01	SUPPLIES	42.53
			551974	033144	001-4000-461.36-03	CLEANING SUPPLIES	118.68
			552321	032952	100-4900-431.36-00	2" X 10' RATCHET	35.55
			552444	032952	100-4900-431.36-00	SINGLE SIDED KEY	1.93
			552473	032952	100-4900-431.36-00	SOAPSTONE REFILL	6.01
194308	1/30/2025	BEAUMONT SAFE & LOCK	77889	033156	704-3200-412.30-02	MAKE ORIGINAL KEY	15.00
194309	1/30/2025	BENAVIDES, SUSIE	EYEWEAR FY25		001-1300-412.25-10	EMPLOYEE EYEWEAR REIMB IBEW MOU BENAVIDES	250.00
194310	1/30/2025	BLOOMHUFF, NINA	MAY24-OCT24		670-7000-357.38-10	MEDICAL DISCOUNT MAY24-OCT24 PAYMENTS	120.00
					675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194311	1/30/2025	CALIFORNIA WATER ENVIRONMENT	FY25 DUES435392		680-8000-454.23-03	CWEA ASSOC DUES D ALBRIGHT #435392	239.00
194312	1/30/2025	CANO, ALONDRA	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194313	1/30/2025	CDW GOVERNMENT, LLC	AC3PN8W	033214	660-6300-471.89-48	DELL DOCK-W/WW	222.00
			AC3PX8J	033214	660-6300-471.89-48	DELL 5450-W/WW 3P4JFW3	1,582.56
194314	1/30/2025	CELL BUSINESS EQUIPMENT (CBE)	IN2789613	032335	705-4500-412.30-06	STACKER FINISHER STAPLES	508.19
			IN2800138	032335	001-4000-461.30-06	COPIER MAINTENANCE 11/20/24-12/19/24	293.49
					660-6300-471.30-06	COPIER MAINTENANCE 11/20/24-12/19/24	172.72
					670-7000-473.30-06	COPIER MAINTENANCE 11/20/24-12/19/24	242.73
					705-4500-412.30-06	COPIER MAINTENANCE 11/20/24-12/19/24	1,573.98
					761-3100-480.30-06	COPIER MAINTENANCE 11/20/24-12/19/24	240.67
194315	1/30/2025	CHARTER COMMUNICATIONS	189282601012125		001-2400-422.26-09	3900 W WILSON 01/25/25-02/24/25	237.00
194316	1/30/2025	CHARTER COMMUNICATIONS	189283801012125		670-7000-473.26-07	CORPORATE YARD FIBER 01/25/2025-02/24/2025	990.58
194317	1/30/2025	CHARTER COMMUNICATIONS	189283501012125		001-2060-446.26-09	CITY HALL 01/25/2025-02/24/2025	119.75
194318	1/30/2025	CHARTER COMMUNICATIONS	189283601012125		670-7000-473.26-07	CITY HALL FIBER 01/25/2025-02/24/2025	990.58
194319	1/30/2025	CICCS	2025-01		001-0000-204.62-00	PET INSURANCE DECEMBER 2024	90.03
			DEC24 EYE		001-0000-204.80-08	EYEMED VISION DECEMBER 2024	1,114.54
194320	1/30/2025	CINTAS CORPORATION	4218137347	033161	001-3600-461.25-02	UNIFORM-PARKS	52.32
			4218871333	032901	702-3800-480.25-02	UNIFORM-FLEET	61.26
			4218871364	032953	100-4900-431.25-02	UNIFORM-STREETS	79.77
					704-3200-412.25-02	UNIFORM-BUILD MAINT	11.03
			4218871447	033256	670-7000-473.25-02	UNIFORM-ELEC	336.70
			4218871522	032937	610-5800-434.25-02	UNIFORM-TRANSIT	112.02
					610-5850-434.25-02	UNIFORM-DAR	7.84
194321	1/30/2025	CONCENTRA MEDICAL CENTERS	85293561		001-1300-412.33-32	PRE-EMPLOYMENT PHYSICALS DOT RE-CERT PHYSICAL	322.00
			85365082		001-1300-412.33-32	PRE-EMPLOYMENT PHYSICALS DOT RE-CERT PHYSICAL	390.00
			85365329		001-1300-412.33-32	PRE-EMPLOYMENT PHYSICALS DOT RE-CERT PHYSICAL	161.00
			85433686		001-1300-412.33-32	PRE-EMPLOYMENT PHYSICALS DOT RE-CERT PHYSICAL	45.00
			85541306		001-1300-412.33-32	PRE-EMPLOYMENT PHYSICALS	126.00
			85608373		001-1300-412.33-32	PRE-EMPLOYMENT PHYSICALS	222.00
194322	1/30/2025	COUTS HEATING & COOLING, INC	10754	032968	704-3200-412.30-02	EAST SIDE CHILLER REPAIR	2,446.89
			10755	032968	704-3200-412.30-02	WEST SIDE CHILLER REPAIR	1,562.08
194323	1/30/2025	DIAMOND HILLS CHEVROLET BUICK GMC	27029145	032979	702-3800-480.38-52	PARTS/LABOR #504	820.27
194324	1/30/2025	EKBERG, STEVEN	91815-21506 AC		675-7020-473.42-35	RESIDENTIAL AC REBATE	1,800.00
194325	1/30/2025	FAST LUBE & TUNE	121645	033199	702-3800-480.30-05	OIL CHANGE #834	67.47
194326	1/30/2025	FEDEX	8-710-01040	032467	001-3000-442.23-04	PUBLIC WORKS MAILINGS	84.76
			9-688-81816	032467	001-3000-442.23-42	PUBLIC WORKS MAILINGS LATE FEE	6.78
194327	1/30/2025	FERRELLGAS LP	1128968207	033261	660-6300-471.36-08	PROPANE	1,050.97
194328	1/30/2025	FLYNN, SHERI	REIMB 1/29/25		001-1000-411.23-05	CITY LEADERS SUMMIT AIRFARE-BARRINGTON TV25H3	308.96
						CITY LEADERS SUMMIT AIRFARE-FLYNN TV25G9	308.96
194329	1/30/2025	FLYNN, SHERI	MILEAGE JAN25		001-1000-411.23-05	CITY COUNCIL TRAVEL MILEAGE FLYNN 1/13/25	32.23
194330	1/30/2025	FLYNN, SHERI	MILEAGE DEC24		001-1000-411.23-05	CITY COUNCIL TRAVEL MILEAGE FLYNN 12/12/24	15.08
194331	1/30/2025	FRONTIER COMMUNICATIONS	2131817186JAN25		703-3700-480.30-17	213-181-7186 01/19/25-02/18/25	483.74
			9518491595JAN25		001-2200-421.26-05	MONTHLY SVC 01/13/25-02/12/25	130.36
			9518496778JAN25		001-2200-421.26-05	951-849-6778 01/01/25-01/31/25	76.69
194332	1/30/2025	GAS COMPANY, THE	03292684002JA25		001-4000-461.26-06	COMMUNITY CENTER 12/16/24-01/16/25	117.21
			05192710001JA25		001-3600-461.26-06	PARKS & REC 12/16/24-01/16/25	22.20
			05602682006JA25		001-2400-422.26-06	172 N MURRAY ST 12/16/24-01/16/25	422.99
			09142474007JA25		001-4050-461.26-06	SENIOR CENTER 12/16/24-01/16/25	428.17

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194332	1/30/2025	GAS COMPANY, THE	15684815176JA25		705-4500-412.26-06	99 E RAMSEY 12/16/24-01/16/25	63.40
			16108344439JA25		001-4010-461.26-06	AQUATICS 12/16/24-01/16/25	29.10
			19499362408DC24		100-4900-431.26-06	176 E LINCOLN ST 11/22/24-12/23/24	121.67
					660-6300-471.26-06	176 E LINCOLN ST 11/22/24-12/23/24	271.44
					670-7000-473.26-06	176 E LINCOLN ST 11/22/24-12/23/24	271.44
					702-3800-480.26-06	176 E LINCOLN ST 11/22/24-12/23/24	271.44
194333	1/30/2025	GONZALEZ, MARIA	NOV23-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	390.00
194334	1/30/2025	GRAINGER	9386159421	032942	702-3800-480.38-52	SHOP SUPPLIES	254.62
			9386159439	032942	702-3800-480.38-52	SHOP SUPPLIES	54.70
194335	1/30/2025	H&L CHARTER CO, INC	30970	033364	001-4000-461.42-31	LIVING DESERT ZOO 1/25/25	1,570.00
194336	1/30/2025	HAWLEY, CAMERON	REBATE WIN&DOOR		675-7020-473.42-66	REBATE FOR WINDOWS/DOORS 1916 CHARLES ST	375.57
						REBATE FOR WINDOWS/DOORS 511 SANTA RITA PL	357.04
194337	1/30/2025	HDL COREN & CONE	SIN046821	032707	001-1900-412.33-11	CONTRACT SVCS - PROP TAX JAN-MAR 2025	4,000.00
194338	1/30/2025	HEMET VALLEY TOOL, INC	183610	033253	660-6300-471.30-06	TOOLS	458.17
			183990	033282	100-4900-431.30-06	TOOLS	178.98
194339	1/30/2025	HOME DEPOT #8987	5012738	033131	001-3600-461.30-01	SUPPLIES	178.77
194340	1/30/2025	HOVIVIAN, AUSTIN	TUITION FY25		660-6300-471.10-58	TUITION REIMBURSEMENT IBEW MOU HOVIVIAN	4,445.00
194341	1/30/2025	IRON MOUNTAIN INFORMATION MGMT, LLC	JZMP391	033352	670-7000-473.33-11	SHREDDING SERVICES 11/26/24-12/24/24	193.29
194342	1/30/2025	JOE A GONSALVES & SON	162199	032066	001-1000-411.33-11	LOBBYING SERVICES FEB 2025	1,925.00
					705-4500-412.33-11	LOBBYING SERVICES FEB 2025	1,925.00
194343	1/30/2025	KEN GRODY FORD REDLANDS	295225	033188	702-3800-480.38-52	PARTS/LABOR #30	4,709.17
194344	1/30/2025	LARA, TORIBIO	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194345	1/30/2025	LINCOLN FINANCIAL GROUP	4770834141		001-0000-204.14-00	LINCOLN LTD DECEMBER 2024	3,282.67
						LINCOLN STD DECEMBER 2024	4,513.71
						LTD - CURRENT ADJUST DECEMBER 2024	133.45
						STD - CURRENT ADJUST DECEMBER 2024	178.86
					001-0000-204.30-00	GROUP LIFE - CURRENT ADJ DECEMBER 2024	78.00
						LINCOLN GROUP LIFE DECEMBER 2024	2,353.34
						LINCOLN VOL LIFE BUY-UP DECEMBER 2024	1,116.13
194346	1/30/2025	LINCOLN FINANCIAL GROUP	4781441032		001-0000-204.14-00	LINCOLN LTD JANUARY 2025	3,282.67
						LINCOLN STD JANUARY 2025	4,513.71
						LTD - CURRENT ADJUST JANUARY 2025	(21.26)
					001-0000-204.30-00	LINCOLN GROUP LIFE JANUARY 2025	2,353.34
						LINCOLN VOL LIFE BUY-UP JANUARY 2025	1,206.91
194347	1/30/2025	MARIPOSA LANDSCAPES, INC	110900	032405	704-3200-412.23-29	LANDSCAPE MAINTENANCE NOV 2024	9,775.85
			111161	032405	704-3200-412.23-29	REPAIR BROKEN MAINLINE EXTRA WORK NOV 2024	840.00
			111449	032405	660-6300-471.45-07	LANDSCAPE MAINTENANCE DEC 2024	1,963.44
194348	1/30/2025	MILSOFT UTILITY SOLUTIONS, INC	20246852	033231	670-7000-473.89-49	ENGINEERING ANALYSIS SUPP 1/1/25-12/31/25	6,934.25
			20247077	033231	670-7000-473.90-49	HOSTED TEXTING DEDICATED NOV 2024	22.74
					761-3100-480.30-17	HOSTED TEXTING DEDICATED NOV 2024	1,929.00
			20250729	033231	670-7000-473.90-49	DATABASE CONVERSION	6,250.00
194349	1/30/2025	MODEL 1 COMMERCIAL VEHICLES	RA101015771:01	033204	702-3800-480.30-05	W/C LIFT #244	443.50
194350	1/30/2025	MORENO, ANGELA	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194351	1/30/2025	MORENO, MELBA	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194352	1/30/2025	MYERS & SONS HI-WAY SAFETY INC.	166962	032956	100-4900-431.89-54	TRAFFIC CONTROL SUPPLIES	889.39
194353	1/30/2025	NAPA AUTO PARTS	225901	032920	702-3800-480.38-52	BLUE DEF 2.5GAL	159.94
194354	1/30/2025	OPENGOV, INC	INV17264	032478	705-4500-412.33-11	OPENGOV MODULES FY25 12/15/24-12/14/25	96,369.00
194355	1/30/2025	PARTS AUTHORITY	062-000968	032939	702-3800-480.38-52	ROTORS/BRACKETS #804	288.61
			062-002122	032939	702-3800-480.38-52	BRAKE PAD #804	59.42
			062-010982	032939	702-3800-480.38-52	BRAKE PAD #804	62.35
			062-012881	032939	702-3800-480.38-52	PROACT DISK #504	55.09
			062-998405	032939	702-3800-480.38-52	FUEL/WATER SEPT #339	26.63
			091-062290	032939	702-3800-480.38-52	BATTERY CORE CREDIT	(19.40)
			091-062305	032939	702-3800-480.38-52	BATTERY CORE CREDIT	(19.40)
			091-062310	032939	702-3800-480.38-52	BATTERY CORE CREDIT	(19.40)
			091-346605	032939	702-3800-480.38-52	BATTERY #806	147.68
			091-346697	032939	702-3800-480.38-52	BATTERY #71	135.52
			091-346735	032939	702-3800-480.38-52	BATTERY #1006	338.29
			092-653863	032939	702-3800-480.38-52	PARTS #338	2.86

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194355	1/30/2025	PARTS AUTHORITY	095-430580	032939	702-3800-480.38-52	BATTERY #326	176.39
			095-430823	032939	702-3800-480.38-52	BATTERY #236	176.39
			097-446001	032939	702-3800-480.38-52	PARTS #338	2.86
			101-104454	032939	702-3800-480.38-52	ROTOR ASY BRAKT #804	237.03
			117-553767	032939	702-3800-480.38-52	ROTOR ASSEMBLY #804	237.05
			292-518466	032939	702-3800-480.38-52	DISC BRAKE PAD #504	52.31
194356	1/30/2025	PINNACLE PETROMLEUM INC	0361592	033189	702-3800-480.36-11	87 REG UNLEADED FUEL	14,868.11
			0361593	033189	702-3800-480.36-11	DIESEL FUEL	5,810.45
194357	1/30/2025	PRE-PAID LEGAL SERVICES, INC	DECEMBER 2024		001-0000-204.80-07	PREPAID LEGAL PREMIUMS DECEMBER 2024	381.66
194358	1/30/2025	RIOS, MARIA FRANCISCO	MAY24-OCT24		675-7020-473.42-36	LOW INCOME DISCOUNT MAY24-OCT24 PAYMENTS	195.00
194359	1/30/2025	ROADWAY ASSET SERVICES LLC	RAS821251	033069	101-4900-431.93-16	FIXED ASSET INSPECTION JAN 2025	36,039.00
194360	1/30/2025	SCCI, INC DBA	242397	033337	660-6300-471.23-06	SAFETY MEETING 11/18/24	250.00
			243987	033337	660-6300-471.23-06	SAFETY MEETING 01/09/25	250.00
194361	1/30/2025	SGP DESIGN AND PRINT	13248	032973	702-3800-480.38-52	VINYL DECALS CITY SEAL	413.76
194362	1/30/2025	SHRED-IT USA, LLC	8009562243	033351	670-7000-473.33-11	SHREDDING SERVICES CITY HALL	152.40
194363	1/30/2025	SMART & FINAL	236311	033138	201-4050-446.36-00	GREEN TEA/CHOCOLATE	26.97
			902544	033138	001-4050-461.36-00	COFFEE	89.24
194364	1/30/2025	SMITH, HAROLD A	MAY24-OCT24		670-7000-357.38-10	MEDICAL DISCOUNT MAY24-OCT24 PAYMENTS	150.00
194365	1/30/2025	SOUTHERN CALIFORNIA EDISON	7501748855		670-7000-473.27-11	JOINT POLE PURCHASE SALVAGE EQUIPMENT	304.67
194366	1/30/2025	STAPLES BUSINESS ADVANTAGE	6019787349	032963	660-6300-471.36-00	HP INK	323.62
			6021227281	033055	001-3600-461.36-00	HAND SANITIZER	53.72
			6021776421	033056	001-1400-412.36-00	SUPPLIES	52.63
194367	1/30/2025	STATE OF CALIFORNIA DOJ	791476	033226	001-2200-421.33-31	BLOOD ANALYSIS DEC 2024	70.00
194368	1/30/2025	T-MOBILE	9590604763		001-2200-421.33-11	GPS LOCATOR 12/11/24-01/08/25	115.00
194369	1/30/2025	TASC	INV3284787		001-1300-412.33-11	FSA ADMIN FEES 01/01/2025-03/31/2025	1,209.18
194370	1/30/2025	TEXAS LIFE INSURANCE COMPANY	SM0FNY202412170		001-0000-204.80-03	TEXAS LIFE INSURANCE DECEMBER 2024	5,463.62
194371	1/30/2025	THOMSON REUTERS - WEST	851370033		001-2400-422.23-03	CCR T 19 PUBLIC SAFETY 01/01/2025-12/31/2025	274.44
194372	1/30/2025	TIMECLOCK PLUS, LLC	INV00393476	032689	001-2200-421.30-17	SOFTWARE RENEWAL 12/1/24-11/30/25	1,861.20
194373	1/30/2025	TURBO DATA SYSTEMS INC	44636	032753	001-2200-421.23-45	CITATION PROCESSING DEC 2024	150.00
194374	1/30/2025	VESTIS SERVICES LLC	5880832625	033216	761-3110-480.25-02	UNIFORM-FSR	100.75
194375	1/30/2025	WEST COAST SAND & GRAVEL, INC.	800353	033297	660-6300-471.45-17	SCREENED FILL SAND	591.68
194376	1/30/2025	YUNEX, LLC	5610004114	032407	100-4900-431.30-09	TRAFFIC SIGNAL CALL OUTS DEC 2024	4,115.50
			90003545	032407	100-4900-431.30-09	TRAFFIC SIGNAL MAINT DEC 2024	648.00
9008146	1/2/2025	QUADIENT LEASING USA, INC	Q1639840		001-0000-201.10-00	POSTAGE-LEASING SALES TAX	(19.43)
				033302	705-4500-412.30-06	POSTAGE-LEASING 1/1/25-3/31/25	959.47
9008147	1/3/2025	WELLS FARGO BANK	PPE 12/22/2024		001-0000-204.80-14	VEBA CONTRIBUTIONS PPE 12/22/24 PD 12/27/24	300.00
9008148	1/6/2025	INTERNAL REVENUE SERVICE	MC 01/03/2025		001-0000-204.13-00	FICA MEDICARE/REGULAR MC 01/03/2025 JOHNSON	15.60
9008149	1/7/2025	WELLS FARGO CARD SERVICES INC	WELLS ONE DEC24		001-1000-411.23-05	LOCC BARRINGTON-LOCC TV25D3	675.00
						LOCC FLYNN TV25C8 LOCC-CC TRNG	(675.00)
						LOCC MILLER TV25C9 LOCC-CC TRN	675.00
						MERITAGE RESORT-REFUNDED WALLACE-LOCC CONF TV25A1	(631.86)
					001-1000-411.41-86	INCREDIBLE COOKIES ELECTED OFFICIAL RECEPTN	777.40
					001-1200-412.23-03	APPLE.COM/BILL IPHONE STORAGE	0.99
						CANVA GRAPHICS SUBSCRIPTION	95.94
						PE SUBSCRIPTIONS PRESS ENTERPRISE ONLINE	18.00
					001-1200-412.23-05	MUNICIPAL MGMT ASSO SCHULZE CONF FEE	125.00
						MUNICIPAL MGMT ASSO SCHULZE CONF FEE REFUND	(125.00)
						YOTEL WASHINGTON DC ROOM CANCELLATION FEE	161.17
					001-1210-412.23-03	COSTAR GROUP INC COM PROPERTY LISTINGS	860.00
					001-1300-412.23-01	CANVA FLYER DESIGN SVCS	12.99
					001-1300-412.23-03	SOCIETYFORHUMANRESOURCE CA LABOR LAW SUBSCRIPTN	1,806.25
					001-1300-412.36-00	AMAZON MKTPL CALENDARS (4)	63.91
						AMAZON MKTPL PRINTER TONER	225.18
						AMAZON MKTPL USB OUTLETS	32.25
						WALMART.COM POSTER CALENDAR	52.80
					001-1300-412.36-68	AMAZON MKTPL HOLIDAY LUNCHEON	53.48
						AMAZON MKTPL SUPPLIES-HOLIDAY LUNCHEON	160.85
						AMAZON.COM HOLIDAY LUNCHEON	125.00
						AMZ WOOT LLC HOLIDAY LUNCHEON	32.31

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9008149	1/7/2025	WELLS FARGO CARD SERVICES INC	WELLS ONE DEC24		001-1300-412.36-68	AMZ WOOT LLC HOLIDAY LUNCHEON-REFUND	(25.84)
						DREAMY FOOD WORKS CATERING-HOLIDAY LUNCHEON	408.00
						DSW HOLIDAY LUNCHEON	21.55
						GAMESTOP HOLIDAY LUNCHEON	156.23
						KOHLS.COM HOLIDAY LUNCHEON	109.13
						MAMA TS FOOD CATERING-HOLIDAY LUNCHEON	7,459.02
						PANERA BREAD DIRECTORS HOLIDAY EVENT	177.46
						SAMSCLUB.COM HOLIDAY LUNCHEON	58.21
						SMART AND FINAL EMPLOYEE HOLIDAY PARTY	211.08
						WALMART.COM HOLIDAY LUNCHEON	117.64
						WALMART.COM HOLIDAY LUNCHEON-REFUND	(55.89)
					001-1400-412.23-03	TIMES MEDIA GROUP CA RECORD GAZETTE SUBSCRIP	49.95
					001-1400-412.36-00	SMART AND FINAL WATER-CITY CLERK	67.96
					001-1900-412.23-03	CSMFO BOGARD CSMF MBRSHP	150.00
					001-1900-412.23-05	CHEVRON 12/12 FUEL-LOCC MUNI FIN INST	17.75
						DELTA AIR 6/28-7/1 MASON-GFOA CONF	767.96
						GOFA 6/29-7/2 MASON-REG-GFOA CONF	525.00
						MERITAGE RESORT 12/10-12 BOGARD-LOCC MUNI FIN INST	528.08
						MERITAGE RESORT 12/10-12 DATUIN-LOCC MUNI FIN INST	528.08
						PS AIRPORT 12/10-12 PARKING-LOCC MUNI FIN	60.00
						SOUTHWEST 12/10-12 BOGARD-LOCC MUNI FIN	581.96
					001-1910-412.23-03	CAPPO ALGIERS CAPPO MBRSHP	145.00
						GFOA MASON-GFOA MBRSHP DUES	150.00
					001-1910-412.23-05	CAPPO 1/11-15 ALGIERS REG CAPPO CONF	595.00
						SOUTHWEST 1/11-15 ALGIERS CAPPO CONF	229.89
						SOUTHWEST 1/11-15 MUNOZ CAPPO CONF	229.89
						SUPERION 4/26-5/1 MASON CS ENGAGE	1,149.00
					001-1910-412.36-00	HOBBY-LOBBY CHRISTMAS DECOR	169.92
						INMOTION LAX CHARGING CORD	38.31
						THE HOME DEPOT SUPPLIES	99.15
					001-2060-446.23-03	YOUTUBEPREMIUM YOU TUBE SUBSCRIPTION	13.99
					001-2060-446.33-11	LEIGHTRONIX WEBSITE VIDEO HOSTING	1,000.00
					001-2060-446.89-49	ADOBE ADOBE CREATIVE CLOUD	659.88
					001-2200-421.23-04	FEDEX DELIVERY SVCS-DA OFFICE	79.61
						FEDEX P&E SHIPMENT	689.46
					001-2200-421.23-05	PCI L749 RIV OFF 12/5 PARKING-LEAC MEETING	7.50
					001-2200-421.23-06	CA POLICE CHIEF 1/12-15 S AVILA REG EX ASSIST	750.00
						RVSD SHERIFF CLARK 12/16 NOTTINGHAM USE OF FORCE	155.53
					001-2200-421.30-05	SHELL OIL FLEET CARWASH-NOV 2024	248.00
					001-2200-421.36-00	BEAUMONT DO IT BEST MOUSE TRAPS	34.44
						FOUR PAWS PET 11/25-27 OVERNIGHT-PD K9 BUDDY	74.00
						RYANS PET SUPPLY MICRO CHIP SCANNER	353.30
						SHELL OIL PROPANE-DUI CHECKPOINT	60.46
						SMART AND FINAL DOG FOOD/SUPPLIES-ACO	158.95
						THE HOME DEPOT DUI CHECKPOINT SUPPLIES	366.17
					001-2200-421.36-04	GALLS UNIFORM-CANO	738.24
					001-2200-421.36-07	TUSCANOS PIZZA & PASTA FOOD-DUI CHECKPOINT	164.39
					001-2200-421.36-62	SGP DESIGN AND PRINT JR POLICE STICKER (1000)	429.92
						ULINE P&E SUPPLIES	795.41
					001-2400-422.89-46	HOMEDEPOT.COM BATHROOM FIXTURES #89	86.18
						THE HOME DEPOT BATHROOM FIXTURES #89	241.34
					001-2700-442.23-33	ESRI CLOUD STORAGE-MAP SVCS	120.00
					001-2800-441.23-06	AM COUNCIL OF ENGINEERS PLANNING CODE TRNG BKS	145.38
					001-3000-442.23-03	ICMA ONLINE VELA ICMA MBRSHP	200.00
					001-3600-461.25-02	CARHARTT JACKETS (3)	459.87
					001-3600-461.38-54	GRAINGER GRAFFITI REMOVER	268.02
					001-4000-461.23-03	SPOTIFY MUSIC SOFTWARE	23.98
						WHEN I WORK INC SCHEDULING SOFTWARE	125.00
					001-4000-461.36-00	DOMINOS 12/12 YOUTH BASKETBALL MEETING	73.75

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9008149	1/7/2025	WELLS FARGO CARD SERVICES INC	WELLS ONE DEC24		001-4000-461.36-09	EPIC SPORTS BASKETBALLS-YOUTH LEAGUE	125.92
						FOOD4LESS 12/21 PAJAMA MOVIE PARTY	16.00
						GOPHER FAMILY BRANDS BASKETBALLS-YOUTH LEAGUE	94.15
					001-4020-461.36-09	DOMINOS 12/23 WINTER DAY CAMP	60.39
						STATERBROS 12/23 WINTER DAY CAMP	54.66
					660-6300-471.23-01	GFE OUTREACH GRANT AD-BID	35.00
						GFE OUTREACH GRANT AD-FUNDED IFB	35.00
					660-6300-471.23-03	AMERICAN WATER WORKS ASSO VELA AWWA MBRSHP	336.00
						ASCE PURCHASING VELA ASCE MBRSHP	642.00
					670-7000-473.23-06	APPA 12/5 ONLINE MISGHINA APPA TRNG	595.00
						UW CE REG CTR 3/17-21 ONL MISGHINA-ELEC DIST TRNG	1,695.00
					670-7000-473.36-00	SAMSCLUB.COM COFFEE SUPPLIES	169.66
						SAMSCLUB.COM SUPPLIES	61.35
					670-7000-473.45-16	BEAUMONT DO IT BEST SUPPLIES	530.11
					675-7020-473.23-03	APPLE.COM/BILL PHOTOBOOTH APP	39.99
						AWWEE ROCKWELL AWWEE MBRSHP	650.00
					675-7020-473.41-46	4 BROS LIQUOR #4 WATER/HYDRATION DRINKS	23.45
						BEAUMONT DO IT BEST PROPANE-HEATER TANKS	114.75
						CHERRY VALLEY FEED RENT-STRAW BALES (30)	228.88
						DOLLAR GENERAL WATER-SNOW MACHINE	7.40
						FAMILY DOLLAR OIL-GENERATORS	13.71
						KILLER TACOS VOLUNTEERS-XMAS LIGHT	318.26
						KOHLS XMAS BLANKET/TREE TOPPER	35.54
						LITTLE CAESARS XMAS TREE LIGHT EVENT	123.62
						THE HOME DEPOT NUTCRACKERS/TREE	224.10
						TRACTOR SUPPLY COWBOY CHRISTMAS	24.23
						WENDYS 12/3 MARKETING MEETING	50.63
					703-3700-480.30-17	DIGICERT SECURE SITE OV REFUND	(528.00)
						SCALEFUSION LOBBY KIOSK SOFTWARE	288.00
					761-3100-480.23-05	SUPERION 4/26-5/1 MASCORRO CS ENGAGE	1,149.00
					810-9700-490.90-59	CARLS JR OPV CLIENT MEALS	22.26
						CHARMERS FRESH BURGERS OPV CLIENT MEALS	28.53
						CHIPOTLE CRISIS RESPONSE TEAM	31.95
						FAST 5 XPRESS BEAUMONT OPV VEHICLE WASH	56.00
						JACK IN THE BOX OPV CLIENT MEALS	46.40
						MCDONALDS OPV CLIENT MEALS	8.49
						MORONGO TRAVEL CENTER OPV VEHICLE WASH	15.00
						QUALITY INNS 12/16-17 OPV CLIENT WILLIAMS	86.69
						QUALITY INNS 12/27-28 OPV CLIENT TYSON	138.16
						RITE AID OPV CLIENT DRINKS	22.76
						RITE AID OPV CLIENT FEM PRODUCTS	13.49
						RITE AID OPV CLIENT GIFT CARDS	439.60
						SHELL OIL OPV VEHICLE WASH	26.98
						UBER TRIP 11/29 OPV CLIENT RIDE	50.39
						UBER TRIP 12/12 OPV CLIENT RIDE	154.67
						WABA GRILL OPV CLIENT MEALS	172.59
9008150	1/8/2025	CA. ST. PUBLIC EMPLOYEES	PPE 12/08/2024		001-0000-204.20-00	PERS ADJUST CORR ADJ-J GARCIA	(54.39)
						PERS ADJUST CORR ADJ-LOGAN	466.94
						PERS ADJUST CORR ADJ-RILEY	(4.10)
						PERS ADJUST CORR ADJ-V AVILA	(44.65)
						PERS ADJUST OVER MAX-COFFEY	(402.42)
						PERS ADJUST OVER MAX-MARTINEZ	(27.53)
						PERS ADJUST OVER MAX-MCCLUNE	(27.55)
						PERS ADJUST OVER MAX-N SMITH	1,391.63
						PERS ADJUST OVER MAX-R MUNOZ	(1,551.01)
						PERS ADJUST OVER MAX-WRIGHT	(99.39)
						RETIREMENT BENEFITS PPE 12/08/24 PD 12/13/24	157,746.16
9008151	1/9/2025	AMERICAN FIDELITY ASSURANCE	2332419B		001-0000-204.80-04	HEALTH FSA 12/01/24-12/15/24	3,004.31
					001-0000-204.80-05	DEPENDENT CARE 12/01/24-12/15/24	796.38

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9008151	1/9/2025	AMERICAN FIDELITY ASSURANCE	2332420B		001-0000-204.80-04	HEALTH FSA 12/16/24-12/31/24	3,004.31
					001-0000-204.80-05	DEPENDENT CARE 12/16/24-12/31/24	796.38
9008152	1/9/2025	CA. ST. PUBLIC EMPLOYEES	100000017772871		001-0000-204.31-00	ANTHEM BL CROSS JANUARY 2025	2,383.89
						BL SHIELD ACCESS JANUARY 2025	34,961.87
						BL SHIELD TRIO JANUARY 2025	75,877.82
						BL SHIELD TRIO JANUARY 2025 (RETRO)	1,409.38
						KAISER HMO JANUARY 2025	72,453.84
						KAISER HMO JANUARY 2025 (RETRO)	(2,250.07)
						PERS GOLD JANUARY 2025	13,369.51
						PERS PLATINUM JANUARY 2025	6,308.71
						PERS PLATINUM JANUARY 2025 (RETRO)	(2,303.00)
					001-1300-412.15-52	PA BILLING ER SHARE-RETIR JANUARY 2025	158.00
					001-1300-412.41-18	ADMIN FEE FOR ACTIVE JANUARY 2025	485.31
					001-1300-412.41-19	ADMIN FEE FOR RETIRED JANUARY 2025	27.02
9008153	1/9/2025	CA. ST. PUBLIC EMPLOYEES	100000017772873		001-0000-204.31-00	BL SHIELD ACCESS JANUARY 2025	2,154.05
						BL SHIELD TRIO JANUARY 2025	1,919.09
						KAISER HMO JANUARY 2025	1,853.04
						PERS PLATINUM JANUARY 2025	1,263.73
					001-1300-412.41-18	ADMIN FEE FOR ACTIVE JANUARY 2025	17.26
9008154	1/9/2025	CA. ST. PUBLIC EMPLOYEES	100000017760356		001-1300-412.15-15	RBF INVOICE PAXTON, CHRISTOPHER	106.80
					670-7000-473.15-15	RBF INVOICE EARHART, JAMES	7,257.00
9008155	1/10/2025	WELLS FARGO BANK	PPE 01/05/2025		001-0000-204.10-00	PAYROLL PPE 01/05/25 PD 01/10/25	632,613.70
9008156	1/10/2025	CORPORATION SERVICE COMPANY	8345718-010825		001-2740-442.23-07	RELEASE OF LIEN APN 408-145-007	8.00
						RELEASE OF LIEN APN 419-072-030	8.00
						RELEASE OF LIEN APN 419-081-004	8.00
						RELEASE OF LIEN APN 419-140-059	8.00
						RELEASE OF LIEN APN 532-130-020	8.00
						RELEASE OF LIEN APN 534-022-014	8.00
						RELEASE OF LIEN APN 534-050-001	8.00
						RELEASE OF LIEN APN 534-093-014	8.00
						RELEASE OF LIEN APN 534-194-004	8.00
						RELEASE OF LIEN APN 535-070-003	8.00
						RELEASE OF LIEN APN 535-150-008	8.00
						RELEASE OF LIEN APN 535-180-006	8.00
						RELEASE OF LIEN APN 537-090-040	8.00
						RELEASE OF LIEN APN 537-090-041	8.00
						RELEASE OF LIEN APN 537-090-042	8.00
						RELEASE OF LIEN APN 537-100-032	8.00
						RELEASE OF LIEN APN 541-082-010	8.00
						RELEASE OF LIEN APN 541-082-018	8.00
						RELEASE OF LIEN APN 541-133-023	8.00
						RELEASE OF LIEN APN 541-161-010	8.00
9008157	1/13/2025	CA. ST. EMPLOYMENT DEV. DEPT.	PPE 01/05/2025		001-0000-204.12-00	STATE INCOME TAX PPE 01/05/25 PD 01/10/25	49,531.36
9008158	1/13/2025	INTERNAL REVENUE SERVICE	PPE 01/05/2025		001-0000-204.11-00	FEDERAL INCOME TAX PPE 01/05/25 PD 01/10/25	109,669.02
					001-0000-204.13-00	FICA MEDICARE/REGULAR PPE 01/05/25 PD 01/10/25	164,912.84
9008159	1/14/2025	WELLS FARGO BANK	PPE 01/05/2025		001-0000-204.80-14	VEBA CONTRIBUTIONS PPE 01/05/25 PD 01/10/25	300.00
9008160	1/14/2025	TASC	PPE 01/05/2025		001-0000-204.80-15	TASC NESP PPE 01/05/25 PD 01/10/25	546.91
9008161	1/15/2025	EMPOWER ANNUITY INSURANCE COMPANY	PPE 01/05/2025		001-0000-204.16-00	457 LOAN PAYMENTS PPE 01/05/25 PD 01/10/25	11,095.12
						457 PRE TAX CONTRIBUTIONS PPE 01/05/25 PD 01/10/25	101,790.51
						457 ROTH CONTRIBUTIONS PPE 01/05/25 PD 01/10/25	1,360.03
9008162	1/16/2025	CA. ST. PUBLIC EMPLOYEES	MC 12/05/2024		001-0000-204.20-00	RETIREMENT BENEFITS MC 12/05/2024 FRANCO	801.66
9008163	1/16/2025	CORPORATION SERVICE COMPANY	8345718-011425		001-2740-442.23-07	RELEASE OF LIEN APN 534-212-014	28.00
						RELEASE OF LIEN APN 534-272-009	8.00
						RELEASE OF LIEN APN 535-020-026	8.00
						RELEASE OF LIEN APN 537-100-031	8.00
						RELEASE OF LIEN APN 538-031-016	8.00
						RELEASE OF LIEN APN 538-040-032	8.00
						RELEASE OF LIEN APN 538-081-014	8.00
9008164	1/16/2025	WINDSTREAM SERVICES, LLC	76802325		001-2200-421.26-05	PHONE SVCS-125 E RAMSEY 11/27/24-12/26/24	1,098.47

City of Banning
Warrant List Detail January 2025

Warrant Number	Warrant Date	Vendor Name	Invoice Number	P.O. Number	Account Number	Payment Description	Warrant Amount
9008165	1/16/2025	WINDSTREAM SERVICES, LLC	76802778		705-4500-412.26-05	PHONE SVCS-99 E RAMSEY 11/27/24-12/26/24	5,267.31
9008166	1/16/2025	WINDSTREAM SERVICES, LLC	76802241		705-4500-412.26-05	PHONE SVCS-176 E LINCOLN 11/27/24-12/26/24	1,097.96
9008167	1/21/2025	CORPORATION SERVICE COMPANY	8345718-011625		001-1400-412.23-07	PROCESSING FEES (4) RIV CO RECORDER OFFICE	32.00
9008168	1/22/2025	CA. ST. PUBLIC EMPLOYEES	PPE 12/22/2024		001-0000-204.20-00	PERS ADJUST CORR ADJ-FONSECA	22.63
						PERS ADJUST CORR ADJ-J FLOYD	(19.48)
						PERS ADJUST CORR ADJ-MASCORRO	(49.11)
						PERS ADJUST CORR ADJ-PARQUE	(0.41)
						PERS ADJUST CORR ADJ-V AVILA	(41.66)
						PERS ADJUST CORR ADJ-WRIGHT	(595.50)
						PERS ADJUST OVER MAX-COFFEY	402.42
						PERS ADJUST OVER MAX-MARTINEZ	27.53
						PERS ADJUST OVER MAX-MCCLUNE	27.55
						PERS ADJUST OVER MAX-NAWAZ	(1,242.59)
						PERS ADJUST OVER MAX-R MUNOZ	(1,885.75)
						PERS ADJUST OVER MAX-VACA	(1,483.77)
						PERS ADJUST OVER MAX-WRIGHT	99.38
						RETIREMENT BENEFITS PPE 12/22/24 PD 12/27/24	156,334.97
9008169	1/24/2025	CA. ST. BOARD OF EQUAL. - FUEL	DEC 2024		702-3800-480.41-04	EXEMPT BUS OPERATOR PUBLIC TRANS BUSES 2024	943.00
9008170	1/24/2025	CA. ST. BOARD OF EQUAL. - FUEL	DEC 2024		702-3800-480.41-04	UNDERGROUND STORAGE TANK QTR END DEC 2024	623.00
9008171	1/24/2025	WELLS FARGO BANK	PPE 01/19/2025		001-0000-204.10-00	PAYROLL PPE 01/19/25 PD 01/24/25	604,316.83
9008172	1/24/2025	CORPORATION SERVICE COMPANY	8345718-012225		001-1400-412.23-07	PROCESSING FEES (4) RIV CO RECORDER OFFICE	32.00
					001-2740-442.23-07	RELEASE OF LIEN APN 2012-0470901	20.00
						RELEASE OF LIEN APN 2012-0525100	20.00
						RELEASE OF LIEN APN 2012-0553482	20.00
9008173	1/27/2025	CA. ST. EMPLOYMENT DEV. DEPT.	PPE 01/19/2025		001-0000-204.12-00	STATE INCOME TAX PPE 01/19/25 PD 01/24/25	45,531.24
9008174	1/27/2025	INTERNAL REVENUE SERVICE	PPE 01/19/2025		001-0000-204.11-00	FEDERAL INCOME TAX PPE 01/19/25 PD 01/24/25	100,005.38
					001-0000-204.13-00	FICA MEDICARE/REGULAR PPE 01/19/25 PD 01/24/25	147,266.68
9008175	1/28/2025	WELLS FARGO BANK	PPE 01/19/2025		001-0000-204.80-14	VEBA CONTRIBUTIONS PPE 01/19/25 PD 01/24/25	300.00
9008176	1/28/2025	EMPOWER ANNUITY INSURANCE COMPANY	PPE 01/19/2025		001-0000-204.16-00	457 LOAN PAYMENTS PPE 01/19/25 PD 01/24/25	11,095.12
						457 PRE TAX CONTRIBUTIONS PPE 01/19/25 PD 01/24/25	31,575.13
						457 ROTH CONTRIBUTIONS PPE 01/19/25 PD 01/24/25	1,437.23
9008177	1/28/2025	TASC	PPE 01/19/2025		001-0000-204.80-15	TASC NESP PPE 01/19/25 PD 01/24/25	546.91
9008178	1/29/2025	CA. ST. BOARD OF EQUALIZATION	CY2024-QTR 4		001-0000-201.10-00	SALES & USE TAX RETURN CY2024 QTR 4	340.00
9008179	1/30/2025	CORPORATION SERVICE COMPANY	8345718-012825		001-1400-412.23-07	PROCESSING FEES (1) RIV CO RECORDER OFFICE	8.00
					680-8000-454.23-01	EASEMENT RECORD-SCE APN 531-130-006	109.00
Grand Total							**7,536,913.66**

Less Voided / Reissued Checks from Prior Period	**-**
Less Voided Checks Prior Period	**(88.31)**
Add Payroll Checks	**5,949.56**
Total Remittance for Month	**7,542,774.91**

Voided Checks

January 2025

Issue Date (Original)	Check (Original)	Vendor #	Reason		Void Amount	Issue Date (Reissue)	Check (Reissue)	Vendor #	Reissued Amount
11/21/2024	193618	8481	INCORRECT CHARGES	$	88.31				
1/16/2025	194167	8340	COURSE RESCHEDULED	$	126.00				
TOTALS					**$214.31**				**$0.00**

Payroll

January 2025

Start	End	Date	Description		Check Total
13769	13769	1/3/2025	Warrant Register	$	489.70
13770	13781	1/10/2025	Warrant Register	$	2,347.48
13782	13792	1/24/2025	Warrant Register	$	3,112.38
TOTALS				**$**	**5,949.56**
	CHECKS USED	**24**			

Dp/Dv/Act: 12 00 412 CITY MANAGER/CITY MANAGER/GENERAL GOVERNMENT MANAGE

Employee	Employee Number	Check Date	Gross Pay	With Hold	Net Pay	Advance Out	Payed Back	Dir Dep	Check Amount	Check Number
JOHNSON, KAIANA J Manual	3809	1/03/25	537.84	48.14	489.70	.00	.00	.00	489.70	13769

Dept/Div Activity	Check Payee	Social Security	Check Number	Amount
1900-412	PHILLIPS, JOYCE Y	6549	13770	.00
	CALIF. STATE DISBURSEMENT UNIT		13771	427.38
	FRANCHISE TAX BOARD		13772	50.00
	TEXAS CHILD SUPPORT SDU		13773	550.62
	FRANCHISE TAX BOARD		13774	125.00
4000-461	GAITER, MARIAH	2531	13775	6.61
	CALIF. STATE DISBURSEMENT UNIT		13776	241.15
4000-461	MONTES, ALEXIS D	5374	13777	357.97
4000-461	SCARRY, COLE	7674	13778	233.52
	CALIF. STATE DISBURSEMENT UNIT		13779	255.23
	FRANCHISE TAX BOARD		13780	50.00
	FRANCHISE TAX BOARD		13781	50.00
	Total Checks -		12	2,347.48

Dept/Div Activity	Check Payee	Social Security	Check Number	Amount
	RIVERSIDE COUNTY SHERIFF - SCS		13782	761.82
1900-412	PHILLIPS, JOYCE Y	6549	13783	.00
	CALIF. STATE DISBURSEMENT UNIT		13784	427.38
	FRANCHISE TAX BOARD		13785	50.00
	TEXAS CHILD SUPPORT SDU		13786	550.62
	FRANCHISE TAX BOARD		13787	125.00
	CALIF. STATE DISBURSEMENT UNIT		13788	241.15
4000-461	SCARRY, COLE	7674	13789	601.18
	CALIF. STATE DISBURSEMENT UNIT		13790	255.23
	FRANCHISE TAX BOARD		13791	50.00
	FRANCHISE TAX BOARD		13792	50.00
	Total Checks -		11	3,112.38

CITY OF BANNING
STAFF REPORT

TO: **CITY COUNCIL**

FROM: **Robert Fisher, Acting City Manager**

PREPARED BY: **Lincoln Bogard, Administrative Services Director**

MEETING DATE: **February 25, 2025**

SUBJECT: **Receive and File Cash and Investments Report for the Month of January 2025**

RECOMMENDATION:

That City Council receive and file Cash and Investment Report for January 2025, in accordance with California Government Code 53646.

BACKGROUND:

The City's investment portfolio is compliant with its Investment Policy and Pooled Cash is expected to meet all disbursement requirements for the next six months.

JUSTIFICATION:

UNRESTRICTED CASH AND INVESTMENTS:

Cash & Investments	December 2024	January 2025
Funds under Control of the City:		
Petty Cash / Cash on Hand	$4,055.00	$4,055.00
Sub-Total	**$4,055.00**	**$4,055.00**
Checking and Savings:		
Wells Fargo - General Account - XXXXX5798	$5,264,794.07	$7,320,186.01
HCN Bank - General Account - XXXXX97479	$49,990.00	$50,000.00
Bank of America - Parking Citations - XXXXXX8776	$145,694.60	$145,924.84
Bank of America - Airport Visa - XXXXXX7548	$616,116.51	$618,596.43
Bank of America - CNG Charge Acct - XXXXXX5594	$79,091.90	$79,091.90
Sub-Total	**$6,155,687.08**	**$8,213,799.18**
See Investment Report for Details of the following investments:		
State of California, Local Agency Investment Fund	**$24,875,518.41**	**$25,139,527.68**
% of Investments in LAIF	**54%**	**54%**
US Bank City of Banning Investment Custody Account XXXXX6000	**$21,495,671.56**	**$21,348,259.25**
Cash and Investments	**$52,530,932.05**	**$54,705,641.11**

RESTRICTED CASH AND INVESTMENTS:

Cash & Investments	December 2024	January 2025
Cash with Fiscal Agents		
US Bank		
2015 Water Revenue Bonds-BUA Water Projects - 258228005	$885,839.35	$888,852.32
2015 Water Revenue Bonds-BUA Water Projects - 258228000	$5,880.43	$5,900.43
2019 Wastewater Revenue Bond - 254226002	$235,011.46	$235,013.45
2019 Wastewater Revenue Bonds 254226000	$115,046.97	$115,047.94
2019 Wastewater Revenue Bonds - BUA Water Projects - Previous Balance less amount required for Refunding - 254226006	$2,503,098.97	$2,503,120.15
2019 Wastewater Revenue Bonds - Interest Account - 254226001	$0.16	$0.16
2019 Wastewater Revenue Bonds - Cost of Issuance Fund - 254226005	$1.43	$1.43
2015 Electric Revenue Bond-Acquisition & Construction Fund - 262685003	$2,538.08	$2,546.71
2015 Electric Revenue Bond-Acquisition & Construction Fund - 262685000	$11,839.59	$11,933.27
Successor Agency of the Dissolved Redevelopment Agency of the City of Banning Tax Allocation Bonds Series 2016 (Taxable) Unexpended Proceeds Fund - 277166005	$7,687,573.46	$7,687,606.11
Successor Agency of the Dissolved Redevelopment Agency of the City of Banning Tax Allocation Bonds Series 2016 (Taxable) Revenue Fund - 277166000	$1.82	$1.82
Improvement Dist No 2004-1 (Fair Oaks Ranch Estates) Limited Obligation Improvement Bonds Series 2005A Interest Acct-789582000	$0.06	$0.06
Improvement Dist No 2004-1 (Fair Oaks Ranch Estates) Limited Obligation Improvement Bonds Series 2005A Principal Acct-789582001	$0.04	$0.04
Improvement Dist No 2004-1 (Fair Oaks Ranch Estates) Limited Obligation Improvement Bonds Series 2005A Reserve Fund-789582003	$186,058.36	$186,059.15
PERMA Member Trust Account xxx-xxxx-101.12-00	$2,141,085.24	$2,049,431.77
CAISO - City of Banning XXXXX6994	$129,007.62	$129,495.11
City of Banning - XXXXX5920 - Riverside Public Utilities (RPU)	$714,426.13	$933,567.31
Cash with Fiscal Agents US Bank	**$14,617,409.17**	**$14,748,577.23**
Restricted Investment in SCPPA Project Stabilization Fund		
Project Stabilization Fund	**$1,002,280.74**	**$1,004,195.67**

Total Restricted Cash and Investments	**$15,619,689.91**	**$15,752,772.90**
Grand Total Cash and Investments	**$68,150,621.96**	**$70,458,414.01**

BOND RESERVE INSURANCE POLICIES:

Insurance Policy and Purpose	Market Value
2015 Electric Revenue Bond-Reserve Fund - 262685002 - Market Value	$2,428,543.76
Successor Agency of the Dissolved Redevelopment Agency of the City of Banning Tax Allocation Bonds Series 2016 (Taxable) Reserve Fund- 277166004 Market Value	$2,205,497.50

FISCAL IMPACT:

Not applicable.

I hereby certify that the investment activity for this reporting period conforms with the investment policy adopted by the City of Banning's City Council and the California Government Code Section 53601.

I also certify that there exists adequate pooled cash available to meet the City's disbursement requirements for at least the next six months.

ALTERNATIVES:

Not applicable.

BUDGETED?:

No

CONTRACT/AGREEMENT:

No

ATTACHMENTS:

1. Attachment 1 - Investment Report January 2025.pdf
2. Attachment 2 - City of Banning Broker Report January 2025.pdf
3. Attachment 3 - LAIF Market Valuation January 2025.pdf
4. Attachment 4 - PMIA-LAIF Performance Report January 2025.pdf

City of Banning
Report of Investments
January 2025

Investment Held by	Investment Name	Investment Type	CUSIP Number	Standard & Poors Rating	Moodys Rating	Maturity Duration	Par	Market Yield	Market Price	Market Value/Accrued Int	Percentage of Investments
State of California, Local Agency Investment Fund											
	City of Banning	Pooled Investment	N/A	N/A	N/A		$ 25,139,527.45	4.366	100.20611	$ 25,191,342.53	54.1%
	Successor Agency	Pooled Investment	N/A	N/A	N/A		$ 0.23	4.366	100.20611	$ 0.23	0.0%
							$ 25,139,527.68			**$ 25,191,342.76**	**54.1%**
US Bank- Broker Chandler Asset Management											
Government Agencies											
	Total ABS	Asset-Backed Securities	Various	AAA	Aaa	1.54	$ 625,000.00	4.580	100.9546	$ 630,966.31	1.34%
	Total Agency	Federal Agencies	Various	AA+	Aaa	1.01	$ 12,000,000.00	4.330	98.71021	$ 11,845,225.20	25.8%
	Total Cash	Cash and Equivalents	Various	AAA	Aaa	0.00	$ 1,098.57	0.000	100.000	$ 1,098.57	0.0%
	Total Commercial Paper	Paper	62479LL78	NA	A-1	0.18	$ -	5.500	99.497	$ -	0.0%
	Total Corporate	Corporate	Various	A+	A1	0.59	$ 4,135,000.00	4.500	99.57207	$ 4,117,305.09	8.9%
	Total Money Market	Money Market/Mutual Funds	31846V401	AAA	Aaa	0.00	$ 92,160.68	3.870	100.000	$ 92,160.68	0.2%
	Total US Treasury	US Treasuries	Various	AA+	Aaa	0.35	$ 4,495,000.00	4.300	99.27349	$ 4,462,343.38	9.7%
							$ 21,348,259.25			**$ 21,149,099.23**	**45.9%**
Total Investments							**$ 46,487,786.93**			**$ 46,340,441.99**	**100.0%**

CHANDLER ASSET MANAGEMENT

MONTHLY ACCOUNT STATEMENT

City of Banning | Account #11089 | As of January 31, 2025

CHANDLER ASSET MANAGEMENT | chandlerasset.com

Chandler Team:

For questions about your account, please call (800) 317-4747,
or contact clientservice@chandlerasset.com

Custodian:

US Bank

Information contained herein is confidential. We urge you to compare this statement to the one you receive from your qualified custodian. Please see Important Disclosures at the end of the statement.

PORTFOLIO SUMMARY

City of Banning | Account #11089 | As of January 31, 2025

Portfolio Characteristics

Average Modified Duration	0.59
Average Coupon	2.47%
Average Purchase YTM	3.34%
Average Market YTM	4.36%
Average Quality*	AA+
Average Final Maturity	0.68
Average Life	0.61

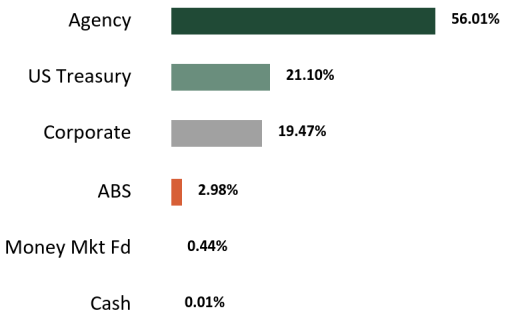
Account Summary

	End Values as of 12/31/2024	End Values as of 01/31/2025
Market Value	21,084,824.21	21,149,098.97
Accrued Interest	125,008.90	146,198.40
Total Market Value	**21,209,833.11**	**21,295,297.36**
Income Earned	62,623.41	61,754.87
Cont/WD	0.00	0.00
Par	21,306,041.03	21,348,259.25
Book Value	21,252,321.38	21,292,941.91
Cost Value	21,158,048.43	21,205,792.83

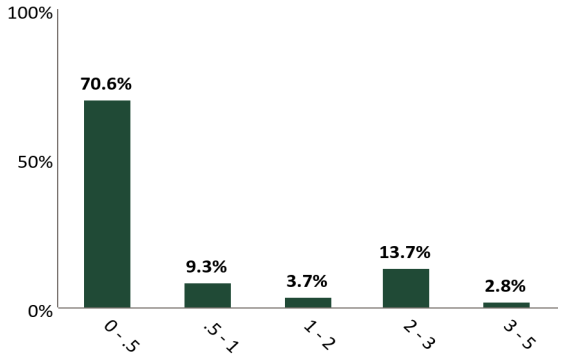
Top Issuers

Federal Home Loan Banks	42.00%
Government of The United States	21.10%
Federal Home Loan Mortgage Corp	14.01%
Amazon.com, Inc.	2.36%
Exxon Mobil Corporation	2.33%
Simon Property Group, Inc.	1.29%
Air Products and Chemicals, Inc.	1.28%
Bank of America Corporation	1.25%

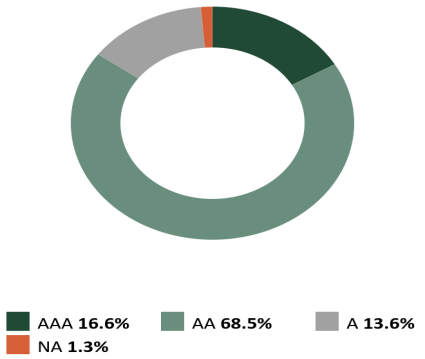
Sector Allocation



Maturity Distribution



Credit Quality (S&P)



Performance Review

Total Rate of Return**	1M	3M	YTD	1YR	2YRS	3YRS	5YRS	10YRS	Since Inception (07/01/23)
City of Banning	0.40%	1.11%	0.40%	4.80%	--	--	--	--	5.41%
Benchmark Return	0.35%	1.15%	0.35%	5.12%	--	--	--	--	5.18%

*The credit quality is a weighted average calculation of the highest of S&P, Moody's and Fitch
**Periods over 1 year are annualized.
Benchmark: ICE BofA 0-1 Year US Treasury Notes & Bonds Secondary Benchmark:

STATEMENT OF COMPLIANCE

City of Banning | Account #11089 | As of January 31, 2025

Rules Name	Limit	Actual	Compliance Status	Notes
AGENCY MORTGAGE SECURITIES (CMOS)				
Max % (MV)	100.0	0.0	Compliant	
Max % Issuer (MV)	30.0	0.0	Compliant	
Max Maturity (Years)	5.0	0.0	Compliant	
ASSET-BACKED SECURITIES (ABS)				
Max % (MV; Non Agency ABS & MBS)	20.0	3.0	Compliant	
Max % Issuer (MV)	5.0	1.0	Compliant	
Max Maturity (Years)	5	4	Compliant	
Min Rating (AA- by 1)	0.0	0.0	Compliant	
BANKERS' ACCEPTANCES				
Max % (MV)	40.0	0.0	Compliant	
Max % Issuer (MV)	5.0	0.0	Compliant	
Max Maturity (Days)	180	0.0	Compliant	
Min Rating (A-1 by 1 or A- by 1)	0.0	0.0	Compliant	
CERTIFICATE OF DEPOSIT PLACEMENT SERVICE (CDARS)				
Max % (MV)	30.0	0.0	Compliant	
Max Maturity (Years)	5.0	0.0	Compliant	
COLLATERALIZED BANK DEPOSITS				
Max Maturity (Years)	5.0	0.0	Compliant	
COLLATERALIZED TIME DEPOSITS (NON-NEGOTIABLE CD/TD)				
Max % (MV)	20.0	0.0	Compliant	
Max Maturity (Years)	5.0	0.0	Compliant	
COMMERCIAL PAPER				
Max % (MV)	25.0	0.0	Compliant	
Max % Issuer (MV)	5.0	0.0	Compliant	
Max Maturity (Days)	270	0.0	Compliant	
Min Rating (A-1 by 1 or A- by 1)	0.0	0.0	Compliant	
CORPORATE MEDIUM TERM NOTES				
Max % (MV)	30.0	19.5	Compliant	
Max % Issuer (MV)	5.0	2.4	Compliant	
Max Maturity (Years)	5	1	Compliant	
Min Rating (A- by 1)	0.0	0.0	Compliant	

STATEMENT OF COMPLIANCE

City of Banning | Account #11089 | As of January 31, 2025

Rules Name	Limit	Actual	Compliance Status	Notes
FDIC INSURED TIME DEPOSITS (NON-NEGOTIABLE CD/ TD)				
Max % (MV)	20.0	0.0	Compliant	
Max Maturity (Years)	5	0.0	Compliant	
FEDERAL AGENCIES				
Max % (MV)	100.0	56.0	Compliant	
Max % Issuer (MV)	30.0	42.1	Not Compliant	Inherited Securities
Max Callables (MV)	20.0	56.1	Not Compliant	Agency Callables; Inherited Securities; Client Directive Approved Strategy Shift
Max Maturity (Years)	5	2	Compliant	
LOCAL AGENCY INVESTMENT FUND (LAIF)				
Max Concentration (MV)	75.0	0.0	Compliant	
MONEY MARKET MUTUAL FUNDS				
Max % (MV)	20.0	0.4	Compliant	
Max % Issuer (MV)	20.0	0.4	Compliant	
Min Rating (AAA by 2)	0.0	0.0	Compliant	
MORTGAGE-BACKED SECURITIES (NON-AGENCY)				
Max % (MV)	20.0	0.0	Compliant	
Max % Issuer (MV)	5.0	0.0	Compliant	
Max Maturity (Years)	5.0	0.0	Compliant	
Min Rating (AA- by 1)	0.0	0.0	Compliant	
MUNICIPAL SECURITIES (CA, LOCAL AGENCY)				
Max % (MV)	30.0	0.0	Compliant	
Max % Issuer (MV)	5.0	0.0	Compliant	
Max Maturity (Years)	5	0.0	Compliant	
Min Rating (A- by 1)	0.0	0.0	Compliant	
MUNICIPAL SECURITIES (CA, OTHER STATES)				
Max % (MV)	30.0	0.0	Compliant	
Max % Issuer (MV)	5.0	0.0	Compliant	
Max Maturity (Years)	5	0.0	Compliant	
Min Rating (A- by 1)	0.0	0.0	Compliant	
MUTUAL FUNDS				
Max % (MV)	20.0	0.0	Compliant	
Max % Issuer (MV)	10.0	0.0	Compliant	

STATEMENT OF COMPLIANCE

City of Banning | Account #11089 | As of January 31, 2025

Rules Name	Limit	Actual	Compliance Status	Notes
Min Rating (AAA by 2)	0.0	0.0	Compliant	
NEGOTIABLE CERTIFICATES OF DEPOSIT (NCD)				
Max % (MV)	30.0	0.0	Compliant	
Max % Issuer (MV)	5.0	0.0	Compliant	
Max Maturity (Years)	5	0.0	Compliant	
Min Rating (A-1 by 1 or A- by 1 if > FDIC Limit)	0.0	0.0	Compliant	
REPURCHASE AGREEMENTS				
Max Maturity (Years)	1.0	0.0	Compliant	
SUPRANATIONAL OBLIGATIONS				
Max % (MV)	30.0	0.0	Compliant	
Max % Issuer (MV)	10.0	0.0	Compliant	
Max Maturity (Years)	5	0.0	Compliant	
Min Rating (AA- by 1)	0.0	0.0	Compliant	
U.S. TREASURIES				
Max % (MV)	100.0	21.1	Compliant	
Max Maturity (Years)	5	0.0	Compliant	

RECONCILIATION SUMMARY

City of Banning | Account #11089 | As of January 31, 2025

Maturities / Calls

Month to Date	**(995,000.00)**
Fiscal Year to Date	**(6,215,000.00)**

Principal Paydowns

Month to Date	**0.00**
Fiscal Year to Date	**0.00**

Purchases

Month to Date	**1,950,149.59**
Fiscal Year to Date	**12,936,288.69**

Sales

Month to Date	**(931,496.42)**
Fiscal Year to Date	**(6,279,217.92)**

Interest Received

Month to Date	**23,653.17**
Fiscal Year to Date	**286,363.71**

Purchased / Sold Interest

Month to Date	**0.00**
Fiscal Year to Date	**(24,292.94)**

Accrual Activity Summary

	Month to Date	Fiscal Year to Date (07/01/2024)
Beginning Book Value	21,252,321.38	20,890,632.11
Maturities/Calls	(995,000.00)	(6,215,000.00)
Principal Paydowns	0.00	0.00
Purchases	1,950,149.59	12,936,288.69
Sales	(931,496.42)	(6,279,217.92)
Change in Cash, Payables, Receivables	55.15	(181,916.35)
Amortization/Accretion	16,912.21	142,155.38
Realized Gain (Loss)	0.00	(0.00)
Ending Book Value	21,292,941.91	21,292,941.91

Fair Market Activity Summary

	Month to Date	Fiscal Year to Date (07/01/2024)
Beginning Market Value	21,084,824.21	20,501,414.03
Maturities/Calls	(995,000.00)	(6,215,000.00)
Principal Paydowns	0.00	0.00
Purchases	1,950,149.59	12,936,288.69
Sales	(931,496.42)	(6,279,217.92)
Change in Cash, Payables, Receivables	55.15	(181,916.35)
Amortization/Accretion	16,912.21	142,155.38
Change in Net Unrealized Gain (Loss)	23,654.23	245,375.14
Realized Gain (Loss)	0.00	(0.00)
Ending Market Value	21,149,098.97	21,149,098.97

HOLDINGS REPORT

CHANDLER ASSET MANAGEMENT

City of Banning | Account #11089 | As of January 31, 2025

Cusip	Security Description	Par Value/ Units	Purchase Date Purchase Yield	Cost Value Book Value	Mkt Price Mkt YTM	Market Value Accrued Int.	% of Port. Gain/Loss	Moody's/ S&P/ Fitch	Maturity Duration
ABS									
379929AD4	GMALT 2023-3 A3 5.38 11/20/2026	45,000.00	08/08/2023 5.36%	44,994.60 44,997.03	100.43 4.61%	45,191.79 73.98	0.21% 194.75	NA/AAA AAA	1.80 0.51
05592XAD2	BMWOT 2023-A A3 5.47 02/25/2028	40,000.00	07/12/2023 5.47%	39,992.91 39,995.29	100.81 4.45%	40,325.89 36.47	0.19% 330.61	NA/AAA AAA	3.07 0.75
47787CAC7	JDOT 2023-C A3 5.48 05/15/2028	195,000.00	09/12/2023 5.40%	194,986.60 194,990.55	101.08 4.77%	197,108.15 474.93	0.93% 2,117.60	AAA/NA AAA	3.29 1.39
36267KAD9	GMCAR 2023-3 A3 5.45 06/16/2028	45,000.00	07/11/2023 5.66%	44,998.26 44,998.81	101.00 4.45%	45,450.77 102.19	0.21% 451.96	AAA/AAA NA	3.38 0.94
02582JKD1	AMXCA 2023-3 A 5.23 09/15/2028	215,000.00	09/12/2023 5.29%	214,990.39 214,993.03	101.26 4.46%	217,699.00 499.76	1.03% 2,705.97	NA/AAA AAA	3.62 1.52
362955AD8	GMCAR 2025-1 A3 4.62 12/17/2029	85,000.00	01/09/2025 5.03%	84,993.68 84,993.74	100.22 4.56%	85,190.74 174.53	0.40% 197.00	AAA/NA AAA	4.88 2.19
Total ABS		**625,000.00**	**5.33%**	**624,956.44** **624,968.44**	**100.96** **4.58%**	**630,966.33** **1,361.85**	**2.98%** **5,997.89**		**3.50** **1.40**
AGENCY									
3130ARFY2	FEDERAL HOME LOAN BANKS 3.0 04/14/2025	3,000,000.00	04/14/2022 3.00%	3,000,000.00 3,000,000.00	99.74 4.31%	2,992,109.91 26,750.00	14.15% (7,890.09)	AAA/AA AA	0.20 0.20
3130ARGD7	FEDERAL HOME LOAN BANKS 4.0 04/14/2025	3,000,000.00	04/14/2022 3.00%	3,000,000.00 3,000,000.00	99.93 4.32%	2,997,789.33 35,666.67	14.17% (2,210.67)	AAA/AA AA	0.20 0.20
3134GW6Z4	FEDERAL HOME LOAN MORTGAGE CORP 0.48 05/29/2025	3,000,000.00	10/30/2020 0.48%	3,000,000.00 3,000,000.00	98.79 4.31%	2,963,624.40 3,680.00	14.01% (36,375.60)	AAA/AA AA	0.32 0.32
3130ARF55	FEDERAL HOME LOAN BANKS 2.6 03/30/2027	3,000,000.00	03/30/2022 2.60%	3,000,000.00 3,000,000.00	96.39 4.37%	2,891,701.38 26,216.67	13.67% (108,298.62)	AAA/AA AA	2.16 2.05
Total Agency		**12,000,000.00**	**2.27%**	**12,000,000.00** **12,000,000.00**	**98.73** **4.33%**	**11,845,225.02** **92,313.33**	**56.01%** **(154,774.98)**		**0.71** **0.68**
CASH									
CCYUSD	Receivable	1,098.57	-- 0.00%	1,098.57 1,098.57	1.00 0.00%	1,098.57 0.00	0.01% 0.00	AAA/AAA AAA	0.00 0.00
Total Cash		**1,098.57**	**0.00%**	**1,098.57** **1,098.57**	**1.00** **0.00%**	**1,098.57** **0.00**	**0.01%** **0.00**		**0.00** **0.00**
CORPORATE									

Cusip	Security Description	Par Value/ Units	Purchase Date Purchase Yield	Cost Value Book Value	Mkt Price Mkt YTM	Market Value Accrued Int.	% of Port. Gain/Loss	Moody's/ S&P/ Fitch	Maturity Duration
63743HFC1	NATIONAL RURAL UTILITIES COOPERATIVE FINANCE CORP 1.875 02/07/2025	260,000.00	05/07/2024 5.53%	253,151.60 259,850.04	99.96 5.21%	259,902.28 2,356.25	1.23% 52.25	A/A A	0.02 0.01
06406HDA4	BANK OF NEW YORK MELLON CORP 3.0 02/24/2025	260,000.00	04/30/2024 5.47%	254,958.60 259,610.90	99.90 4.63%	259,744.45 3,401.67	1.23% 133.55	AA/A AA	0.07 0.06
00440EAS6	CHUBB INA HOLDINGS LLC 3.15 03/15/2025	250,000.00	04/22/2024 5.44%	245,082.50 249,364.51	99.83 4.59%	249,566.59 2,975.00	1.18% 202.08	A/A A	0.12 0.12
89236TGX7	TOYOTA MOTOR CREDIT CORP 3.0 04/01/2025	260,000.00	04/30/2024 5.53%	254,217.60 258,978.56	99.78 4.31%	259,434.87 2,600.00	1.23% 456.32	A/A A	0.16 0.16
023135CE4	AMAZON.COM INC 3.0 04/13/2025	500,000.00	06/08/2023 4.67%	485,440.00 498,459.37	99.71 4.44%	498,570.07 4,500.00	2.36% 110.69	A/AA AA	0.20 0.19
756109AV6	REALTY INCOME CORP 3.875 04/15/2025	260,000.00	05/14/2024 5.57%	256,105.20 259,148.74	99.89 4.38%	259,710.96 2,966.53	1.23% 562.22	A/A NA	0.20 0.20
6174468C6	MORGAN STANLEY 4.0 07/23/2025	260,000.00	09/12/2024 4.56%	258,780.61 259,329.92	99.79 4.45%	259,454.11 231.11	1.23% 124.19	A/A A	0.47 0.46
06051GFS3	BANK OF AMERICA CORP 3.875 08/01/2025	265,000.00	08/12/2024 4.88%	262,506.35 263,721.39	99.72 4.45%	264,262.26 5,134.38	1.25% 540.88	A/A AA	0.50 0.48
20030NBN0	COMCAST CORP 3.375 08/15/2025	260,000.00	07/22/2024 5.17%	255,247.20 257,611.35	99.42 4.49%	258,490.03 4,046.25	1.22% 878.68	A/A A	0.54 0.51
828807CV7	SIMON PROPERTY GROUP LP 3.5 09/01/2025	275,000.00	12/16/2024 4.65%	272,819.25 273,208.07	99.42 4.53%	273,395.30 4,010.42	1.29% 187.24	A/A NA	0.58 0.56
24422EWJ4	JOHN DEERE CAPITAL CORP 4.05 09/08/2025	260,000.00	07/09/2024 5.06%	257,056.80 258,483.39	99.82 4.34%	259,544.75 4,182.75	1.23% 1,061.36	A/A A	0.60 0.57
009158BB1	AIR PRODUCTS AND CHEMICALS INC 1.5 10/15/2025	275,000.00	11/12/2024 4.51%	267,597.00 269,359.62	98.07 4.33%	269,686.93 1,214.58	1.28% 327.31	A/A NA	0.70 0.68
30231GAT9	EXXON MOBIL CORP 3.043 03/01/2026	500,000.00	06/08/2023 4.53%	481,105.00 492,521.92	98.58 4.41%	492,892.77 6,339.58	2.33% 370.84	AA/AA NA	1.08 1.03
48125LRU8	JPMORGAN CHASE BANK NA 5.11 12/08/2026	250,000.00	10/16/2024 4.23%	254,312.50 253,698.89	101.06 4.50%	252,649.52 1,880.76	1.19% (1,049.36)	AA/AA AA	1.85 1.66
Total Corporate		**4,135,000.00**	**4.94%**	**4,058,380.21** **4,113,346.65**	**99.58** **4.50%**	**4,117,304.90** **45,839.28**	**19.47%** **3,958.25**		**0.52** **0.49**
MONEY MARKET FUND									
31846V401	FIRST AMER:GVT OBLG D	92,160.68	-- 3.87%	92,160.68 92,160.68	1.00 3.87%	92,160.68 0.00	0.44% 0.00	AAA/AAA AAA	0.00 0.00

HOLDINGS REPORT

City of Banning | Account #11089 | As of January 31, 2025

Cusip	Security Description	Par Value/ Units	Purchase Date Purchase Yield	Cost Value Book Value	Mkt Price Mkt YTM	Market Value Accrued Int.	% of Port. Gain/Loss	Moody's/ S&P/ Fitch	Maturity Duration
Total Money Market Fund		**92,160.68**	**3.87%**	**92,160.68** **92,160.68**	**1.00** **3.87%**	**92,160.68** **0.00**	**0.44%** **0.00**		**0.00** **0.00**
US TREASURY									
912797MK0	UNITED STATES TREASURY 02/13/2025	225,000.00	08/19/2024 4.97%	219,703.28 224,640.90	99.88 4.31%	224,734.48 0.00	1.06% 93.58	A/AAA AAA	0.04 0.03
912797KA4	UNITED STATES TREASURY 02/20/2025	325,000.00	09/24/2024 4.50%	319,191.26 324,254.28	99.80 4.33%	324,347.94 0.00	1.53% 93.65	A/AAA AAA	0.05 0.05
912797MM6	UNITED STATES TREASURY 03/06/2025	575,000.00	-- 4.48%	564,689.77 572,713.25	99.63 4.32%	572,898.13 0.00	2.71% 184.88	A/AAA AAA	0.09 0.08
912797NR4	UNITED STATES TREASURY 03/18/2025	600,000.00	11/18/2024 4.52%	591,288.21 596,705.63	99.50 4.31%	596,970.65 0.00	2.82% 265.02	A/AAA AAA	0.13 0.12
912797LN5	UNITED STATES TREASURY 06/12/2025	420,000.00	12/16/2024 4.33%	411,363.14 413,607.75	98.50 4.30%	413,716.62 0.00	1.96% 108.88	A/AAA AAA	0.36 0.35
91282CEU1	UNITED STATES TREASURY 2.875 06/15/2025	500,000.00	10/21/2024 4.30%	495,468.75 497,427.17	99.47 4.35%	497,339.85 1,895.60	2.35% (87.33)	AAA/AA AA	0.37 0.36
912797NW3	UNITED STATES TREASURY 06/26/2025	350,000.00	01/21/2025 4.31%	343,707.00 344,113.00	98.34 4.30%	344,207.17 0.00	1.63% 94.17	A/AAA AAA	0.40 0.39
912797NX1	UNITED STATES TREASURY 07/03/2025	250,000.00	01/06/2025 4.28%	244,920.47 245,637.92	98.27 4.29%	245,671.36 0.00	1.16% 33.44	A/AAA AAA	0.42 0.40
912797PE1	UNITED STATES TREASURY 07/17/2025	350,000.00	01/21/2025 4.31%	342,868.95 343,274.12	98.11 4.29%	343,383.05 0.00	1.62% 108.93	A/AAA AAA	0.46 0.44
91282CFW6	UNITED STATES TREASURY 4.5 11/15/2025	400,000.00	12/30/2024 4.24%	400,859.38 400,773.17	100.16 4.28%	400,628.91 3,878.45	1.89% (144.26)	AAA/AA AA	0.79 0.75
91282CGE5	UNITED STATES TREASURY 3.875 01/15/2026	500,000.00	06/08/2023 4.27%	495,136.72 498,220.38	99.69 4.21%	498,445.31 909.88	2.36% 224.93	AAA/AA AA	0.96 0.92
Total US Treasury		**4,495,000.00**	**4.40%**	**4,429,196.93** **4,461,367.57**	**99.28** **4.30%**	**4,462,343.47** **6,683.93**	**21.10%** **975.90**		**0.38** **0.36**
Total Portfolio		**21,348,259.25**	**3.34%**	**21,205,792.83** **21,292,941.91**	**98.65** **4.36%**	**21,149,098.97** **146,198.40**	**100.00%** **(143,842.94)**		**0.68** **0.59**
Total Market Value + Accrued						**21,295,297.36**			

TRANSACTION LEDGER

City of Banning | Account #11089 | As of January 31, 2025

Transaction Type	Settlement Date	CUSIP	Quantity	Security Description	Price	Acq/Disp Yield	Amount	Interest Pur/ Sold	Total Amount	Gain/Loss
ACQUISITIONS										
Purchase	01/02/2025	31846V401	1,043.42	FIRST AMER:GVT OBLG D	1.000	3.94%	(1,043.42)	0.00	(1,043.42)	0.00
Purchase	01/02/2025	31846V401	225,000.00	FIRST AMER:GVT OBLG D	1.000	3.94%	(225,000.00)	0.00	(225,000.00)	0.00
Purchase	01/07/2025	912797NX1	250,000.00	UNITED STATES TREASURY 07/03/2025	97.968	4.28%	(244,920.47)	0.00	(244,920.47)	0.00
Purchase	01/10/2025	31846V401	260,000.00	FIRST AMER:GVT OBLG D	1.000	3.85%	(260,000.00)	0.00	(260,000.00)	0.00
Purchase	01/10/2025	31846V401	1,950.00	FIRST AMER:GVT OBLG D	1.000	3.85%	(1,950.00)	0.00	(1,950.00)	0.00
Purchase	01/13/2025	31846V401	261,950.00	FIRST AMER:GVT OBLG D	1.000	3.85%	(261,950.00)	0.00	(261,950.00)	0.00
Purchase	01/15/2025	31846V401	890.50	FIRST AMER:GVT OBLG D	1.000	3.85%	(890.50)	0.00	(890.50)	0.00
Purchase	01/15/2025	31846V401	177,037.11	FIRST AMER:GVT OBLG D	1.000	3.85%	(177,037.11)	0.00	(177,037.11)	0.00
Purchase	01/15/2025	362955AD8	85,000.00	GMCAR 2025-1 A3 4.62 12/17/2029	99.993	5.03%	(84,993.68)	0.00	(84,993.68)	0.00
Purchase	01/16/2025	31846V401	204.38	FIRST AMER:GVT OBLG D	1.000	3.85%	(204.38)	0.00	(204.38)	0.00
Purchase	01/21/2025	31846V401	201.75	FIRST AMER:GVT OBLG D	1.000	3.85%	(201.75)	0.00	(201.75)	0.00
Purchase	01/22/2025	912797NW3	350,000.00	UNITED STATES TREASURY 06/26/2025	98.202	4.31%	(343,707.00)	0.00	(343,707.00)	0.00
Purchase	01/22/2025	912797PE1	350,000.00	UNITED STATES TREASURY 07/17/2025	97.963	4.31%	(342,868.95)	0.00	(342,868.95)	0.00
Purchase	01/23/2025	31846V401	5,200.00	FIRST AMER:GVT OBLG D	1.000	3.85%	(5,200.00)	0.00	(5,200.00)	0.00
Purchase	01/27/2025	31846V401	182.33	FIRST AMER:GVT OBLG D	1.000	3.87%	(182.33)	0.00	(182.33)	0.00
Total Purchase			**1,968,659.49**				**(1,950,149.59)**	**0.00**	**(1,950,149.59)**	**0.00**
TOTAL ACQUISITIONS			**1,968,659.49**				**(1,950,149.59)**	**0.00**	**(1,950,149.59)**	**0.00**
OTHER TRANSACTIONS										
Maturity	01/02/2025	912797LR6	(225,000.00)	UNITED STATES TREASURY 01/02/2025	100.000	0.00%	225,000.00	0.00	225,000.00	0.00
Maturity	01/10/2025	06368FAE9	(260,000.00)	BANK OF MONTREAL 1.5 01/10/2025	100.000	1.50%	260,000.00	0.00	260,000.00	0.00
Maturity	01/13/2025	02665WEA5	(260,000.00)	AMERICAN HONDA FINANCE CORP 1.5 01/13/2025	100.000	1.50%	260,000.00	0.00	260,000.00	0.00

TRANSACTION LEDGER

City of Banning | Account #11089 | As of January 31, 2025

Transaction Type	Settlement Date	CUSIP	Quantity	Security Description	Price	Acq/Disp Yield	Amount	Interest Pur/ Sold	Total Amount	Gain/Loss
Maturity	01/15/2025	91282CDS7	(250,000.00)	UNITED STATES TREASURY 1.125 01/15/2025	100.000	1.13%	250,000.00	0.00	250,000.00	0.00
Total Maturity			**(995,000.00)**				**995,000.00**	**0.00**	**995,000.00**	**0.00**
Sale	01/07/2025	31846V401	(244,920.47)	FIRST AMER:GVT OBLG D	1.000	3.85%	244,920.47	0.00	244,920.47	0.00
Sale	01/22/2025	31846V401	(342,868.95)	FIRST AMER:GVT OBLG D	1.000	3.84%	342,868.95	0.00	342,868.95	0.00
Sale	01/22/2025	31846V401	(343,707.00)	FIRST AMER:GVT OBLG D	1.000	3.84%	343,707.00	0.00	343,707.00	0.00
Total Sale			**(931,496.42)**				**931,496.42**	**0.00**	**931,496.42**	**0.00**
TOTAL OTHER TRANSACTIONS			**(1,926,496.42)**				**1,926,496.42**	**0.00**	**1,926,496.42**	**0.00**
OTHER TRANSACTIONS										
Coupon	01/10/2025	06368FAE9	0.00	BANK OF MONTREAL 1.5 01/10/2025		1.50%	1,950.00	0.00	1,950.00	0.00
Coupon	01/13/2025	02665WEA5	0.00	AMERICAN HONDA FINANCE CORP 1.5 01/13/2025		1.50%	1,950.00	0.00	1,950.00	0.00
Coupon	01/15/2025	91282CDS7	0.00	UNITED STATES TREASURY 1.125 01/15/2025		1.13%	1,406.25	0.00	1,406.25	0.00
Coupon	01/15/2025	91282CGE5	0.00	UNITED STATES TREASURY 3.875 01/15/2026		4.27%	9,687.50	0.00	9,687.50	0.00
Coupon	01/15/2025	02582JKD1	0.00	AMXCA 2023-3 A 5.23 09/15/2028		5.29%	937.04	0.00	937.04	0.00
Coupon	01/15/2025	47787CAC7	0.00	JDOT 2023-C A3 5.48 05/15/2028		5.55%	890.50	0.00	890.50	0.00
Coupon	01/16/2025	36267KAD9	0.00	GMCAR 2023-3 A3 5.45 06/16/2028		5.51%	204.38	0.00	204.38	0.00
Coupon	01/20/2025	379929AD4	0.00	GMALT 2023-3 A3 5.38 11/20/2026		5.45%	201.75	0.00	201.75	0.00
Coupon	01/23/2025	6174468C6	0.00	MORGAN STANLEY 4.0 07/23/2025		4.56%	5,200.00	0.00	5,200.00	0.00
Coupon	01/25/2025	05592XAD2	0.00	BMWOT 2023-A A3 5.47 02/25/2028		5.55%	182.33	0.00	182.33	0.00
Total Coupon			**0.00**				**22,609.75**	**0.00**	**22,609.75**	**0.00**
Dividend	01/31/2025	31846V401	0.00	FIRST AMER:GVT OBLG D		3.85%	1,098.57	0.00	1,098.57	0.00

TRANSACTION LEDGER

City of Banning | Account #11089 | As of January 31, 2025

Transaction Type	Settlement Date	CUSIP	Quantity	Security Description	Price	Acq/Disp Yield	Amount	Interest Pur/ Sold	Total Amount	Gain/Loss
Total Dividend			**0.00**				**1,098.57**	**0.00**	**1,098.57**	**0.00**
TOTAL OTHER TRANSACTIONS			**0.00**				**23,708.32**	**0.00**	**23,708.32**	**0.00**

INCOME EARNED

City of Banning | Account #11089 | As of January 31, 2025

Cusip	Security Description	Trade Date Settle Date Units	Book Value: Begin Book Value: Acq Book Value: Disp Book Value: End	Prior Accrued Inc. Received Ending Accrued Total Interest	Accr. Of Discount Amort. Of Premium Net Accret/Amort Income Earned	Total Income
CASH & EQUIVALENTS						
31846V401	FIRST AMER:GVT OBLG D	92,160.68	89,997.61 933,659.49 (931,496.42) 92,160.68	0.00 1,043.42 0.00 1,043.42	0.00 0.00 0.00 1,043.42	1,043.42
CCYUSD	Receivable	1,098.57	1,043.42 0.00 0.00 1,098.57	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00
Total Cash & Equivalents		**93,259.25**	**91,041.03** **933,659.49** **(931,496.42)** **93,259.25**	**0.00** **1,043.42** **0.00** **1,043.42**	**0.00** **0.00** **0.00** **1,043.42**	**1,043.42**
FIXED INCOME						
00440EAS6	CHUBB INA HOLDINGS LLC 3.15 03/15/2025	04/22/2024 04/24/2024 250,000.00	248,895.45 0.00 0.00 249,364.51	2,318.75 0.00 2,975.00 656.25	469.05 0.00 469.05 1,125.30	1,125.30
009158BB1	AIR PRODUCTS AND CHEMICALS INC 1.5 10/15/2025	11/12/2024 11/13/2024 275,000.00	268,676.60 0.00 0.00 269,359.62	870.83 0.00 1,214.58 343.75	683.01 0.00 683.01 1,026.76	1,026.76
023135CE4	AMAZON.COM INC 3.0 04/13/2025	06/08/2023 06/12/2023 500,000.00	497,786.71 0.00 0.00 498,459.37	3,250.00 0.00 4,500.00 1,250.00	672.67 0.00 672.67 1,922.67	1,922.67
02582JKD1	AMXCA 2023-3 A 5.23 09/15/2028	09/12/2023 09/19/2023 215,000.00	214,992.87 0.00 0.00 214,993.03	499.76 937.04 499.76 937.04	0.16 0.00 0.16 937.20	937.20
02665WEA5	AMERICAN HONDA FINANCE CORP 1.5 01/13/2025	04/30/2024 05/02/2024 0.00	259,664.60 0.00 (260,000.00) 0.00	1,820.00 1,950.00 0.00 130.00	335.40 0.00 335.40 465.40	465.40

INCOME EARNED

City of Banning | Account #11089 | As of January 31, 2025

Cusip	Security Description	Trade Date Settle Date Units	Book Value: Begin Book Value: Acq Book Value: Disp Book Value: End	Prior Accrued Inc. Received Ending Accrued Total Interest	Accr. Of Discount Amort. Of Premium Net Accret/Amort Income Earned	Total Income
05592XAD2	BMWOT 2023-A A3 5.47 02/25/2028	07/12/2023 07/18/2023 40,000.00	39,995.15 0.00 0.00 39,995.29	36.47 182.33 36.47 182.33	0.13 0.00 0.13 182.46	182.46
06051GFS3	BANK OF AMERICA CORP 3.875 08/01/2025	08/12/2024 08/13/2024 265,000.00	263,502.40 0.00 0.00 263,721.39	4,278.65 0.00 5,134.38 855.73	218.99 0.00 218.99 1,074.72	1,074.72
06368FAE9	BANK OF MONTREAL 1.5 01/10/2025	04/30/2024 05/02/2024 0.00	259,745.56 0.00 (260,000.00) 0.00	1,852.50 1,950.00 0.00 97.50	254.44 0.00 254.44 351.94	351.94
06406HDA4	BANK OF NEW YORK MELLON CORP 3.0 02/24/2025	04/30/2024 05/02/2024 260,000.00	259,086.46 0.00 0.00 259,610.90	2,751.67 0.00 3,401.67 650.00	524.44 0.00 524.44 1,174.44	1,174.44
20030NBN0	COMCAST CORP 3.375 08/15/2025	07/22/2024 07/23/2024 260,000.00	257,231.62 0.00 0.00 257,611.35	3,315.00 0.00 4,046.25 731.25	379.73 0.00 379.73 1,110.98	1,110.98
24422EWJ4	JOHN DEERE CAPITAL CORP 4.05 09/08/2025	07/09/2024 07/10/2024 260,000.00	258,268.71 0.00 0.00 258,483.39	3,305.25 0.00 4,182.75 877.50	214.68 0.00 214.68 1,092.18	1,092.18
30231GAT9	EXXON MOBIL CORP 3.043 03/01/2026	06/08/2023 06/12/2023 500,000.00	491,932.05 0.00 0.00 492,521.92	5,071.67 0.00 6,339.58 1,267.92	589.87 0.00 589.87 1,857.79	1,857.79
3130ARF55	FEDERAL HOME LOAN BANKS 2.6 03/30/2027	03/30/2022 03/30/2022 3,000,000.00	3,000,000.00 0.00 0.00 3,000,000.00	19,716.67 0.00 26,216.67 6,500.00	0.00 0.00 0.00 6,500.00	6,500.00
3130ARFY2	FEDERAL HOME LOAN BANKS 3.0 04/14/2025	04/14/2022 04/14/2022 3,000,000.00	3,000,000.00 0.00 0.00 3,000,000.00	19,250.00 0.00 26,750.00 7,500.00	0.00 0.00 0.00 7,500.00	7,500.00

INCOME EARNED

City of Banning | Account #11089 | As of January 31, 2025

Cusip	Security Description	Trade Date Settle Date Units	Book Value: Begin Book Value: Acq Book Value: Disp Book Value: End	Prior Accrued Inc. Received Ending Accrued Total Interest	Accr. Of Discount Amort. Of Premium Net Accret/Amort Income Earned	Total Income
3130ARGD7	FEDERAL HOME LOAN BANKS 4.0 04/14/2025	04/14/2022 04/14/2022 3,000,000.00	3,000,000.00 0.00 0.00 3,000,000.00	25,666.67 0.00 35,666.67 10,000.00	0.00 0.00 0.00 10,000.00	10,000.00
3134GW6Z4	FEDERAL HOME LOAN MORTGAGE CORP 0.48 05/29/2025	10/30/2020 10/30/2020 3,000,000.00	3,000,000.00 0.00 0.00 3,000,000.00	2,480.00 0.00 3,680.00 1,200.00	0.00 0.00 0.00 1,200.00	1,200.00
36267KAD9	GMCAR 2023-3 A3 5.45 06/16/2028	07/11/2023 07/19/2023 45,000.00	44,998.78 0.00 0.00 44,998.81	102.19 204.38 102.19 204.38	0.03 0.00 0.03 204.41	204.41
362955AD8	GMCAR 2025-1 A3 4.62 12/17/2029	01/09/2025 01/15/2025 85,000.00	0.00 84,993.68 0.00 84,993.74	0.00 0.00 174.53 174.53	0.06 0.00 0.06 174.59	174.59
379929AD4	GMALT 2023-3 A3 5.38 11/20/2026	08/08/2023 08/11/2023 45,000.00	44,996.89 0.00 0.00 44,997.03	73.98 201.75 73.98 201.75	0.14 0.00 0.14 201.89	201.89
47787CAC7	JDOT 2023-C A3 5.48 05/15/2028	09/12/2023 09/19/2023 195,000.00	194,990.30 0.00 0.00 194,990.55	474.93 890.50 474.93 890.50	0.24 0.00 0.24 890.74	890.74
48125LRU8	JPMORGAN CHASE BANK NA 5.11 12/08/2026	10/16/2024 10/17/2024 250,000.00	253,876.66 0.00 0.00 253,698.89	816.18 0.00 1,880.76 1,064.58	0.00 (177.78) (177.78) 886.81	886.81
6174468C6	MORGAN STANLEY 4.0 07/23/2025	09/12/2024 09/13/2024 260,000.00	259,209.15 0.00 0.00 259,329.92	4,564.44 5,200.00 231.11 866.67	120.77 0.00 120.77 987.44	987.44
63743HFC1	NATIONAL RURAL UTILITIES COOPERATIVE FINANCE CORP 1.875 02/07/2025	05/07/2024 05/09/2024 260,000.00	259,075.22 0.00 0.00 259,850.04	1,950.00 0.00 2,356.25 406.25	774.82 0.00 774.82 1,181.07	1,181.07

INCOME EARNED

City of Banning | Account #11089 | As of January 31, 2025

Cusip	Security Description	Trade Date Settle Date Units	Book Value: Begin Book Value: Acq Book Value: Disp Book Value: End	Prior Accrued Inc. Received Ending Accrued Total Interest	Accr. Of Discount Amort. Of Premium Net Accret/Amort Income Earned	Total Income
756109AV6	REALTY INCOME CORP 3.875 04/15/2025	05/14/2024 05/16/2024 260,000.00	258,787.25 0.00 0.00 259,148.74	2,126.94 0.00 2,966.53 839.58	361.49 0.00 361.49 1,201.08	1,201.08
828807CV7	SIMON PROPERTY GROUP LP 3.5 09/01/2025	12/16/2024 12/17/2024 275,000.00	272,946.04 0.00 0.00 273,208.07	3,208.33 0.00 4,010.42 802.08	262.03 0.00 262.03 1,064.11	1,064.11
89236TGX7	TOYOTA MOTOR CREDIT CORP 3.0 04/01/2025	04/30/2024 05/02/2024 260,000.00	258,441.87 0.00 0.00 258,978.56	1,950.00 0.00 2,600.00 650.00	536.69 0.00 536.69 1,186.69	1,186.69
912797KA4	UNITED STATES TREASURY 02/20/2025	09/24/2024 09/25/2024 325,000.00	323,037.59 0.00 0.00 324,254.28	0.00 0.00 0.00 0.00	1,216.70 0.00 1,216.70 1,216.70	1,216.70
912797LN5	UNITED STATES TREASURY 06/12/2025	12/16/2024 12/17/2024 420,000.00	412,095.08 0.00 0.00 413,607.75	0.00 0.00 0.00 0.00	1,512.67 0.00 1,512.67 1,512.67	1,512.67
912797LR6	UNITED STATES TREASURY 01/02/2025	08/19/2024 08/20/2024 0.00	224,969.75 0.00 (225,000.00) 0.00	0.00 0.00 0.00 0.00	30.25 0.00 30.25 30.25	30.25
912797MK0	UNITED STATES TREASURY 02/13/2025	08/19/2024 08/20/2024 225,000.00	223,713.23 0.00 0.00 224,640.90	0.00 0.00 0.00 0.00	927.67 0.00 927.67 927.67	927.67
912797MM6	UNITED STATES TREASURY 03/06/2025	575,000.00	570,565.09 0.00 0.00 572,713.25	0.00 0.00 0.00 0.00	2,148.16 0.00 2,148.16 2,148.16	2,148.16
912797NR4	UNITED STATES TREASURY 03/18/2025	11/18/2024 11/19/2024 600,000.00	594,436.17 0.00 0.00 596,705.63	0.00 0.00 0.00 0.00	2,269.46 0.00 2,269.46 2,269.46	2,269.46

INCOME EARNED

City of Banning | Account #11089 | As of January 31, 2025

Cusip	Security Description	Trade Date Settle Date Units	Book Value: Begin Book Value: Acq Book Value: Disp Book Value: End	Prior Accrued Inc. Received Ending Accrued Total Interest	Accr. Of Discount Amort. Of Premium Net Accret/Amort Income Earned	Total Income
912797NW3	UNITED STATES TREASURY 06/26/2025	01/21/2025 01/22/2025 350,000.00	0.00 343,707.00 0.00 344,113.00	0.00 0.00 0.00 0.00	406.00 0.00 406.00 406.00	406.00
912797NX1	UNITED STATES TREASURY 07/03/2025	01/06/2025 01/07/2025 250,000.00	0.00 244,920.47 0.00 245,637.92	0.00 0.00 0.00 0.00	717.45 0.00 717.45 717.45	717.45
912797PE1	UNITED STATES TREASURY 07/17/2025	01/21/2025 01/22/2025 350,000.00	0.00 342,868.95 0.00 343,274.12	0.00 0.00 0.00 0.00	405.17 0.00 405.17 405.17	405.17
91282CDS7	UNITED STATES TREASURY 1.125 01/15/2025	06/24/2024 06/25/2024 0.00	249,612.63 0.00 (250,000.00) 0.00	1,299.25 1,406.25 0.00 107.00	387.37 0.00 387.37 494.37	494.37
91282CEU1	UNITED STATES TREASURY 2.875 06/15/2025	10/21/2024 10/22/2024 500,000.00	496,831.97 0.00 0.00 497,427.17	671.36 0.00 1,895.60 1,224.24	595.21 0.00 595.21 1,819.45	1,819.45
91282CFW6	UNITED STATES TREASURY 4.5 11/15/2025	12/30/2024 12/31/2024 400,000.00	400,856.69 0.00 0.00 400,773.17	2,337.02 0.00 3,878.45 1,541.44	0.00 (83.51) (83.51) 1,457.92	1,457.92
91282CGE5	UNITED STATES TREASURY 3.875 01/15/2026	06/08/2023 06/09/2023 500,000.00	498,061.85 0.00 0.00 498,220.38	8,950.41 9,687.50 909.88 1,646.97	158.53 0.00 158.53 1,805.50	1,805.50
Total Fixed Income		**21,255,000.00**	**21,161,280.35 1,016,490.10 (995,000.00) 21,199,682.66**	**125,008.90 22,609.75 146,198.40 43,799.24**	**17,173.50 (261.29) 16,912.21 60,711.45**	**60,711.45**
TOTAL PORTFOLIO		**21,348,259.25**	**21,252,321.38 1,950,149.59 (1,926,496.42) 21,292,941.91**	**125,008.90 23,653.17 146,198.40 44,842.66**	**17,173.50 (261.29) 16,912.21 61,754.87**	**61,754.87**

Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
FEBRUARY 2025							
02/03/2025	Dividend	31846V401	0.00		1,098.57		1,098.57
02/03/2025	Coupon	06051GFS3	0.00	BANK OF AMERICA CORP 3.875 08/01/2025		5,134.38	5,134.38
02/13/2025	Final Maturity	912797MK0	225,000.00	UNITED STATES TREASURY 02/13/2025	225,000.00		225,000.00
02/17/2025	Coupon	36267KAD9	45,000.00	GMCAR 2023-3 A3 5.45 06/16/2028		204.38	204.38
02/17/2025	Coupon	362955AD8	85,000.00	GMCAR 2025-1 A3 4.62 12/17/2029		364.51	364.51
02/17/2025	Coupon	47787CAC7	195,000.00	JDOT 2023-C A3 5.48 05/15/2028		890.50	890.50
02/18/2025	Coupon	02582JKD1	215,000.00	AMXCA 2023-3 A 5.23 09/15/2028		937.04	937.04
02/18/2025	Coupon	20030NBN0	260,000.00	COMCAST CORP 3.375 08/15/2025		4,387.50	4,387.50
02/20/2025	Coupon	379929AD4	45,000.00	GMALT 2023-3 A3 5.38 11/20/2026		201.75	201.75
02/20/2025	Final Maturity	912797KA4	325,000.00	UNITED STATES TREASURY 02/20/2025	325,000.00		325,000.00
02/24/2025	Coupon	06406HDA4	260,000.00	BANK OF NEW YORK MELLON CORP 3.0 02/24/2025		3,900.00	3,900.00
02/24/2025	Final Maturity	06406HDA4	260,000.00	BANK OF NEW YORK MELLON CORP 3.0 02/24/2025	260,000.00		260,000.00
02/25/2025	Coupon	05592XAD2	40,000.00	BMWOT 2023-A A3 5.47 02/25/2028		182.33	182.33
February 2025 Total					**811,098.57**	**16,202.39**	**827,300.96**
MARCH 2025							
03/03/2025	Coupon	30231GAT9	500,000.00	EXXON MOBIL CORP 3.043 03/01/2026		7,607.50	7,607.50
03/03/2025	Coupon	828807CV7	275,000.00	SIMON PROPERTY GROUP LP 3.5 09/01/2025		4,812.50	4,812.50
03/06/2025	Final Maturity	912797MM6	575,000.00	UNITED STATES TREASURY 03/06/2025	575,000.00		575,000.00
03/10/2025	Coupon	24422EWJ4	260,000.00	JOHN DEERE CAPITAL CORP 4.05 09/08/2025		5,265.00	5,265.00
03/17/2025	Coupon	00440EAS6	250,000.00	CHUBB INA HOLDINGS LLC 3.15 03/15/2025		3,937.50	3,937.50
03/17/2025	Final Maturity	00440EAS6	250,000.00	CHUBB INA HOLDINGS LLC 3.15 03/15/2025	250,000.00		250,000.00
03/17/2025	Coupon	02582JKD1	215,000.00	AMXCA 2023-3 A 5.23 09/15/2028		937.04	937.04
03/17/2025	Coupon	36267KAD9	45,000.00	GMCAR 2023-3 A3 5.45 06/16/2028		204.38	204.38
03/17/2025	Coupon	362955AD8	85,000.00	GMCAR 2025-1 A3 4.62 12/17/2029		352.75	352.75
03/17/2025	Coupon	47787CAC7	195,000.00	JDOT 2023-C A3 5.48 05/15/2028		890.50	890.50
03/18/2025	Final Maturity	912797NR4	600,000.00	UNITED STATES TREASURY 03/18/2025	600,000.00		600,000.00
03/20/2025	Coupon	379929AD4	45,000.00	GMALT 2023-3 A3 5.38 11/20/2026		201.75	201.75
03/20/2025	Principal Paydown	379929AD4	45,000.00	GMALT 2023-3 A3 5.38 11/20/2026	3,921.56		3,921.56

Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
03/25/2025	Coupon	05592XAD2	40,000.00	BMWOT 2023-A A3 5.47 02/25/2028		182.33	182.33
03/25/2025	Principal Paydown	05592XAD2	40,000.00	BMWOT 2023-A A3 5.47 02/25/2028	1,413.54		1,413.54
03/31/2025	Coupon	3130ARF55	3,000,000.00	FEDERAL HOME LOAN BANKS 2.6 03/30/2027		39,000.00	39,000.00
March 2025 Total					**1,430,335.10**	**63,391.25**	**1,493,726.35**
APRIL 2025							
04/01/2025	Coupon	89236TGX7	260,000.00	TOYOTA MOTOR CREDIT CORP 3.0 04/01/2025		3,900.00	3,900.00
04/01/2025	Final Maturity	89236TGX7	260,000.00	TOYOTA MOTOR CREDIT CORP 3.0 04/01/2025	260,000.00		260,000.00
04/14/2025	Coupon	023135CE4	500,000.00	AMAZON.COM INC 3.0 04/13/2025		7,500.00	7,500.00
04/14/2025	Final Maturity	023135CE4	500,000.00	AMAZON.COM INC 3.0 04/13/2025	500,000.00		500,000.00
04/14/2025	Coupon	3130ARFY2	3,000,000.00	FEDERAL HOME LOAN BANKS 3.0 04/14/2025		45,000.00	45,000.00
04/14/2025	Final Maturity	3130ARFY2	3,000,000.00	FEDERAL HOME LOAN BANKS 3.0 04/14/2025	3,000,000.00		3,000,000.00
04/14/2025	Coupon	3130ARGD7	3,000,000.00	FEDERAL HOME LOAN BANKS 4.0 04/14/2025		60,000.00	60,000.00
04/14/2025	Final Maturity	3130ARGD7	3,000,000.00	FEDERAL HOME LOAN BANKS 4.0 04/14/2025	3,000,000.00		3,000,000.00
04/15/2025	Coupon	009158BB1	275,000.00	AIR PRODUCTS AND CHEMICALS INC 1.5 10/15/2025		2,062.50	2,062.50
04/15/2025	Coupon	02582JKD1	215,000.00	AMXCA 2023-3 A 5.23 09/15/2028		937.04	937.04
04/15/2025	Coupon	47787CAC7	195,000.00	JDOT 2023-C A3 5.48 05/15/2028		890.50	890.50
04/15/2025	Coupon	756109AV6	260,000.00	REALTY INCOME CORP 3.875 04/15/2025		5,037.50	5,037.50
04/15/2025	Final Maturity	756109AV6	260,000.00	REALTY INCOME CORP 3.875 04/15/2025	260,000.00		260,000.00
04/16/2025	Coupon	36267KAD9	45,000.00	GMCAR 2023-3 A3 5.45 06/16/2028		204.38	204.38
04/16/2025	Coupon	362955AD8	85,000.00	GMCAR 2025-1 A3 4.62 12/17/2029		352.75	352.75
04/21/2025	Coupon	379929AD4	45,000.00	GMALT 2023-3 A3 5.38 11/20/2026		184.17	184.17
04/21/2025	Principal Paydown	379929AD4	45,000.00	GMALT 2023-3 A3 5.38 11/20/2026	4,733.25		4,733.25
04/25/2025	Coupon	05592XAD2	40,000.00	BMWOT 2023-A A3 5.47 02/25/2028		175.89	175.89
04/25/2025	Principal Paydown	05592XAD2	40,000.00	BMWOT 2023-A A3 5.47 02/25/2028	2,496.00		2,496.00
04/29/2025	Coupon	3134GW6Z4	3,000,000.00	FEDERAL HOME LOAN MORTGAGE CORP 0.48 05/29/2025		7,200.00	7,200.00
April 2025 Total					**7,027,229.25**	**133,444.73**	**7,160,673.97**
MAY 2025							
05/15/2025	Coupon	02582JKD1	215,000.00	AMXCA 2023-3 A 5.23 09/15/2028		937.04	937.04
05/15/2025	Coupon	47787CAC7	195,000.00	JDOT 2023-C A3 5.48 05/15/2028		890.50	890.50
05/15/2025	Coupon	91282CFW6	400,000.00	UNITED STATES TREASURY 4.5 11/15/2025		9,000.00	9,000.00

Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
05/16/2025	Coupon	36267KAD9	45,000.00	GMCAR 2023-3 A3 5.45 06/16/2028		204.38	204.38
05/16/2025	Principal Paydown	36267KAD9	45,000.00	GMCAR 2023-3 A3 5.45 06/16/2028	1,258.27		1,258.27
05/16/2025	Coupon	362955AD8	85,000.00	GMCAR 2025-1 A3 4.62 12/17/2029		352.75	352.75
05/20/2025	Coupon	379929AD4	45,000.00	GMALT 2023-3 A3 5.38 11/20/2026		162.95	162.95
05/20/2025	Principal Paydown	379929AD4	45,000.00	GMALT 2023-3 A3 5.38 11/20/2026	5,931.63		5,931.63
05/26/2025	Coupon	05592XAD2	40,000.00	BMWOT 2023-A A3 5.47 02/25/2028		164.51	164.51
05/26/2025	Principal Paydown	05592XAD2	40,000.00	BMWOT 2023-A A3 5.47 02/25/2028	2,378.21		2,378.21
05/29/2025	Coupon	3134GW6Z4	3,000,000.00	FEDERAL HOME LOAN MORTGAGE CORP 0.48 05/29/2025		1,200.00	1,200.00
05/29/2025	Final Maturity	3134GW6Z4	3,000,000.00	FEDERAL HOME LOAN MORTGAGE CORP 0.48 05/29/2025	3,000,000.00		3,000,000.00
May 2025 Total					**3,009,568.11**	**12,912.13**	**3,022,480.23**
JUNE 2025							
06/09/2025	Coupon	48125LRU8	250,000.00	JPMORGAN CHASE BANK NA 5.11 12/08/2026		6,387.50	6,387.50
06/12/2025	Final Maturity	912797LN5	420,000.00	UNITED STATES TREASURY 06/12/2025	420,000.00		420,000.00
06/16/2025	Coupon	02582JKD1	215,000.00	AMXCA 2023-3 A 5.23 09/15/2028		937.04	937.04
06/16/2025	Coupon	36267KAD9	45,000.00	GMCAR 2023-3 A3 5.45 06/16/2028		198.66	198.66
06/16/2025	Principal Paydown	36267KAD9	45,000.00	GMCAR 2023-3 A3 5.45 06/16/2028	2,475.81		2,475.81
06/16/2025	Coupon	362955AD8	85,000.00	GMCAR 2025-1 A3 4.62 12/17/2029		352.75	352.75
06/16/2025	Coupon	47787CAC7	195,000.00	JDOT 2023-C A3 5.48 05/15/2028		890.50	890.50
06/16/2025	Principal Paydown	47787CAC7	195,000.00	JDOT 2023-C A3 5.48 05/15/2028	8,489.29		8,489.29
06/16/2025	Coupon	91282CEU1	500,000.00	UNITED STATES TREASURY 2.875 06/15/2025		7,187.50	7,187.50
06/16/2025	Final Maturity	91282CEU1	500,000.00	UNITED STATES TREASURY 2.875 06/15/2025	500,000.00		500,000.00
06/20/2025	Coupon	379929AD4	45,000.00	GMALT 2023-3 A3 5.38 11/20/2026		136.35	136.35
06/20/2025	Principal Paydown	379929AD4	45,000.00	GMALT 2023-3 A3 5.38 11/20/2026	5,384.81		5,384.81
06/25/2025	Coupon	05592XAD2	40,000.00	BMWOT 2023-A A3 5.47 02/25/2028		153.67	153.67
06/25/2025	Principal Paydown	05592XAD2	40,000.00	BMWOT 2023-A A3 5.47 02/25/2028	2,335.61		2,335.61
06/26/2025	Final Maturity	912797NW3	350,000.00	UNITED STATES TREASURY 06/26/2025	350,000.00		350,000.00
June 2025 Total					**1,288,685.51**	**16,243.98**	**1,304,929.49**
JULY 2025							
07/03/2025	Final Maturity	912797NX1	250,000.00	UNITED STATES TREASURY 07/03/2025	250,000.00		250,000.00
07/15/2025	Coupon	02582JKD1	215,000.00	AMXCA 2023-3 A 5.23 09/15/2028		937.04	937.04

CASH FLOW REPORT

City of Banning | Account #11089 | As of January 31, 2025

Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
07/15/2025	Coupon	47787CAC7	195,000.00	JDOT 2023-C A3 5.48 05/15/2028		851.73	851.73
07/15/2025	Principal Paydown	47787CAC7	195,000.00	JDOT 2023-C A3 5.48 05/15/2028	13,528.75		13,528.75
07/15/2025	Coupon	91282CGE5	500,000.00	UNITED STATES TREASURY 3.875 01/15/2026		9,687.50	9,687.50
07/16/2025	Coupon	36267KAD9	45,000.00	GMCAR 2023-3 A3 5.45 06/16/2028		187.42	187.42
07/16/2025	Principal Paydown	36267KAD9	45,000.00	GMCAR 2023-3 A3 5.45 06/16/2028	2,491.32		2,491.32
07/16/2025	Coupon	362955AD8	85,000.00	GMCAR 2025-1 A3 4.62 12/17/2029		352.75	352.75
07/17/2025	Final Maturity	912797PE1	350,000.00	UNITED STATES TREASURY 07/17/2025	350,000.00		350,000.00
07/21/2025	Coupon	379929AD4	45,000.00	GMALT 2023-3 A3 5.38 11/20/2026		112.21	112.21
07/21/2025	Principal Paydown	379929AD4	45,000.00	GMALT 2023-3 A3 5.38 11/20/2026	5,149.98		5,149.98
07/23/2025	Coupon	6174468C6	260,000.00	MORGAN STANLEY 4.0 07/23/2025		5,200.00	5,200.00
07/23/2025	Final Maturity	6174468C6	260,000.00	MORGAN STANLEY 4.0 07/23/2025	260,000.00		260,000.00
07/25/2025	Coupon	05592XAD2	40,000.00	BMWOT 2023-A A3 5.47 02/25/2028		143.03	143.03
07/25/2025	Principal Paydown	05592XAD2	40,000.00	BMWOT 2023-A A3 5.47 02/25/2028	2,286.37		2,286.37
July 2025 Total					**883,456.42**	**17,471.68**	**900,928.10**
AUGUST 2025							
08/01/2025	Coupon	06051GFS3	265,000.00	BANK OF AMERICA CORP 3.875 08/01/2025		5,134.38	5,134.38
08/01/2025	Final Maturity	06051GFS3	265,000.00	BANK OF AMERICA CORP 3.875 08/01/2025	265,000.00		265,000.00
08/15/2025	Coupon	02582JKD1	215,000.00	AMXCA 2023-3 A 5.23 09/15/2028		937.04	937.04
08/15/2025	Coupon	20030NBN0	260,000.00	COMCAST CORP 3.375 08/15/2025		4,387.50	4,387.50
08/15/2025	Final Maturity	20030NBN0	260,000.00	COMCAST CORP 3.375 08/15/2025	260,000.00		260,000.00
08/15/2025	Coupon	47787CAC7	195,000.00	JDOT 2023-C A3 5.48 05/15/2028		789.95	789.95
08/15/2025	Principal Paydown	47787CAC7	195,000.00	JDOT 2023-C A3 5.48 05/15/2028	10,344.43		10,344.43
08/18/2025	Coupon	36267KAD9	45,000.00	GMCAR 2023-3 A3 5.45 06/16/2028		176.10	176.10
08/18/2025	Principal Paydown	36267KAD9	45,000.00	GMCAR 2023-3 A3 5.45 06/16/2028	2,417.55		2,417.55
08/18/2025	Coupon	362955AD8	85,000.00	GMCAR 2025-1 A3 4.62 12/17/2029		352.75	352.75
08/20/2025	Coupon	379929AD4	45,000.00	GMALT 2023-3 A3 5.38 11/20/2026		89.12	89.12
08/20/2025	Principal Paydown	379929AD4	45,000.00	GMALT 2023-3 A3 5.38 11/20/2026	4,919.69		4,919.69
08/25/2025	Coupon	05592XAD2	40,000.00	BMWOT 2023-A A3 5.47 02/25/2028		132.60	132.60
08/25/2025	Principal Paydown	05592XAD2	40,000.00	BMWOT 2023-A A3 5.47 02/25/2028	2,218.04		2,218.04
August 2025 Total					**544,899.70**	**11,999.45**	**556,899.14**
SEPTEMBER 2025							
09/02/2025	Coupon	30231GAT9	500,000.00	EXXON MOBIL CORP 3.043 03/01/2026		7,607.50	7,607.50

Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
09/02/2025	Coupon	828807CV7	275,000.00	SIMON PROPERTY GROUP LP 3.5 09/01/2025		4,812.50	4,812.50
09/02/2025	Final Maturity	828807CV7	275,000.00	SIMON PROPERTY GROUP LP 3.5 09/01/2025	275,000.00		275,000.00
09/08/2025	Coupon	24422EWJ4	260,000.00	JOHN DEERE CAPITAL CORP 4.05 09/08/2025		5,265.00	5,265.00
09/08/2025	Final Maturity	24422EWJ4	260,000.00	JOHN DEERE CAPITAL CORP 4.05 09/08/2025	260,000.00		260,000.00
09/15/2025	Coupon	02582JKD1	215,000.00	AMXCA 2023-3 A 5.23 09/15/2028		937.04	937.04
09/15/2025	Coupon	47787CAC7	195,000.00	JDOT 2023-C A3 5.48 05/15/2028		742.71	742.71
09/15/2025	Principal Paydown	47787CAC7	195,000.00	JDOT 2023-C A3 5.48 05/15/2028	8,214.74		8,214.74
09/16/2025	Coupon	36267KAD9	45,000.00	GMCAR 2023-3 A3 5.45 06/16/2028		165.12	165.12
09/16/2025	Principal Paydown	36267KAD9	45,000.00	GMCAR 2023-3 A3 5.45 06/16/2028	2,371.80		2,371.80
09/16/2025	Coupon	362955AD8	85,000.00	GMCAR 2025-1 A3 4.62 12/17/2029		352.75	352.75
09/22/2025	Coupon	379929AD4	45,000.00	GMALT 2023-3 A3 5.38 11/20/2026		67.07	67.07
09/22/2025	Principal Paydown	379929AD4	45,000.00	GMALT 2023-3 A3 5.38 11/20/2026	5,663.97		5,663.97
09/25/2025	Coupon	05592XAD2	40,000.00	BMWOT 2023-A A3 5.47 02/25/2028		122.49	122.49
09/25/2025	Principal Paydown	05592XAD2	40,000.00	BMWOT 2023-A A3 5.47 02/25/2028	2,079.20		2,079.20
09/30/2025	Coupon	3130ARF55	3,000,000.00	FEDERAL HOME LOAN BANKS 2.6 03/30/2027		39,000.00	39,000.00
September 2025 Total					**553,329.71**	**59,072.18**	**612,401.89**
OCTOBER 2025							
10/15/2025	Coupon	009158BB1	275,000.00	AIR PRODUCTS AND CHEMICALS INC 1.5 10/15/2025		2,062.50	2,062.50
10/15/2025	Final Maturity	009158BB1	275,000.00	AIR PRODUCTS AND CHEMICALS INC 1.5 10/15/2025	275,000.00		275,000.00
10/15/2025	Coupon	02582JKD1	215,000.00	AMXCA 2023-3 A 5.23 09/15/2028		937.04	937.04
10/15/2025	Coupon	47787CAC7	195,000.00	JDOT 2023-C A3 5.48 05/15/2028		705.20	705.20
10/15/2025	Principal Paydown	47787CAC7	195,000.00	JDOT 2023-C A3 5.48 05/15/2028	9,599.79		9,599.79
10/16/2025	Coupon	36267KAD9	45,000.00	GMCAR 2023-3 A3 5.45 06/16/2028		154.35	154.35
10/16/2025	Principal Paydown	36267KAD9	45,000.00	GMCAR 2023-3 A3 5.45 06/16/2028	2,272.82		2,272.82
10/16/2025	Coupon	362955AD8	85,000.00	GMCAR 2025-1 A3 4.62 12/17/2029		352.75	352.75
10/20/2025	Coupon	379929AD4	45,000.00	GMALT 2023-3 A3 5.38 11/20/2026		41.67	41.67
10/20/2025	Principal Paydown	379929AD4	45,000.00	GMALT 2023-3 A3 5.38 11/20/2026	5,300.05		5,300.05
10/27/2025	Coupon	05592XAD2	40,000.00	BMWOT 2023-A A3 5.47 02/25/2028		113.02	113.02
10/27/2025	Principal Paydown	05592XAD2	40,000.00	BMWOT 2023-A A3 5.47 02/25/2028	1,967.60		1,967.60

CASH FLOW REPORT

City of Banning | Account #11089 | As of January 31, 2025

Payment Date	Transaction Type	CUSIP	Quantity	Security Description	Principal Amount	Income	Total Amount
October 2025 Total					**294,140.27**	**4,366.53**	**298,506.80**
NOVEMBER 2025							
11/17/2025	Coupon	02582JKD1	215,000.00	AMXCA 2023-3 A 5.23 09/15/2028		937.04	937.04
11/17/2025	Coupon	36267KAD9	45,000.00	GMCAR 2023-3 A3 5.45 06/16/2028		144.03	144.03
11/17/2025	Principal Paydown	36267KAD9	45,000.00	GMCAR 2023-3 A3 5.45 06/16/2028	2,221.11		2,221.11
11/17/2025	Coupon	362955AD8	85,000.00	GMCAR 2025-1 A3 4.62 12/17/2029		352.75	352.75
11/17/2025	Coupon	47787CAC7	195,000.00	JDOT 2023-C A3 5.48 05/15/2028		661.36	661.36
11/17/2025	Principal Paydown	47787CAC7	195,000.00	JDOT 2023-C A3 5.48 05/15/2028	10,286.63		10,286.63
11/17/2025	Coupon	91282CFW6	400,000.00	UNITED STATES TREASURY 4.5 11/15/2025		9,000.00	9,000.00
11/17/2025	Final Maturity	91282CFW6	400,000.00	UNITED STATES TREASURY 4.5 11/15/2025	400,000.00		400,000.00
11/20/2025	Coupon	379929AD4	45,000.00	GMALT 2023-3 A3 5.38 11/20/2026		17.91	17.91
11/20/2025	Effective Maturity	379929AD4	45,000.00	GMALT 2023-3 A3 5.38 11/20/2026	3,995.05		3,995.05
11/25/2025	Coupon	05592XAD2	40,000.00	BMWOT 2023-A A3 5.47 02/25/2028		104.05	104.05
11/25/2025	Principal Paydown	05592XAD2	40,000.00	BMWOT 2023-A A3 5.47 02/25/2028	1,808.24		1,808.24
November 2025 Total					**418,311.03**	**11,217.13**	**429,528.16**
DECEMBER 2025							
12/08/2025	Coupon	48125LRU8	250,000.00	JPMORGAN CHASE BANK NA 5.11 12/08/2026		6,387.50	6,387.50
12/15/2025	Coupon	02582JKD1	215,000.00	AMXCA 2023-3 A 5.23 09/15/2028		937.04	937.04
12/15/2025	Coupon	47787CAC7	195,000.00	JDOT 2023-C A3 5.48 05/15/2028		614.38	614.38
12/15/2025	Principal Paydown	47787CAC7	195,000.00	JDOT 2023-C A3 5.48 05/15/2028	7,642.07		7,642.07
12/16/2025	Coupon	36267KAD9	45,000.00	GMCAR 2023-3 A3 5.45 06/16/2028		133.94	133.94
12/16/2025	Principal Paydown	36267KAD9	45,000.00	GMCAR 2023-3 A3 5.45 06/16/2028	1,901.72		1,901.72
12/16/2025	Coupon	362955AD8	85,000.00	GMCAR 2025-1 A3 4.62 12/17/2029		352.75	352.75
12/25/2025	Coupon	05592XAD2	40,000.00	BMWOT 2023-A A3 5.47 02/25/2028		95.80	95.80
12/25/2025	Principal Paydown	05592XAD2	40,000.00	BMWOT 2023-A A3 5.47 02/25/2028	1,719.08		1,719.08
December 2025 Total					**11,262.87**	**8,521.42**	**19,784.29**
Grand Total			**50,975,000.00**		**16,272,316.53**	**354,842.85**	**16,627,159.39**

IMPORTANT DISCLOSURES

Chandler Asset Management, Inc. ("Chandler") is an SEC registered investment adviser. For additional information about our firm, please see our current disclosures (Form ADV). To obtain a copy of our current disclosures, you may contact your client service representative by calling the number on the front of this statement or you may visit our website at www.chandlerasset.com.

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Custody: Your qualified custodian bank maintains control of all assets reflected in this statement and we urge you to compare this statement to the one you receive from your qualified custodian. Chandler does not have any authority to withdraw or deposit funds from/to the custodian account.

Valuation: Prices are provided by IDC, an independent pricing source. In the event IDC does not provide a price or if the price provided is not reflective of fair market value, Chandler will obtain pricing from an alternative approved third party pricing source in accordance with our written valuation policy and procedures. Our valuation procedures are also disclosed in Item 5 of our Form ADV Part 2A.

Performance: Performance results are presented gross-of-advisory fees and represent the client's Total Return. The deduction of advisory fees lowers performance results. These results include the reinvestment of dividends and other earnings. Past performance may not be indicative of future results. Therefore, clients should not assume that future performance of any specific investment or investment strategy will be profitable or equal to past performance levels. All investment strategies have the potential for profit or loss. Economic factors, market conditions or changes in investment strategies, contributions or withdrawals may materially alter the performance and results of your portfolio.

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Ratings: Ratings information have been provided by Moody's, S&P and Fitch through data feeds we believe to be reliable as of the date of this statement, however we cannot guarantee its accuracy.

Security level ratings for U.S. Agency issued mortgage-backed securities ("MBS") reflect the issuer rating because the securities themselves are not rated. The issuing U.S. Agency guarantees the full and timely payment of both principal and interest and carries a high rating by S&P, Moody's and Fitch respectively.

BENCHMARK INDEX & DISCLOSURES

City of Banning | Account #11089 | As of January 31, 2025

Benchmark	Disclosure
ICE BofA 0-1 Yr US Treasury Index	The ICE BAML 0-1 Year US Treasury Index tracks the performance of US Dollar denominated Sovereign debt publically issued by the US government in its domestic market with maturities less than two years. Qualifying securities must haveat least one month and less than one years remaining term to final maturity, a fixed coupon schedule and a minimum amount outstanding of $1 billion. (Index: G0QA. Please visit www.mlindex.ml.com for more information)

State of California
Pooled Money Investment Account
Market Valuation
1/31/2025

Description	Carrying Cost Plus Accrued Interest Purch.	Fair Value	Accrued Interest
United States Treasury:			
Bills	$ 42,926,380,346.04	$ 43,388,983,305.00	NA
Notes	$ 47,712,004,249.09	$ 47,674,732,330.50	$ 462,691,523.00
Federal Agency:			
SBA	$ 216,168,173.61	$ 216,352,890.86	$ 956,235.00
MBS-REMICs	$ 1,213,098.54	$ 1,199,058.14	$ 5,292.04
Debentures	$ 7,826,369,240.48	$ 7,805,873,300.00	$ 87,552,618.50
Debentures FR	$ -	$ -	$ -
Debentures CL	$ 2,350,000,000.00	$ 2,348,999,000.00	$ 27,068,389.50
Discount Notes	$ 28,215,247,930.56	$ 28,518,879,650.00	NA
Supranational Debentures	$ 3,046,274,656.75	$ 3,028,880,500.00	$ 29,094,096.50
Supranational Debentures FR	$ -	$ -	$ -
CDs and YCDs FR	$ -	$ -	$ -
Bank Notes			
CDs and YCDs	$ 14,400,000,000.00	$ 14,402,301,575.23	$ 196,794,618.03
Commercial Paper	$ 10,044,014,430.49	$ 10,160,255,208.31	NA
Corporate:			
Bonds FR	$ -	$ -	$ -
Bonds	$ 895,310,112.42	$ 887,014,670.00	$ 8,848,653.91
Repurchase Agreements	$ -	$ -	$ -
Reverse Repurchase	$ -	$ -	$ -
Time Deposits	$ 5,068,500,000.00	$ 5,068,500,000.00	NA
PMIA & GF Loans	$ 194,249,000.00	$ 194,249,000.00	NA
TOTAL	$ 162,895,731,237.98	$ 163,696,220,488.04	$ 813,011,426.48

Fair Value Including Accrued Interest $ 164,509,231,914.52

Repurchase Agreements, Time Deposits, PMIA & General Fund loans, and
Reverse Repurchase agreements are carried at portfolio book value (carrying cost).

PMIA/LAIF Performance Report as of 02/05/25

Quarterly Performance Quarter Ended 12/31/24

LAIF Apportionment Rate[2]:	4.62
LAIF Earnings Ratio[2]:	0.00012664187216722
LAIF Administrative Cost[1]*:	0.28
LAIF Fair Value Factor[1]:	0.999621985
PMIA Daily[1]:	4.40
PMIA Quarter to Date[1]:	4.48
PMIA Average Life[1]:	252

PMIA Average Monthly Effective Yields[1]

January	**4.366**
December	4.434
November	4.477
October	4.518
September	4.575
August	4.579

Pooled Money Investment Account Monthly Portfolio Composition [1] 12/31/24 $155.4 billion

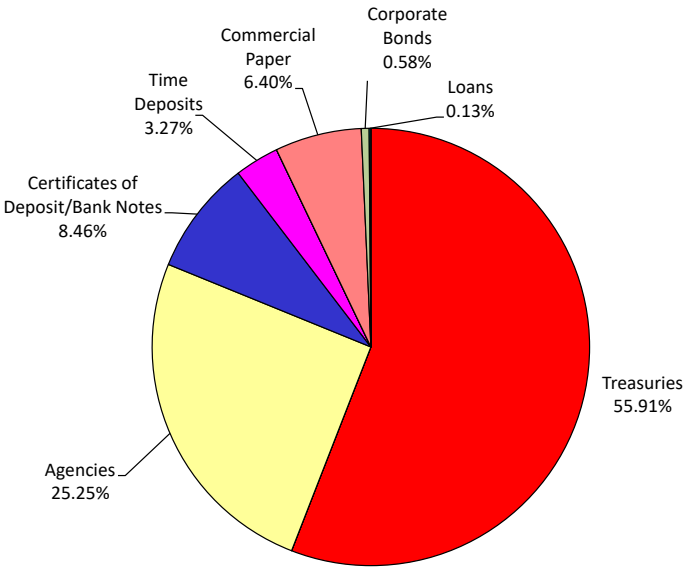

Chart does not include $1,239,000.00 in mortgages, which equates to 0.001%. Percentages may not total 100% due to rounding.

Daily rates are now available here. **View PMIA Daily Rates**

Notes: The apportionment rate includes interest earned on the CalPERS Supplemental Pension Payment pursuant to Government Code 20825 (c)(1) and interest earned on the Wildfire Fund loan pursuant to Public Utility Code 3288 (a).

**The percentage of administrative cost equals the total administrative cost divided by the quarterly interest earnings. The law provides that administrative costs are not to exceed 5% of quarterly EARNINGS of the fund. However, if the 13-week Daily Treasury Bill Rate on the last day of the fiscal year is below 1%, then administrative costs shall not exceed 8% of quarterly EARNINGS of the fund for the subsequent fiscal year.*

Source:
[1] State of California, Office of the Treasurer
[2] State of California, Office of the Controller

CITY OF BANNING
STAFF REPORT

TO:	**CITY COUNCIL**
FROM:	**Robert Fisher, Acting City Manager**
PREPARED BY:	**Lincoln Bogard, Administrative Services Director**
MEETING DATE:	**February 25, 2025**
SUBJECT:	**Receipts, Disbursements, & Fund Balances Reporting for Fiscal Year 2024-25, Periods 7, January 2025**

RECOMMENDATION:

Receive and file.

BACKGROUND:

Per Government Code Section 41004, Regularly, at least once each month, the city treasurer shall submit to the city clerk a written report and accounting of all receipts, disbursements, and fund balances. The city treasurer shall file a copy with the legislative body.

JUSTIFICATION:

Reporting mandated by Government Code Section 41001.

FISCAL IMPACT:

None. This report only shows the results of operations.

ALTERNATIVES:

Not Applicable.

BUDGETED?:

No

CONTRACT/AGREEMENT:

No

ATTACHMENTS:

1. Receipts Disbursements and Net Cash Flows
2. Vendor Activity Detail
3. Monthly Fund Balances

Receipts, Disbursements, and Net Cash Flows

			FY Values		
			25		
Fund	Fund Description	Period	Receipts	Disbursements	Net Cash Flow
001	GENERAL FUND	1	13,552,463.07	8,396,828.63	5,155,634.44
		2	3,549,022.16	4,390,741.07	(841,291.67)
		3	2,102,879.99	4,551,719.57	(2,448,839.58)
		4	2,736,039.77	3,225,830.16	(489,790.39)
		5	4,482,506.66	3,792,078.84	690,427.82
		6	3,766,759.38	3,533,332.08	233,427.30
		7	4,608,881.30	4,043,254.06	565,627.24
	GENERAL FUND Total		34,798,552.33	31,933,784.41	2,865,195.16
002	DEVELOPER DEPOSIT FUND	1	0.00	62,345.17	(62,345.17)
		2	0.00	27,871.12	(27,871.12)
		3	0.00	23,580.35	(23,580.35)
		4	0.00	36,146.91	(36,146.91)
		5	0.00	1,710.00	(1,710.00)
		6	6,083.00	48,479.90	(42,396.90)
		7	0.00	16,737.42	(16,737.42)
	DEVELOPER DEPOSIT FUND Total		6,083.00	216,870.87	(210,787.87)
100	GAS TAX STREET FUND	1	81,734.56	935,345.55	(853,610.99)
		2	128,678.61	85,673.85	43,004.76
		3	82,028.17	103,016.32	(20,988.15)
		4	84,724.41	86,682.47	(1,958.06)
		5	73,681.01	143,355.25	(69,674.24)
		6	80,774.48	93,244.80	(12,470.32)
		7	81,190.40	99,628.14	(18,437.74)
	GAS TAX STREET FUND Total		612,811.64	1,546,946.38	(934,134.74)
101	MEASURE A STREET FUND	1	1,048,371.19	0.00	1,048,371.19
		2	139,999.69	205,563.09	(65,563.40)
		3	68,178.35	452,256.73	(384,078.38)
		4	18,235.83	59,251.07	(41,015.24)
		5	62,726.75	0.00	62,726.75
		6	150,684.93	109,339.60	41,345.33
		7	67,233.73	55,789.54	11,444.19
	MEASURE A STREET FUND Total		1,555,430.47	882,200.03	673,230.44
102	RMRA (SB1) GAS TAX FUND	1	789,459.85	0.00	789,459.85
		2	75,494.55	0.00	75,494.55
		3	70,491.93	631,977.61	(561,485.68)
		4	71,367.70	35,508.67	35,859.03
		5	80,732.87	0.00	80,732.87
		6	61,939.19	0.00	61,939.19
		7	73,829.53	0.00	73,829.53
	RMRA (SB1) GAS TAX FUND Total		1,223,315.62	667,486.28	555,829.34
110	CDBG FUND	1	0.00	88,847.08	(88,847.08)
		2	34,580.12	0.00	34,580.12
	CDBG FUND Total		34,580.12	88,847.08	(54,266.96)
111	LANDSCAPE MAINTENANCE FD	1	82,078.50	5,025.09	77,053.41

Receipts, Disbursements, and Net Cash Flows

			FY Values		
			25		
Fund	Fund Description	Period	Receipts	Disbursements	Net Cash Flow
111	LANDSCAPE MAINTENANCE FD	2	1,562.56	5,423.42	(3,860.86)
		3	0.00	23,049.13	(23,049.13)
		4	1,084.05	9,266.32	(8,182.27)
		5	0.00	17,946.00	(17,946.00)
		6	0.00	10,257.72	(10,257.72)
		7	81,852.92	15,680.44	66,172.48
	LANDSCAPE MAINTENANCE FD Total		166,578.03	86,648.12	79,929.91
132	AIR QUALITY IMPROVEMT FD	1	317,416.64	0.00	317,416.64
		3	10,513.55	0.00	10,513.55
		5	1,125.00	0.00	1,125.00
		6	10,613.10	0.00	10,613.10
	AIR QUALITY IMPROVEMT FD Total		339,668.29	0.00	339,668.29
140	ASSET FORFEIT-POLICE FUND	1	1,923.34	0.00	1,923.34
	ASSET FORFEIT-POLICE FUND Total		1,923.34	0.00	1,923.34
148	SUPPL LAW ENFORCEMENT FD	1	184,910.05	0.00	184,910.05
		4	102,996.79	0.00	102,996.79
		5	8,333.33	0.00	8,333.33
		6	8,333.33	0.00	8,333.33
		7	8,333.33	0.00	8,333.33
	SUPPL LAW ENFORCEMENT FD Total		312,906.83	0.00	312,906.83
150	STATE PARK BOND ACT FUND	1	0.00	117.84	(117.84)
	STATE PARK BOND ACT FUND Total		0.00	117.84	(117.84)
200	SPECIAL DONATION FUND	1	46,948.83	0.00	46,948.83
		2	2,545.00	0.00	2,545.00
		7	50.00	0.00	50.00
	SPECIAL DONATION FUND Total		49,543.83	0.00	49,543.83
201	SENIOR CTR ACTIVITIES FD	1	64,168.00	0.00	64,168.00
		2	2,456.00	0.00	2,456.00
		3	488.22	0.00	488.22
		4	240.00	651.21	(411.21)
		5	803.00	633.74	169.26
		6	2,444.75	1,361.27	1,083.48
		7	827.75	26.97	800.78
	SENIOR CTR ACTIVITIES FD Total		71,427.72	2,673.19	68,754.53
202	ANIMAL CONTROL RESERVE FD	1	0.00	114.96	(114.96)
	ANIMAL CONTROL RESERVE FD Total		0.00	114.96	(114.96)
203	POLICE VOLUNTEER FUND	1	6,726.37	0.00	6,726.37
	POLICE VOLUNTEER FUND Total		6,726.37	0.00	6,726.37
221	CSCDA-CFD 2020-02 ATWELL	4	384,706.20	0.00	384,706.20
		5	27,675.15	0.00	27,675.15
	CSCDA-CFD 2020-02 ATWELL Total		412,381.35	0.00	412,381.35
222	ARPA-AMERICA RESCUE PLAN	1	1,653,816.58	0.00	1,653,816.58
		2	0.00	40,963.23	(40,963.23)
		3	0.00	13,267.92	(13,267.92)

Receipts, Disbursements, and Net Cash Flows

			FY Values		
			25		
Fund	Fund Description	Period	Receipts	Disbursements	Net Cash Flow
222	ARPA-AMERICA RESCUE PLAN	4	0.00	13,344.84	(13,344.84)
		5	0.00	7,230.06	(7,230.06)
		6	18,805.81	0.00	18,805.81
		7	13,267.92	0.00	13,267.92
	ARPA-AMERICA RESCUE PLAN Total		1,685,890.31	74,806.05	1,611,084.26
360	SUN LAKES CFD #86-1 FUND	1	104.04	0.00	104.04
	SUN LAKES CFD #86-1 FUND Total		104.04	0.00	104.04
365	WILSON ST #91-1 ASSMT DBT	1	215.12	0.00	215.12
	WILSON ST #91-1 ASSMT DBT Total		215.12	0.00	215.12
375	FAIR OAKS AD #2004-1 DEBT	1	0.00	3,757.50	(3,757.50)
		2	2,955.72	146,304.83	(143,349.11)
		3	0.00	185.44	(185.44)
		4	4,425.60	782.20	3,643.40
		6	0.00	190.59	(190.59)
		7	96,824.55	0.00	96,824.55
	FAIR OAKS AD #2004-1 DEBT Total		104,205.87	151,220.56	(47,014.69)
400	P/FACILITIES DVLP FUND	1	305,238.75	0.00	305,238.75
		7	267,600.00	0.00	267,600.00
	P/FACILITIES DVLP FUND Total		572,838.75	0.00	572,838.75
410	F/FACILITY DEVELOPMENT FD	1	1,441,097.19	0.00	1,441,097.19
		7	166,358.00	0.00	166,358.00
	F/FACILITY DEVELOPMENT FD Total		1,607,455.19	0.00	1,607,455.19
420	TRAFFIC CONTROL FACIL FD	1	2,141,814.76	0.00	2,141,814.76
		2	0.00	45,462.83	(45,462.83)
		3	200.00	0.00	200.00
		6	0.00	128,938.00	(128,938.00)
	TRAFFIC CONTROL FACIL FD Total		2,142,014.76	174,400.83	1,967,613.93
430	GENERAL FACILITIES FUND	1	506,483.20	0.00	506,483.20
		2	0.00	7,264.48	(7,264.48)
		7	132,908.00	0.00	132,908.00
	GENERAL FACILITIES FUND Total		639,391.20	7,264.48	632,126.72
444	WILSON MEDIAN FUND	1	412,179.88	0.00	412,179.88
	WILSON MEDIAN FUND Total		412,179.88	0.00	412,179.88
451	PARK DEVELOPMENT FUND	1	299,965.71	0.00	299,965.71
		2	0.00	95,671.41	(95,671.41)
	PARK DEVELOPMENT FUND Total		299,965.71	95,671.41	204,294.30
470	CAPITAL IMPROVEMENT FUND	1	0.00	48,317.87	(48,317.87)
	CAPITAL IMPROVEMENT FUND Total		0.00	48,317.87	(48,317.87)
600	AIRPORT FUND	1	214,267.09	10,814.21	203,452.88
		2	7,497.04	10,853.09	(3,356.05)
		3	8,156.53	18,675.29	(10,518.76)
		4	7,929.98	10,070.82	(2,140.84)
		5	7,162.52	47,121.63	(39,959.11)
		6	9,289.63	7,906.08	1,383.55

Receipts, Disbursements, and Net Cash Flows

			FY Values		
			25		
Fund	Fund Description	Period	Receipts	Disbursements	Net Cash Flow
600	AIRPORT FUND	7	8,758.70	8,611.40	147.30
	AIRPORT FUND Total		263,061.49	114,052.52	149,008.97
610	TRANSIT FUND	1	7,404,847.97	3,833,302.57	3,571,545.40
		2	239,389.38	743,705.25	(504,315.87)
		3	188,645.29	176,378.93	12,266.36
		4	328,917.61	108,377.86	220,539.75
		5	184,658.61	187,304.71	(2,646.10)
		6	183,549.95	103,343.67	80,206.28
		7	188,458.90	151,194.60	37,264.30
	TRANSIT FUND Total		8,718,467.71	5,303,607.59	3,414,860.12
660	WATER FUND	1	2,704,987.74	963,811.18	1,741,176.56
		2	1,556,133.14	740,780.94	815,352.20
		3	1,275,291.43	686,412.57	588,878.86
		4	1,649,356.91	877,961.44	771,395.47
		5	1,954,538.56	572,504.66	1,382,033.90
		6	5,955.00	494,210.70	(488,255.70)
		7	137,101.93	638,629.62	(501,527.69)
	WATER FUND Total		9,283,364.71	4,974,311.11	4,309,053.60
661	WATER CAPITAL FACIL FUND	1	239,050.32	0.00	239,050.32
		2	0.00	3,192.64	(3,192.64)
		3	19,488.00	9,349.14	10,138.86
		4	0.00	8,622.51	(8,622.51)
		6	0.00	3,299.68	(3,299.68)
		7	0.00	2,106.79	(2,106.79)
	WATER CAPITAL FACIL FUND Total		258,538.32	26,570.76	231,967.56
662	IRRIGATION WATER FUND	1	3,798.29	0.00	3,798.29
	IRRIGATION WATER FUND Total		3,798.29	0.00	3,798.29
669	BUA WATER - DEBT SERV FD	4	0.00	1,614,781.26	(1,614,781.26)
	BUA WATER - DEBT SERV FD Total		0.00	1,614,781.26	(1,614,781.26)
670	ELECTRIC FUND	1	2,910,667.02	11,382,968.48	(8,472,301.46)
		2	3,567,643.64	4,391,921.37	(824,277.73)
		3	5,168,989.28	3,327,106.64	1,841,882.64
		4	3,338,656.22	3,392,982.07	(54,325.85)
		5	1,095,375.93	2,468,591.79	(1,373,215.86)
		6	825,347.93	2,181,418.99	(1,356,071.06)
		7	407,952.07	2,460,904.19	(2,052,952.12)
	ELECTRIC FUND Total		17,314,632.09	29,605,893.53	(12,291,261.44)
672	RATE STABILITY FUND	1	18,484.84	0.00	18,484.84
	RATE STABILITY FUND Total		18,484.84	0.00	18,484.84
673	ELECTRIC IMPROVEMENT FUND	1	0.00	187,306.25	(187,306.25)
		2	0.00	51,118.00	(51,118.00)
		3	794,162.21	28,366.25	765,795.96
		4	0.00	12,000.00	(12,000.00)
		5	0.00	41,900.00	(41,900.00)

Receipts, Disbursements, and Net Cash Flows

			FY Values		
			25		
Fund	Fund Description	Period	Receipts	Disbursements	Net Cash Flow
673	ELECTRIC IMPROVEMENT FUND	6	0.00	24,137.68	(24,137.68)
		7	1,398,143.94	72,014.27	1,326,129.67
	ELECTRIC IMPROVEMENT FUND Total		2,192,306.15	416,842.45	1,775,463.70
675	PUBLIC BENEFIT FUND	1	71,759.88	62,409.29	9,350.59
		2	85,072.17	66,096.49	18,975.68
		3	80,407.72	178,283.63	(97,875.91)
		4	79,298.21	75,615.65	3,682.56
		5	6,013.94	93,176.14	(87,162.20)
		6	0.00	61,591.49	(61,591.49)
		7	0.00	41,782.69	(41,782.69)
	PUBLIC BENEFIT FUND Total		322,551.92	578,955.38	(256,403.46)
678	07 ELEC REV BDS DEBT SVC	4	0.00	2,750.00	(2,750.00)
		5	0.00	476,771.88	(476,771.88)
	07 ELEC REV BDS DEBT SVC Total		0.00	479,521.88	(479,521.88)
680	WASTEWATER FUND	1	968,774.59	344,341.30	624,433.29
		2	750,090.75	494,907.51	255,183.24
		3	668,110.80	291,594.90	376,515.90
		4	1,297,810.78	271,412.59	1,026,398.19
		5	15,738.78	201,600.18	(185,861.40)
		6	159.24	366,726.07	(366,566.83)
		7	159.24	392,999.32	(392,840.08)
	WASTEWATER FUND Total		3,700,844.18	2,363,581.87	1,337,262.31
681	WASTEWATER CAP FACIL FUND	1	95,761.95	0.00	95,761.95
		2	0.00	12,413.68	(12,413.68)
		3	10,122.00	0.00	10,122.00
		4	0.00	39,350.13	(39,350.13)
		5	0.00	9,600.00	(9,600.00)
		6	0.00	35,401.19	(35,401.19)
		7	0.00	28,888.88	(28,888.88)
	WASTEWATER CAP FACIL FUND Total		105,883.95	125,653.88	(19,769.93)
682	WWTR TERTIARY FUND	1	63,485.67	0.00	63,485.67
		2	31,837.36	0.00	31,837.36
		3	29,622.54	0.00	29,622.54
		4	36,248.26	0.00	36,248.26
	WWTR TERTIARY FUND Total		161,193.83	0.00	161,193.83
683	BUA W/WATER CAP PROJ FUND	4	0.00	6,470.60	(6,470.60)
	BUA W/WATER CAP PROJ FUND Total		0.00	6,470.60	(6,470.60)
685	STATE REVOLVING LOAN FUND	1	1,464.60	0.00	1,464.60
	STATE REVOLVING LOAN FUND Total		1,464.60	0.00	1,464.60
689	BUA WASTEWATER-DEBT SERV	4	0.00	380,625.00	(380,625.00)
	BUA WASTEWATER-DEBT SERV Total		0.00	380,625.00	(380,625.00)
690	REFUSE FUND	1	531.64	22.96	508.68
		2	435.35	510.00	(74.65)
		3	436.33	40,859.79	(40,423.46)

Receipts, Disbursements, and Net Cash Flows

			FY Values		
			25		
Fund	Fund Description	Period	Receipts	Disbursements	Net Cash Flow
690	REFUSE FUND	4	185.69	2,150.52	(1,964.83)
		5	0.00	506.22	(506.22)
	REFUSE FUND Total		1,589.01	44,049.49	(42,460.48)
700	RISK MANAGEMENT FUND	1	114,127.23	7,955,759.87	(7,841,632.64)
		2	113,936.05	252,354.72	(138,260.23)
		3	120,546.21	143,862.57	(23,316.36)
		4	116,111.23	185,489.59	(69,378.36)
		5	171,275.82	116,075.82	55,200.00
		6	117,226.21	185,767.49	(68,541.28)
		7	120,699.13	224,914.60	(104,215.47)
	RISK MANAGEMENT FUND Total		873,921.88	9,064,224.66	(8,190,144.34)
702	FLEET MAINTENANCE FUND	1	1,128,392.43	59,734.56	1,068,657.87
		2	11,034.30	158,434.25	(147,399.95)
		3	55,614.02	170,889.57	(115,275.55)
		4	16,781.19	138,981.35	(122,200.16)
		5	20,243.42	137,224.47	(116,981.05)
		6	11,479.22	132,252.75	(120,773.53)
		7	22,302.32	153,054.04	(130,751.72)
	FLEET MAINTENANCE FUND Total		1,265,846.90	950,570.99	315,275.91
703	INFORMAT'N SYSTEMS SVC FD	1	0.00	1,412,742.75	(1,412,742.75)
		2	0.00	118,051.22	(118,051.22)
		3	0.00	154,189.85	(154,189.85)
		4	0.00	53,387.03	(53,387.03)
		5	0.00	71,067.95	(71,067.95)
		6	0.00	77,489.01	(77,489.01)
		7	240.00	62,833.50	(62,593.50)
	INFORMAT'N SYSTEMS SVC FD Total		240.00	1,949,761.31	(1,949,521.31)
704	BUILDING MAINTENANCE	1	765,860.57	4,453.61	761,406.96
		2	0.00	51,509.24	(51,509.24)
		3	480.00	149,968.59	(149,488.59)
		4	0.00	56,046.76	(56,046.76)
		5	0.00	95,380.63	(95,380.63)
		6	0.00	63,561.93	(63,561.93)
		7	0.00	101,844.61	(101,844.61)
	BUILDING MAINTENANCE Total		766,340.57	522,765.37	243,575.20
705	SUPPORT SERVICES	1	0.00	546,076.01	(546,076.01)
		2	5,000.00	175,258.70	(170,258.70)
		3	0.00	102,259.21	(102,259.21)
		4	0.00	67,667.99	(67,667.99)
		5	0.00	24,462.32	(24,462.32)
		6	0.00	124,656.63	(124,656.63)
		7	0.00	175,698.34	(175,698.34)
	SUPPORT SERVICES Total		5,000.00	1,216,079.20	(1,211,079.20)
761	UTL BILL, ACCT & COLL SVC	1	191,896.87	160,495.74	31,401.13

Receipts, Disbursements, and Net Cash Flows

			FY Values		
			25		
Fund	Fund Description	Period	Receipts	Disbursements	Net Cash Flow
761	UTL BILL, ACCT & COLL SVC	2	31,365.69	186,688.27	(155,322.58)
		3	31,003.72	157,830.39	(126,826.67)
		4	31,016.58	149,248.22	(118,231.64)
		5	463.51	205,427.02	(204,963.51)
		6	0.00	141,882.57	(141,882.57)
		7	0.00	152,755.85	(152,755.85)
	UTL BILL, ACCT & COLL SVC Total		285,746.37	1,154,328.06	(868,581.69)
805	REDEV OBLIGAT'N RETIRE FD	7	535,526.00	0.00	535,526.00
	REDEV OBLIGAT'N RETIRE FD Total		535,526.00	0.00	535,526.00
810	SA-LOW/MOD FUND	1	2,000,517.07	18,220.85	1,982,296.22
		2	1,000.00	30,703.76	(29,703.76)
		3	1,000.00	7,063.69	(6,063.69)
		4	971.88	48,623.41	(47,651.53)
		5	698.32	10,955.18	(10,256.86)
		6	500.00	32,536.41	(32,036.41)
		7	1,378.86	24,039.43	(22,660.57)
	SA-LOW/MOD FUND Total		2,006,066.13	172,142.73	1,833,923.40
830	SA-DEBT SERVICE FUND	2	0.00	1,779,195.76	(1,779,195.76)
		6	0.00	2,750.00	(2,750.00)
	SA-DEBT SERVICE FUND Total		0.00	1,781,945.76	(1,781,945.76)
840	BEA CAPITAL PROJECTS FUND	1	0.00	4,078,920.26	(4,078,920.26)
	BEA CAPITAL PROJECTS FUND Total		0.00	4,078,920.26	(4,078,920.26)
841	BEA L/M CAP PROJECTS FUND	1	545,659.53	0.00	545,659.53
	BEA L/M CAP PROJECTS FUND Total		545,659.53	0.00	545,659.53
975	INVESTMENT FUND	6	0.00	50,000.00	(50,000.00)
	INVESTMENT FUND Total		0.00	50,000.00	(50,000.00)
Grand Total			95,686,718.24	102,953,026.02	(7,265,722.10)

Payments Per Fund FY 2024-25

Sum of Tran Amt		FY
Fund	Period	25
001	1	7,778,217.83
	2	3,059,839.46
	3	4,209,086.32
	4	2,982,435.50
	5	3,772,867.16
	6	3,260,207.16
	7	3,702,101.21
001 Total		28,764,754.64
002	1	0.00
	2	29,837.85
	3	23,281.04
	4	17,148.37
	5	54,546.15
	6	8,098.67
	7	9,763.20
002 Total		142,675.28
100	1	12,731.49
	2	35,573.08
	3	16,521.70
	4	56,477.87
	5	58,914.37
	6	30,684.96
	7	23,921.89
100 Total		234,825.36
101	1	39,250.50
	2	14,759.75
	3	498,284.05
	4	72,259.03
	5	60,982.69
	6	19,750.54

Payments Per Fund FY 2024-25

Sum of Tran Amt		FY
Fund	Period	25
101	7	36,039.00
101 Total		741,325.56
102	1	0.00
	3	658,051.61
	4	9,434.67
	5	35,130.86
102 Total		702,617.14
111	1	8,605.55
	2	6,520.81
	3	7,689.67
	4	9,091.10
	5	7,304.60
	6	7,333.60
	7	6,517.60
111 Total		53,062.93
201	2	132.30
	3	143.28
	4	759.37
	5	1,565.83
	6	45.44
	7	26.97
201 Total		2,673.19
222	1	40,963.23
	2	13,267.92
	3	7,230.06
	4	76.92
	7	0.00
222 Total		61,538.13
375	1	4,740.86
	2	145,506.91

Payments Per Fund FY 2024-25

Sum of Tran Amt		FY
Fund	Period	25
375	3	782.20
	5	190.59
	6	873.30
375 Total		152,093.86
420	1	0.00
	2	40,899.23
	5	0.00
	6	128,938.00
420 Total		169,837.23
451	1	95,671.41
451 Total		95,671.41
600	1	8,283.09
	2	1,884.80
	3	148.11
	4	150.62
	5	33,186.62
	6	219.19
	7	135.90
600 Total		44,008.33
610	1	7,592.43
	2	72,948.46
	3	5,363.50
	4	3,077.35
	5	41,129.13
	6	2,220.58
	7	3,531.61
610 Total		135,863.06
660	1	394,571.42
	2	154,068.36
	3	154,675.37

Payments Per Fund FY 2024-25

Sum of Tran Amt		FY
Fund	Period	25
660	4	162,314.13
	5	171,454.11
	6	417,714.82
	7	86,061.27
660 Total		1,540,859.48
661	1	2,310.89
	2	0.00
	3	7,951.76
	4	2,293.44
	5	486.24
	6	2,106.79
661 Total		15,149.12
669	3	2,750.00
	4	1,612,031.26
669 Total		1,614,781.26
670	1	1,648,545.70
	2	3,136,400.44
	3	2,811,101.44
	4	2,934,228.25
	5	1,754,102.45
	6	1,719,014.16
	7	1,650,591.54
670 Total		15,653,983.98
673	1	2,800.00
	2	28,366.25
	3	4,970.00
	4	53,444.58
	5	67,265.19
	6	15,506.40
	7	16,542.18

Payments Per Fund FY 2024-25

Sum of Tran Amt		FY
Fund	Period	25
673 Total		188,894.60
675	1	2,332.96
	2	3,946.12
	3	120,614.63
	4	28,462.44
	5	74,487.39
	6	26,591.97
	7	8,490.54
675 Total		264,926.05
678	3	2,750.00
	5	476,771.88
678 Total		479,521.88
680	1	117,216.80
	2	136,812.75
	3	220,882.60
	4	125,455.04
	5	184,831.45
	6	201,604.72
	7	106,937.41
680 Total		1,093,740.77
681	1	0.00
	2	37,983.19
	3	28,095.13
	4	9,600.00
	5	8,673.00
	6	28,888.88
681 Total		113,240.20
689	1	0.00
	4	380,625.00
689 Total		380,625.00

Payments Per Fund FY 2024-25

Sum of Tran Amt		FY
Fund	Period	25
690	1	43,010.31
	2	0.00
	3	0.00
	4	506.22
690 Total		43,516.53
700	1	3,652,774.37
	2	132,829.15
	3	134,853.03
	4	150,447.48
	5	245,834.18
	6	111,814.55
	7	75,013.98
700 Total		4,503,566.74
702	1	100,274.69
	2	47,580.14
	3	77,464.49
	4	122,129.59
	5	101,669.12
	6	59,875.88
	7	52,002.70
702 Total		560,996.61
703	1	46,091.00
	2	122,344.60
	3	13,698.28
	4	16,607.82
	5	17,185.34
	6	26,845.14
	7	14,839.21
703 Total		257,611.39
704	1	58,336.80

Payments Per Fund FY 2024-25

Sum of Tran Amt		FY
Fund	Period	25
704	2	63,662.91
	3	46,514.38
	4	64,201.11
	5	36,679.51
	6	36,080.74
	7	16,974.86
704 Total		322,450.31
705	1	131,630.87
	2	110,581.81
	3	35,220.20
	4	26,764.48
	5	105,721.89
	6	184,294.39
	7	16,733.41
705 Total		610,947.05
761	1	24,810.28
	2	18,645.96
	3	15,913.96
	4	23,154.58
	5	41,904.71
	6	19,417.43
	7	15,257.60
761 Total		159,104.52
810	1	17,982.93
	2	8,981.91
	3	16,838.91
	4	49,648.70
	5	26,141.86
	6	12,420.95
	7	19,783.23

Payments Per Fund FY 2024-25

Sum of Tran Amt		FY
Fund	Period	25
810 Total		151,798.49
830	2	1,779,195.76
	4	2,750.00
830 Total		1,781,945.76
975	6	50,000.00
975 Total		50,000.00
Grand Total		61,088,605.86

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
72 HOUR LLC-NATIONAL AUTO FLT GRP	6900	1	0.00
		4	172,063.20
72 HOUR LLC-NATIONAL AUTO FLT GRP Total			172,063.20
A.C. PROPANE	8333	1	472.15
		6	393.82
A.C. PROPANE Total			865.97
ABBOTT, CELIA	7508	5	195.00
ABBOTT, CELIA Total			195.00
ACOM SOLUTIONS, INC	6497	1	5,371.00
		4	0.00
ACOM SOLUTIONS, INC Total			5,371.00
ADVANCED WORKPLACE STRATEGIES INC	4781	1	1,166.55
		2	272.18
		3	194.85
		4	129.90
ADVANCED WORKPLACE STRATEGIES INC Total			1,763.48
AED ENERGY SERVICES LLC	8694	1	0.00
		2	3,630.00
		3	2,115.00
		4	18,280.00
		5	15,517.50
		6	9,672.50
		7	7,830.00
AED ENERGY SERVICES LLC Total			57,045.00
AFFORDABLE BEE SERVICES	8766	1	650.00
AFFORDABLE BEE SERVICES Total			650.00
AHRENS, JOYCE	6435	7	333.94
AHRENS, JOYCE Total			333.94
AIRGAS USA, LLC	2454	5	272.82
AIRGAS USA, LLC Total			272.82
ALBERT A. WEBB ASSOCIATES	3065	1	40,331.89
		2	41,487.94
		3	34,025.43
		4	61,367.47
		5	19,734.99
		6	15,889.42

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
ALBERT A. WEBB ASSOCIATES Total			212,837.14
ALBRIGHT, DILLON	8505	6	312.00
ALBRIGHT, DILLON Total			312.00
ALBRIGHT, RANDI	8876	6	399.99
ALBRIGHT, RANDI Total			399.99
ALGIERS, LYNETTE	7977	7	282.37
ALGIERS, LYNETTE Total			282.37
ALIDIO, ROSANNE	8623	5	4,211.71
ALIDIO, ROSANNE Total			4,211.71
ALL AMERICAN SEWER TOOLS	8673	6	1,804.08
ALL AMERICAN SEWER TOOLS Total			1,804.08
ALL PHASE ELECTRIC SUPPLY	8635	5	30,499.39
ALL PHASE ELECTRIC SUPPLY Total			30,499.39
ALL STAR ELITE SPORTS	7098	1	175.81
		3	1,178.83
		4	466.86
		7	6,363.96
ALL STAR ELITE SPORTS Total			8,185.46
ALLDATA, LLC	5787	1	1,500.00
		3	0.00
ALLDATA, LLC Total			1,500.00
ALLGOOD DRIVING SCHOOL, INC	7979	1	109.20
		4	54.60
		5	54.60
		7	81.90
ALLGOOD DRIVING SCHOOL, INC Total			300.30
ALLIANT INSURANCE SERVICES, INC	6775	1	10,371.00
ALLIANT INSURANCE SERVICES, INC Total			10,371.00
ALTA LANGUAGE SERVICES INC	8714	1	198.00
		4	138.00
ALTA LANGUAGE SERVICES INC Total			336.00
ALTA PLANNING + DESIGN INC	8297	2	10,353.75
ALTA PLANNING + DESIGN INC Total			10,353.75
ALTAIR ENGINEERING INC	8311	1	23,165.00
ALTAIR ENGINEERING INC Total			23,165.00
ALTEC INDUSTRIES, INC.	1616	1	10,453.82

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
ALTEC INDUSTRIES, INC.	1616	4	1,858.56
		5	689.37
ALTEC INDUSTRIES, INC. Total			13,001.75
AMAZON BUSINESS	7468	1	8,591.77
		2	5,963.12
		3	4,872.82
		4	6,890.11
		5	8,185.68
		6	5,920.61
		7	4,484.47
AMAZON BUSINESS Total			44,908.58
AMERICAN FIDELITY ASSURANCE	8584	1	25,109.20
		2	24,826.60
		3	25,445.18
		4	25,334.92
		5	25,294.84
		6	25,294.84
	2295	1	7,554.16
		2	7,554.16
		3	7,100.00
		4	7,066.68
		5	7,601.38
		6	7,601.38
AMERICAN FIDELITY ASSURANCE Total			195,783.34
AMERICAN FORENSIC NURSES	4265	1	1,021.02
		2	1,021.02
		3	3,349.76
		4	1,174.17
		5	1,174.17
		7	4,029.49
AMERICAN FORENSIC NURSES Total			11,769.63
AMERICAN LEGAL PUBLISHING LLC	8808	2	6,855.00
AMERICAN LEGAL PUBLISHING LLC Total			6,855.00
AMERICAN WATER WORKS ASSN	910	5	336.00
AMERICAN WATER WORKS ASSN Total			336.00
AMPLIFUND	8636	5	17,500.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
AMPLIFUND	8636	6	0.00
AMPLIFUND Total			17,500.00
ANDERSON, DENNIS & LUCILLE	7161	7	181.37
ANDERSON, DENNIS & LUCILLE Total			181.37
ANDREWS, LORRAINE	7603	7	283.59
ANDREWS, LORRAINE Total			283.59
ANIXTER, INC	7048	1	3,496.38
		2	9,983.98
		3	1,098.64
		4	1,256.54
		5	168,826.89
		6	28,430.92
ANIXTER, INC Total			213,093.35
ARAGON GEOTECHNICAL, INC	6195	1	0.00
		5	4,356.25
ARAGON GEOTECHNICAL, INC Total			4,356.25
ARCE, PAUL	8331	3	84.00
		4	112.00
		5	112.00
		6	84.00
ARCE, PAUL Total			392.00
ARCH, SHANE	8879	6	1,600.00
ARCH, SHANE Total			1,600.00
ARIAS DE RAMIREZ, LEONILA	8509	5	195.00
ARIAS DE RAMIREZ, LEONILA Total			195.00
ASBURY ENVIRONMENTAL SERVICES DBA	6899	3	486.44
		4	743.48
		5	150.00
		6	1,841.82
		7	953.48
ASBURY ENVIRONMENTAL SERVICES DBA Total			4,175.22
ASSOCIATED BAG COMPANY	921	5	0.00
		6	1,812.41
ASSOCIATED BAG COMPANY Total			1,812.41
AT&T CALNET 2	6175	1	412.59
		2	661.67

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
AT&T CALNET 2	6175	3	655.72
		4	976.74
		5	980.72
		6	537.90
		7	1,439.74
AT&T CALNET 2 Total			5,665.08
AT&T MOBILITY LLC	8147	1	1,737.14
		2	3,044.34
		3	2,924.34
		4	3,264.34
		5	3,302.30
		6	3,317.30
		7	3,307.30
AT&T MOBILITY LLC Total			20,897.06
ATBACKGROUNDS	7667	2	462.30
		5	88.06
		6	88.06
ATBACKGROUNDS Total			638.42
ATWORK PERSONNEL SERVICES	7937	1	4,624.55
		2	7,871.15
		3	6,331.68
		4	12,114.55
		5	27,244.44
		6	21,950.49
		7	27,770.39
ATWORK PERSONNEL SERVICES Total			107,907.25
AUDELO, REBECCA	8515	5	390.00
AUDELO, REBECCA Total			390.00
AUER, WILLIAM	6942	1	621.00
AUER, WILLIAM Total			621.00
AURIGA CORPORATION	8259	1	2,800.00
		2	1,550.00
		3	2,200.00
		4	1,200.00
		5	1,400.00
		6	800.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
AURIGA CORPORATION Total			9,950.00
AUTO GLASS NOW	8602	3	769.66
AUTO GLASS NOW Total			769.66
AUTOMATED GATE SERVICES, INC.	3933	1	1,363.00
		2	2,099.00
		5	394.00
		6	1,419.00
		7	436.00
AUTOMATED GATE SERVICES, INC. Total			5,711.00
AVILA, CHRISTINA	6593	4	189.00
AVILA, CHRISTINA Total			189.00
AVILA, SOL	7121	5	579.00
		7	5,131.37
AVILA, SOL Total			5,710.37
AVILA, VINCENT	5872	4	1,256.06
AVILA, VINCENT Total			1,256.06
BABCOCK LABORATORIES, INC	6774	1	7,710.65
		2	5,836.25
		3	16,079.59
		4	7,474.15
		5	4,065.66
		6	14,793.49
		7	4,905.19
BABCOCK LABORATORIES, INC Total			60,864.98
BANNING CHAMBER OF COMMERCE	7632	3	7,380.00
BANNING CHAMBER OF COMMERCE Total			7,380.00
BANNING GLASS MIRROR & SCREEN	7101	4	233.78
		6	519.62
BANNING GLASS MIRROR & SCREEN Total			753.40
BANNING POLICE OFFICERS ASSOC.	7990	1	2,910.30
		2	2,860.30
		3	2,960.30
		4	2,960.30
		5	2,960.30
		6	2,910.30
BANNING POLICE OFFICERS ASSOC. Total			17,561.80

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
BANNING VETERINARY HOSPITAL	5297	1	1,065.75
		2	643.25
		3	1,124.77
		4	278.50
		5	904.85
		6	1,266.50
		7	1,410.00
BANNING VETERINARY HOSPITAL Total			6,693.62
BARR DOOR, INC	6710	2	4,124.39
		3	1,254.03
		4	15,048.15
		5	625.00
		7	750.00
BARR DOOR, INC Total			21,801.57
BARRINGTON, CINDY	8892	7	131.25
BARRINGTON, CINDY Total			131.25
BATDORF, JACQUELINE	8650	5	195.00
BATDORF, JACQUELINE Total			195.00
BEAUMONT BASIN WATERMASTER	4972	1	16,427.00
		3	3,164.89
		6	49,849.60
BEAUMONT BASIN WATERMASTER Total			69,441.49
BEAUMONT CHERRY VALLEY WATER	3674	1	2,402.74
		2	227.56
		3	378.51
		6	3,702.27
BEAUMONT CHERRY VALLEY WATER Total			6,711.08
BEAUMONT DO IT BEST HOME CENTER	6091	1	3,236.46
		2	1,784.43
		3	1,419.87
		4	2,275.14
		5	463.28
		6	1,328.45
		7	1,293.63
BEAUMONT DO IT BEST HOME CENTER Total			11,801.26
BEAUMONT SAFE & LOCK	951	1	273.72

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
BEAUMONT SAFE & LOCK	951	2	768.85
		4	248.77
		5	703.78
		6	195.84
		7	922.22
BEAUMONT SAFE & LOCK Total			3,113.18
BECERRA, ELADIO	6575	5	195.00
BECERRA, ELADIO Total			195.00
BENAVIDES, SUSIE	8773	4	239.71
		5	302.77
BENAVIDES, SUSIE Total			542.48
BENHAR, CHANDA	8722	4	99.00
BENHAR, CHANDA Total			99.00
BENHAR, DIANA T	7099	1	1,025.50
		2	626.50
		3	287.00
		4	479.50
		5	311.50
		6	252.00
		7	430.50
BENHAR, DIANA T Total			3,412.50
BENTLEY SYSTEMS, INC	8613	3	4,580.00
BENTLEY SYSTEMS, INC Total			4,580.00
BESS, WILLIAM & SANDRA	8912	7	17.94
BESS, WILLIAM & SANDRA Total			17.94
BIO-TOX LABORATORIES	2051	1	0.00
		2	2,224.00
		3	574.00
		4	1,348.00
		5	605.00
		6	945.00
		7	2,343.00
BIO-TOX LABORATORIES Total			8,039.00
BLACK & VEATCH CORPORATION	4726	1	11,145.00
BLACK & VEATCH CORPORATION Total			11,145.00
BLAIS & ASSOCIATES, LLC	7612	1	2,102.50

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
BLAIS & ASSOCIATES, LLC	7612	2	0.00
		3	1,292.50
		4	8,245.00
BLAIS & ASSOCIATES, LLC Total			11,640.00
BLAISDELL'S BUSINESS PRODUCTS	8271	1	0.00
		2	2,206.67
		5	2,206.66
BLAISDELL'S BUSINESS PRODUCTS Total			4,413.33
BLEIER, TODD	7816	5	315.00
BLEIER, TODD Total			315.00
BLOOMHUFF, NINA	5704	5	315.00
BLOOMHUFF, NINA Total			315.00
BLUEBEAM, INC	8338	4	2,340.00
		7	5,640.00
BLUEBEAM, INC Total			7,980.00
BLUMENFELD, PHILLIP & JOAN	7162	7	140.89
BLUMENFELD, PHILLIP & JOAN Total			140.89
BOESS, RICHARD	8842	4	1,800.00
BOESS, RICHARD Total			1,800.00
BOGARD, LINCOLN	8420	3	179.75
		4	285.48
		6	146.50
BOGARD, LINCOLN Total			611.73
BOIES, SANDRA DIANE	6748	5	195.00
BOIES, SANDRA DIANE Total			195.00
BOLIN, DIANA	7817	5	195.00
BOLIN, DIANA Total			195.00
BONICH, HECTOR	8846	4	513.36
BONICH, HECTOR Total			513.36
BOOTH, CATHY	7085	5	195.00
BOOTH, CATHY Total			195.00
BOSTON, LINDA	6362	5	195.00
BOSTON, LINDA Total			195.00
BOWEN, WAYNE	7875	7	205.81
BOWEN, WAYNE Total			205.81
BRAX COMPANY, INC	7901	3	0.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
BRAX COMPANY, INC	7901	5	18,116.25
BRAX COMPANY, INC Total			18,116.25
BRAY, ROBERT & RUTH	8913	7	669.40
BRAY, ROBERT & RUTH Total			669.40
BRIANT, HARRIET	7382	7	228.46
BRIANT, HARRIET Total			228.46
BUDD-FALEN LAW OFFICES, LLC.	7651	1	2,488.47
		3	3,640.00
		4	17,363.17
		5	4,864.34
		6	2,940.00
		7	9,876.31
BUDD-FALEN LAW OFFICES, LLC. Total			41,172.29
BUNCH, JAMES & BRENDA	6251	7	201.99
BUNCH, JAMES & BRENDA Total			201.99
BURKE, WILLIAMS & SORENSON LLP	3991	2	6,230.00
		3	4,692.50
		5	4,935.00
BURKE, WILLIAMS & SORENSON LLP Total			15,857.50
BURRIS, JEFFREY & VIRGINIA	8914	7	35.79
BURRIS, JEFFREY & VIRGINIA Total			35.79
BUSINESS TELECOMMUNICATION	6702	1	0.00
		2	533.06
BUSINESS TELECOMMUNICATION Total			533.06
CA. ST. BOARD OF EQUAL. - FUEL	2257	1	487.00
		4	626.00
		7	1,566.00
CA. ST. BOARD OF EQUAL. - FUEL Total			2,679.00
CA. ST. BOARD OF EQUALIZATION	3012	2	8,666.00
		4	285.00
		7	340.00
CA. ST. BOARD OF EQUALIZATION Total			9,291.00
CA. ST. DEPT. OF CONSERVATION	994	1	4,208.38
CA. ST. DEPT. OF CONSERVATION Total			4,208.38
CA. ST. DEPT. OF FISH AND WILDLIFE	4385	5	19,741.50
CA. ST. DEPT. OF FISH AND WILDLIFE Total			19,741.50

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
CA. ST. EMPLOYMENT DEV. DEPT.	985	1	164,376.47
		2	97,050.52
		3	106,529.95
		4	89,542.74
		5	99,212.04
		6	146,398.02
		7	95,062.60
CA. ST. EMPLOYMENT DEV. DEPT. Total			798,172.34
CA. ST. PUBLIC EMPLOYEES	997	1	4,674,291.88
		2	526,473.84
		3	681,279.02
		4	531,690.90
		5	526,744.60
		6	504,056.47
		7	527,244.81
CA. ST. PUBLIC EMPLOYEES Total			7,971,781.52
CABALLERO, DANIEL	7051	2	869.55
CABALLERO, DANIEL Total			869.55
CALACT	3726	7	840.00
CALACT Total			840.00
CALIFORNIA DEPT OF TAX AND FEE ADMN	1756	3	17,578.00
		6	10,422.00
CALIFORNIA DEPT OF TAX AND FEE ADMN Total			28,000.00
CALIFORNIA LAW ENFORCE ASSN	3780	1	1,056.00
		2	1,120.00
		3	1,088.00
		4	1,152.00
		5	1,152.00
		6	1,088.00
		7	1,088.00
CALIFORNIA LAW ENFORCE ASSN Total			7,744.00
CALIFORNIA MUNICIPAL STATISTICS	6811	4	550.00
CALIFORNIA MUNICIPAL STATISTICS Total			550.00
CALIFORNIA PARK & REC SOCIETY	989	3	855.00
CALIFORNIA PARK & REC SOCIETY Total			855.00
CALIFORNIA PEACE OFFICERS' ASSN	1585	4	700.00

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Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
CALIFORNIA PEACE OFFICERS' ASSN Total			700.00
CALIFORNIA WATER EFFICIENCY PARTNER	8749	7	3,581.50
CALIFORNIA WATER EFFICIENCY PARTNER Total			3,581.50
CALIFORNIA WATER ENVIRONMENT	4042	2	572.00
		5	239.00
		6	478.00
		7	239.00
CALIFORNIA WATER ENVIRONMENT Total			1,528.00
CALIFORNIA, STATE OF	992	2	10,632.00
		5	9,730.00
CALIFORNIA, STATE OF Total			20,362.00
CAMPA, ERIC	7287	1	851.00
		3	259.00
		6	42.00
CAMPA, ERIC Total			1,152.00
CAMPBELL, DUSTIN	8894	6	76.50
CAMPBELL, DUSTIN Total			76.50
CAMPBELL, GABRIELLE	8895	6	321.10
CAMPBELL, GABRIELLE Total			321.10
CAMPBELL, SANDRA	8833	4	1,800.00
CAMPBELL, SANDRA Total			1,800.00
CANALES, SILVERIO	7796	5	195.00
CANALES, SILVERIO Total			195.00
CANO, ALONDRA	8800	5	195.00
CANO, ALONDRA Total			195.00
CANON FINANCIAL SERVICES, INC	7078	1	2,053.53
		2	2,244.85
		3	2,052.86
		4	2,244.11
		5	2,373.70
		6	2,106.02
		7	2,010.77
CANON FINANCIAL SERVICES, INC Total			15,085.84
CAPITAL REALTY ANALYSTS, INC	7260	1	0.00
		2	10,300.00
CAPITAL REALTY ANALYSTS, INC Total			10,300.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
CAPPO	8112	6	435.00
CAPPO Total			435.00
CARRANZA, CORY	7163	7	172.44
CARRANZA, CORY Total			172.44
CASC ENGINEERING AND CONSULTING INC	6874	1	1,011.25
		2	16,700.25
		3	4,531.50
		4	2,867.50
		5	2,532.00
		6	5,517.50
		7	0.00
CASC ENGINEERING AND CONSULTING INC Total			33,160.00
CASTILLO, ASHLEY	8477	7	154.25
CASTILLO, ASHLEY Total			154.25
CASTILLO, JORGE IVAN	8078	1	287.39
CASTILLO, JORGE IVAN Total			287.39
CASTRO, DAVID	8488	2	250.00
CASTRO, DAVID Total			250.00
CDW GOVERNMENT, LLC	4253	1	(371.74)
		2	25,534.68
		3	1,424.67
		4	3,931.77
		5	2,398.55
		6	14,328.95
		7	5,205.17
CDW GOVERNMENT, LLC Total			52,452.05
CELL BUSINESS EQUIP-LEASING	7561	1	2,082.04
		2	1,699.58
		3	821.50
		4	3,001.45
		5	844.10
		6	108.73
		7	844.10
CELL BUSINESS EQUIP-LEASING Total			9,401.50
CELL BUSINESS EQUIPMENT (CBE)	7033	1	2,072.90
		2	1,104.14

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
CELL BUSINESS EQUIPMENT (CBE)	7033	3	1,146.05
		4	1,830.45
		5	974.36
		6	2,795.89
		7	422.72
CELL BUSINESS EQUIPMENT (CBE) Total			10,346.51
CENTER ELECTRIC SERVICES, INC	5307	1	3,499.77
		5	515.44
CENTER ELECTRIC SERVICES, INC Total			4,015.21
CENTRAL TAX-EXEMPT INVESTMENTS	8814	1	95,671.41
CENTRAL TAX-EXEMPT INVESTMENTS Total			95,671.41
CHANDLER ASSET MANAGEMENT INC	8471	1	0.00
		2	2,062.39
		3	2,091.93
		4	2,104.00
		5	2,100.76
		6	2,095.30
		7	2,115.53
CHANDLER ASSET MANAGEMENT INC Total			12,569.91
CHAPAROSA, ANDREW	8915	7	192.46
CHAPAROSA, ANDREW Total			192.46
CHARTER COMMUNICATIONS	8150	1	2,737.70
		2	2,541.74
		3	2,541.74
		4	2,549.20
		5	2,549.20
		6	2,549.20
		7	2,547.20
CHARTER COMMUNICATIONS Total			18,015.98
CI SOLUTIONS	5838	2	995.00
		6	1,627.71
		7	119.61
CI SOLUTIONS Total			2,742.32
CICCS	8578	1	1,051.67
		2	1,108.23
		3	1,129.75

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
CICCS	8578	4	1,136.33
		5	1,256.26
		6	1,114.54
		7	90.03
CICCS Total			6,886.81
CINTAS CORPORATION	7061	1	3,817.71
		2	5,510.34
		3	3,989.65
		4	6,102.81
		5	5,088.98
		6	3,970.62
		7	3,810.38
CINTAS CORPORATION Total			32,290.49
CITY OF BANNING (BNG)	8274	1	964.23
		2	964.23
		3	964.23
		4	964.23
		5	964.23
		6	964.23
		7	964.23
CITY OF BANNING (BNG) Total			6,749.61
CITY OF BANNING UTILITIES OPV	7992	1	1,651.14
		2	2,255.77
		3	2,109.24
		4	1,481.16
		6	1,080.14
CITY OF BANNING UTILITIES OPV Total			8,577.45
CIVICPLUS	5418	1	31,203.88
		2	0.00
		3	4,500.00
CIVICPLUS Total			35,703.88
CLA-VAL	2125	1	0.00
		2	19,737.66
		3	12,950.81
		4	10,671.60
CLA-VAL Total			43,360.07

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
CLAYTON, NETA	8798	5	195.00
CLAYTON, NETA Total			195.00
CM LANDSCAPE	8756	1	6,731.25
		2	7,515.20
		4	14,816.80
CM LANDSCAPE Total			29,063.25
COASTAL BOILER WORKS INC	8606	1	3,636.86
		5	4,205.52
		6	0.00
COASTAL BOILER WORKS INC Total			7,842.38
CODE 3 TECHNOLOGY	8812	2	0.00
		3	11,118.87
		4	0.00
		5	33,805.67
CODE 3 TECHNOLOGY Total			44,924.54
COLLATZ, ED	7748	7	79.56
COLLATZ, ED Total			79.56
COMCATE SOFTWARE, INC	6863	1	11,263.97
COMCATE SOFTWARE, INC Total			11,263.97
COMDIRECT, INC	6464	1	6,880.00
		2	0.00
COMDIRECT, INC Total			6,880.00
COMMISSO, DOMINICK	7827	7	326.10
COMMISSO, DOMINICK Total			326.10
CONCENTRA MEDICAL CENTERS	8153	1	967.00
		2	690.00
		3	532.00
		4	251.00
		5	286.00
		6	918.00
		7	512.00
CONCENTRA MEDICAL CENTERS Total			4,156.00
CONSOLIDATED ELECTRICAL	120	2	679.12
		3	210.65
		4	421.30
		5	63.03

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
CONSOLIDATED ELECTRICAL Total			1,374.10
COOPERATIVE PERSONNEL SVCS.	1022	4	1,595.00
COOPERATIVE PERSONNEL SVCS. Total			1,595.00
CORE & MAIN, LP	7772	1	5,236.66
		2	2,541.83
		3	1,574.88
		4	10,474.26
		5	10,569.74
		6	8,177.81
		7	2,994.79
CORE & MAIN, LP Total			41,569.97
CORNELL, JOE	8380	5	195.00
CORNELL, JOE Total			195.00
CORNERSTONE DEVELOPMENT CO.	8000	1	0.00
		2	8,310.00
		3	2,770.00
CORNERSTONE DEVELOPMENT CO. Total			11,080.00
CORNETT, DARRELL & DEBORAH	8916	7	311.78
CORNETT, DARRELL & DEBORAH Total			311.78
CORPORATION SERVICE COMPANY	8102	1	318.00
		2	201.00
		3	56.00
		4	217.00
		5	21.00
		6	82.00
		7	477.00
CORPORATION SERVICE COMPANY Total			1,372.00
CORTEZ-JASSO, VICTOR	7036	2	250.00
CORTEZ-JASSO, VICTOR Total			250.00
COUNSELING TEAM INTERNATIONAL, THE	2232	1	1,560.00
		2	910.00
		3	910.00
		4	1,462.50
		5	910.00
		6	910.00
COUNSELING TEAM INTERNATIONAL, THE Total			6,662.50

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
COUTS HEATING & COOLING, INC	5345	1	7,444.34
		2	10,250.29
		3	10,080.76
		4	22,968.00
		5	4,618.43
		6	1,635.81
		7	1,100.00
COUTS HEATING & COOLING, INC Total			58,097.63
CRABTREE, JEFFREY	7626	5	195.00
CRABTREE, JEFFREY Total			195.00
CRAFCO INC	3061	2	1,008.13
		6	1,008.13
CRAFCO INC Total			2,016.26
CRAIN, MARK	8385	5	195.00
CRAIN, MARK Total			195.00
CTC TECHNOLOGY AND ENERGY	8661	1	0.00
		2	18,506.25
		4	40,700.00
		5	12,593.10
CTC TECHNOLOGY AND ENERGY Total			71,799.35
CUMMINS SALES AND SERVICE	4047	5	840.00
CUMMINS SALES AND SERVICE Total			840.00
CUSTOM TROPHIES & UNEEK AWARDS	7774	1	78.65
		3	1,115.21
		4	875.46
		5	0.00
		6	2,325.77
		7	14.54
CUSTOM TROPHIES & UNEEK AWARDS Total			4,409.63
CYBERTIME NETWORK COMMUNICATIONS	6189	1	2,599.00
		2	2,599.00
		3	2,599.00
		4	2,599.00
		5	3,099.00
		6	2,599.00
		7	2,599.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
CYBERTIME NETWORK COMMUNICATIONS Total			18,693.00
D&M JOB INC.	7696	1	350.19
		3	1,327.77
		4	280.15
		5	417.90
		6	134.31
		7	960.06
D&M JOB INC. Total			3,470.38
DANIEL R HOUSER INC	8220	6	750.00
DANIEL R HOUSER INC Total			750.00
DATUIN JR, CORNELIO	5335	6	146.50
DATUIN JR, CORNELIO Total			146.50
DAVIS, LORRAINE	8856	5	2,000.00
DAVIS, LORRAINE Total			2,000.00
DAVIS, RANDOLYN	6983	5	195.00
DAVIS, RANDOLYN Total			195.00
DBT TRANSPORTATION SERVICES, LLC	7950	1	7,000.00
DBT TRANSPORTATION SERVICES, LLC Total			7,000.00
DE LA HOYA, JUAN	8651	5	357.50
DE LA HOYA, JUAN Total			357.50
DEGRAVE COMMUNICATIONS INC	8789	4	2,145.00
		5	3,647.98
DEGRAVE COMMUNICATIONS INC Total			5,792.98
DELTA DENTAL INSURANCE COMPANY	8123	1	814.89
		2	885.61
		3	902.51
		4	894.06
		5	984.24
		6	924.12
DELTA DENTAL INSURANCE COMPANY Total			5,405.43
DELTA DENTAL OF CALIFORNIA	8108	1	7,581.00
		2	7,530.86
		3	7,522.62
		4	7,360.13
		5	8,065.07
		6	7,699.03

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
DELTA DENTAL OF CALIFORNIA Total			45,758.71
DEUSENBERRY, DANIEL	7070	1	15.75
		2	16.50
		3	16.50
		4	16.50
		6	42.00
DEUSENBERRY, DANIEL Total			107.25
DEWALT, RICK	8663	5	195.00
DEWALT, RICK Total			195.00
DEWETT, TOM & LORAY	6255	7	167.06
DEWETT, TOM & LORAY Total			167.06
DEWITT, STEVE	8857	4	1,600.00
DEWITT, STEVE Total			1,600.00
DIAMOND ENVIRONMENTAL SERVICES	6517	1	1,509.58
		2	641.78
		3	707.14
		4	883.64
		5	427.64
		7	165.40
DIAMOND ENVIRONMENTAL SERVICES Total			4,335.18
DIAMOND HILLS CHEVROLET BUICK GMC	7082	1	54,005.38
		3	239.95
		5	341.68
		7	820.27
DIAMOND HILLS CHEVROLET BUICK GMC Total			55,407.28
DJ TONY	8597	2	450.00
		4	200.00
		5	250.00
		6	300.00
DJ TONY Total			1,200.00
DJORDJEVIC, BARBARA $ SVETOLIK	8917	7	654.24
DJORDJEVIC, BARBARA $ SVETOLIK Total			654.24
DLT SOLUTIONS, LLC	5302	1	1,910.56
DLT SOLUTIONS, LLC Total			1,910.56
DOBBINS, DEANN LOUISE	7512	1	218.40
		2	193.20

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Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
DOBBINS, DEANN LOUISE	7512	3	98.00
		4	417.50
		5	116.20
		6	138.60
		7	61.60
DOBBINS, DEANN LOUISE Total			1,243.50
DUDEK	7112	1	0.00
		2	2,565.45
		3	31,301.59
		5	2,926.12
		6	28,017.00
		7	3,271.50
DUDEK Total			68,081.66
DUKE'S ROOT CONTROL INC	5820	5	25,000.00
DUKE'S ROOT CONTROL INC Total			25,000.00
E.R. BLOCK PLUMBING	7839	1	0.00
		4	0.00
		5	350.00
		6	12,450.00
		7	15,075.00
E.R. BLOCK PLUMBING Total			27,875.00
ECCLESTON, CHARLES	7359	7	219.08
ECCLESTON, CHARLES Total			219.08
ECCLESTONE, CHERYL	7195	5	195.00
ECCLESTONE, CHERYL Total			195.00
ECS IMAGING , INC	4275	1	26,450.00
		2	0.00
ECS IMAGING , INC Total			26,450.00
EFS WEST INC	8599	1	0.00
		2	70,309.50
		5	36,091.26
		6	0.00
		7	0.00
EFS WEST INC Total			106,400.76
EICHEL, GEORGE	8848	4	1,500.00
EICHEL, GEORGE Total			1,500.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
EIDE BAILLY LLP	8531	1	4,304.00
		2	60,677.31
		3	6,976.24
		4	4,928.95
		5	52,230.85
		6	4,464.20
		7	18,893.63
EIDE BAILLY LLP Total			152,475.18
EKBERG, STEVEN	8905	7	1,800.00
EKBERG, STEVEN Total			1,800.00
ELECTRIC POWER SYSTEMS INT, INC.	7380	1	0.00
		3	0.00
		4	3,499.80
		6	0.00
ELECTRIC POWER SYSTEMS INT, INC. Total			3,499.80
ELECTROMARK COMPANY	1479	4	2,820.96
ELECTROMARK COMPANY Total			2,820.96
ELITE FIRE PROTECTION, INC	7775	2	505.00
		4	2,914.38
ELITE FIRE PROTECTION, INC Total			3,419.38
ELLIOTT, PATRICIA	8144	5	195.00
ELLIOTT, PATRICIA Total			195.00
ELLIS, LINDA & CHRISTOPHER	6953	7	223.31
ELLIS, LINDA & CHRISTOPHER Total			223.31
EMPOWER ANNUITY INSURANCE COMPANY	8702	1	97,374.58
		2	149,280.53
		3	95,370.38
		4	89,972.41
		5	114,703.32
		6	120,011.01
		7	158,353.14
EMPOWER ANNUITY INSURANCE COMPANY Total			825,065.37
ENGINEERING RESOURCES OF SO CA	7565	1	0.00
		2	135,214.15
		3	106,427.83
		4	116,199.20

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
ENGINEERING RESOURCES OF SO CA	7565	5	135,822.59
		6	89,316.73
ENGINEERING RESOURCES OF SO CA Total			582,980.50
ENGINEERING SOLUTIONS SERVICES INC	8746	1	0.00
		4	4,848.00
		5	27,131.00
		6	2,400.00
ENGINEERING SOLUTIONS SERVICES INC Total			34,379.00
ENTERPRISE FM TRUST	7536	1	42,629.56
		2	24,629.89
		3	23,365.40
		4	23,550.32
		5	29,069.25
		6	43,612.70
		7	39,304.28
ENTERPRISE FM TRUST Total			226,161.40
ENTERPRISE RENT-A-CAR	2753	1	190.70
		2	266.71
		3	141.77
		4	513.40
		6	384.15
		7	271.54
ENTERPRISE RENT-A-CAR Total			1,768.27
ESPITIA, ARTURO	8520	5	250.00
ESPITIA, ARTURO Total			250.00
ESRI, INC.	3683	7	1,400.00
ESRI, INC. Total			1,400.00
ESTERSON, LORI	7969	5	195.00
ESTERSON, LORI Total			195.00
ETHIER, GREG	8302	5	195.00
ETHIER, GREG Total			195.00
EXECUTIVE FACILTIES SERVICES INC	8518	1	17,835.81
		2	17,840.06
		3	17,838.80
		4	17,838.89
		5	17,838.22

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
EXECUTIVE FACILTIES SERVICES INC	8518	6	17,838.89
EXECUTIVE FACILTIES SERVICES INC Total			107,030.67
FALCON, ESTHER	7130	5	32.50
FALCON, ESTHER Total			32.50
FALTO, CONSTANCE	7102	5	195.00
FALTO, CONSTANCE Total			195.00
FAST LUBE & TUNE	6794	1	1,211.02
		2	63.16
		3	369.93
		4	351.81
		5	49.99
		7	141.49
FAST LUBE & TUNE Total			2,187.40
FEDEX	1078	1	43.07
		6	84.76
		7	6.78
FEDEX Total			134.61
FERGUSON ENTERPRISES LLC #1089	8822	1	35.89
		3	0.00
FERGUSON ENTERPRISES LLC #1089 Total			35.89
FERRELLGAS LP	1081	1	705.45
		4	65.00
		5	568.69
		6	1,050.97
FERRELLGAS LP Total			2,390.11
FIKSE, LEON & HARRIET	7599	7	20.49
FIKSE, LEON & HARRIET Total			20.49
FINLEY ENGINEERING CO INC	8823	4	8,044.78
		5	22,772.70
		6	14,706.40
FINLEY ENGINEERING CO INC Total			45,523.88
FIRST AMERICAN TITLE COMPANY	8468	2	40,563.23
FIRST AMERICAN TITLE COMPANY Total			40,563.23
FIRST TWO INC	8759	2	3,600.00
FIRST TWO INC Total			3,600.00
FISHER, ROBERT	2544	4	102.55

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
FISHER, ROBERT Total			102.55
FISHER, SHARON	7361	7	174.65
FISHER, SHARON Total			174.65
FLAGSTAR PUBLIC FUNDING CORP	8820	3	95,274.81
FLAGSTAR PUBLIC FUNDING CORP Total			95,274.81
FLETCHER, CORAL	8535	5	195.00
FLETCHER, CORAL Total			195.00
FLETCHER, TERRI	5651	5	195.00
FLETCHER, TERRI Total			195.00
FLINT, AUSTIN	8451	3	250.00
FLINT, AUSTIN Total			250.00
FLORES, IRMA	8803	5	195.00
FLORES, IRMA Total			195.00
FLOYD SR, ERNEST	6978	7	1,801.00
FLOYD SR, ERNEST Total			1,801.00
FLYNN, SHERI	7486	1	74.67
		4	246.58
		6	15.08
		7	781.40
FLYNN, SHERI Total			1,117.73
FOSTER & FOSTER CONSULTING	8370	1	0.00
		2	0.00
		5	16,500.00
FOSTER & FOSTER CONSULTING Total			16,500.00
FOSTER, SCOTT	6062	4	65.19
FOSTER, SCOTT Total			65.19
FRANCO AVILA, JUAN	8791	4	250.00
FRANCO AVILA, JUAN Total			250.00
FRANKLIN, DEBBIE	1096	5	500.00
FRANKLIN, DEBBIE Total			500.00
FRONTIER COMMUNICATIONS	7053	1	6,016.67
		2	5,979.96
		3	6,167.99
		4	6,280.49
		5	6,569.23
		6	6,761.34

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
FRONTIER COMMUNICATIONS	7053	7	5,945.50
FRONTIER COMMUNICATIONS Total			43,721.18
FRUGIUELE, EDWARD & LESLIE	7861	7	241.03
FRUGIUELE, EDWARD & LESLIE Total			241.03
FUENTES, RAMON	8224	4	634.17
FUENTES, RAMON Total			634.17
FUN EXPRESS	7117	2	265.82
		3	1,735.42
		4	177.48
		5	486.54
FUN EXPRESS Total			2,665.26
G & G ENVIRONMENTAL COMPLIANCE, INC	5602	1	0.00
		2	2,271.90
G & G ENVIRONMENTAL COMPLIANCE, INC Total			2,271.90
GALVAN, MANUEL & NANCY	8918	7	184.52
GALVAN, MANUEL & NANCY Total			184.52
GAMBILL, JOHN	8402	7	32.61
GAMBILL, JOHN Total			32.61
GAMETIME	8784	1	0.00
		2	1,384.38
GAMETIME Total			1,384.38
GARDA CL WEST INC	2589	1	1,371.03
		2	1,295.83
		3	1,310.81
		4	1,333.77
		5	1,381.79
		6	1,481.53
		7	1,271.32
GARDA CL WEST INC Total			9,446.08
GAS COMPANY, THE	1375	1	1,980.70
		2	1,549.45
		3	1,949.11
		4	1,058.69
		5	1,978.92
		6	3,192.84
		7	3,768.54

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
GAS COMPANY, THE Total			15,478.25
GASSMAN, VICTOR	8844	4	1,200.00
GASSMAN, VICTOR Total			1,200.00
GEELAN, CHRIS	7363	7	191.66
GEELAN, CHRIS Total			191.66
GERBER COLLISION & GLASS	8666	3	11,131.55
		6	0.00
GERBER COLLISION & GLASS Total			11,131.55
GERDES, PERRY	5309	6	300.00
GERDES, PERRY Total			300.00
GLICKMAN, SANDRA	7168	7	91.20
GLICKMAN, SANDRA Total			91.20
GOLDEN STAR TECHNOLOGY, INC	7912	4	0.00
		5	4,400.20
GOLDEN STAR TECHNOLOGY, INC Total			4,400.20
GONZALEZ, MARIA	8664	5	390.00
GONZALEZ, MARIA Total			390.00
GONZALEZ, OSCAR & MARIA	7598	7	178.79
GONZALEZ, OSCAR & MARIA Total			178.79
GORBETT, LINDA	8838	4	1,600.00
GORBETT, LINDA Total			1,600.00
GOVINVEST,INC	7927	1	38,349.00
		2	0.00
GOVINVEST,INC Total			38,349.00
GRAINGER	448	1	1,592.70
		2	1,228.27
		3	1,473.01
		4	2,053.35
		5	1,465.04
		6	1,237.77
		7	1,685.27
GRAINGER Total			10,735.41
GRANAT, CARMELLA R	8870	5	2,400.00
GRANAT, CARMELLA R Total			2,400.00
GRANICUS LLC	8524	1	0.00
		3	43,605.89

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
GRANICUS LLC	8524	5	0.00
GRANICUS LLC Total			43,605.89
GRAYBAR ELECTRIC COMPANY, INC.	203	1	2,844.60
		2	379.61
		5	1,648.83
GRAYBAR ELECTRIC COMPANY, INC. Total			4,873.04
GREAT WESTERN RECREATION LLC	8185	4	51.43
		7	678.37
GREAT WESTERN RECREATION LLC Total			729.80
GREEN DREAM INTERNATIONAL LLC	8536	2	711.71
		3	1,030.86
GREEN DREAM INTERNATIONAL LLC Total			1,742.57
GREYBAR PRINTING	2470	7	536.09
GREYBAR PRINTING Total			536.09
GUZMAN, SUSANA	7288	5	195.00
GUZMAN, SUSANA Total			195.00
H&L CHARTER CO, INC	6308	1	0.00
		2	3,770.00
		3	1,346.75
		4	1,570.00
		7	1,570.00
H&L CHARTER CO, INC Total			8,256.75
HAAKER EQUIPMENT COMPANY	205	3	851.09
		5	3,008.74
HAAKER EQUIPMENT COMPANY Total			3,859.83
HAAS & WILKERSON, INC	7759	1	6,404.00
HAAS & WILKERSON, INC Total			6,404.00
HAGEN, JOHN	7883	7	162.05
HAGEN, JOHN Total			162.05
HAHN, MICHAEL	7263	2	229.50
HAHN, MICHAEL Total			229.50
HALDIMAN, RENEE	8889	6	3,000.00
HALDIMAN, RENEE Total			3,000.00
HALLOCK, DENNIS	6232	5	195.00
HALLOCK, DENNIS Total			195.00
HALVERSON, ALEC	8793	2	99.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
HALVERSON, ALEC Total			99.00
HAMPTON, PATRICIA	5391	5	390.00
HAMPTON, PATRICIA Total			390.00
HARDEE, TIMOTHY	8665	5	195.00
HARDEE, TIMOTHY Total			195.00
HARDY & HARPER, INC	6817	1	25,500.75
HARDY & HARPER, INC Total			25,500.75
HARGROVE, JOHN	7777	1	16.76
		4	250.00
HARGROVE, JOHN Total			266.76
HARRIS, ANNE	8796	5	65.00
HARRIS, ANNE Total			65.00
HASENPFLUG, RICK	6259	7	214.67
HASENPFLUG, RICK Total			214.67
HASKELL REAL ESTATE INC	8712	2	2,200.00
HASKELL REAL ESTATE INC Total			2,200.00
HAWLEY, CAMERON	5553	7	732.61
HAWLEY, CAMERON Total			732.61
HAZEN AND SAWYER	6977	1	1,190.75
		3	2,160.00
		5	11,387.50
HAZEN AND SAWYER Total			14,738.25
HCN BANK	8662	1	0.00
		6	50,000.00
HCN BANK Total			50,000.00
HDL COREN & CONE	2920	1	4,568.75
		2	0.00
		4	3,873.75
		7	4,000.00
HDL COREN & CONE Total			12,442.50
HEIDT, ANGELO	8706	2	101.10
HEIDT, ANGELO Total			101.10
HEISS, SUZANNA	7987	5	195.00
HEISS, SUZANNA Total			195.00
HEMET VALLEY TOOL, INC	7766	1	544.75
		2	95.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
HEMET VALLEY TOOL, INC	7766	5	82.63
		7	637.15
HEMET VALLEY TOOL, INC Total			1,359.53
HERC RENTALS INC.	6746	3	872.54
		4	869.29
HERC RENTALS INC. Total			1,741.83
HERNANDEZ, CARLA	7557	1	70.00
		2	875.00
		3	665.00
		4	913.50
		5	910.00
		6	1,190.00
		7	1,022.00
HERNANDEZ, CARLA Total			5,645.50
HERNANDEZ, JOSUE	8821	5	99.00
HERNANDEZ, JOSUE Total			99.00
HERNANDEZ, LATHISHA LOPEZ	8850	4	231.00
HERNANDEZ, LATHISHA LOPEZ Total			231.00
HERRERA, ANDRES	8809	2	1,800.00
HERRERA, ANDRES Total			1,800.00
HERRERA, SANDRA	8036	5	195.00
HERRERA, SANDRA Total			195.00
HINDERLITER DE LLAMAS & ASSOCIATES	2370	1	0.00
		2	1,439.80
		3	0.00
		5	1,393.08
HINDERLITER DE LLAMAS & ASSOCIATES Total			2,832.88
HOME DEPOT #8987	5365	1	2,063.23
		2	2,402.15
		3	3,148.53
		4	2,765.76
		5	2,663.81
		6	2,360.38
		7	2,786.28
HOME DEPOT #8987 Total			18,190.14
HOPKINS, VICKI	7624	5	195.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
HOPKINS, VICKI Total			195.00
HOVIVIAN, AUSTIN	8908	6	4,445.00
HOVIVIAN, AUSTIN Total			4,445.00
HUERTA JR., GILBERT	7697	1	420.00
		2	542.50
		3	437.50
		4	612.50
		5	577.50
		6	455.00
		7	420.00
HUERTA JR., GILBERT Total			3,465.00
HUERTA LOPEZ, TUNNIA A	8736	1	245.00
		2	280.00
		3	490.00
		4	280.00
		5	385.00
		6	385.00
		7	210.00
HUERTA LOPEZ, TUNNIA A Total			2,275.00
HYDROTEX PARTNERS, LTD	6448	3	1,451.07
HYDROTEX PARTNERS, LTD Total			1,451.07
I.B.E.W. LOCAL 47	1146	1	10,960.34
		2	10,576.65
		3	10,501.65
		4	10,508.12
		5	10,346.42
		6	10,281.46
I.B.E.W. LOCAL 47 Total			63,174.64
I.B.E.W. LOCAL 47 (PAC)	4086	1	40.00
		2	48.00
		3	48.00
		4	48.00
		5	48.00
		6	48.00
I.B.E.W. LOCAL 47 (PAC) Total			280.00
IBEW LOCAL 47 RETIREE MEDICAL TRUST	5217	1	6,094.03

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
IBEW LOCAL 47 RETIREE MEDICAL TRUST	5217	2	5,941.92
		3	5,866.36
		4	5,822.58
		5	8,661.87
		6	5,820.89
		7	6,131.72
IBEW LOCAL 47 RETIREE MEDICAL TRUST Total			44,339.37
IGM TECHNOLOGY CORP	8692	5	0.00
		6	45,150.00
IGM TECHNOLOGY CORP Total			45,150.00
IMEG CONSULTANTS CORP	8667	1	4,150.50
		3	12,177.39
		4	3,519.90
		6	1,932.50
		7	6,688.61
IMEG CONSULTANTS CORP Total			28,468.90
IML NORTH AMERICA	7530	5	421.58
IML NORTH AMERICA Total			421.58
IMPERIAL SUPPLIES, LLC	7970	2	113.22
		3	243.03
		6	159.68
IMPERIAL SUPPLIES, LLC Total			515.93
INDEPENDENT REVIEW INVESTIGATIONS	8761	1	6,796.92
		2	4,692.80
		3	9,415.80
		4	9,122.15
		5	3,918.25
		6	2,895.02
		7	3,835.72
INDEPENDENT REVIEW INVESTIGATIONS Total			40,676.66
INFOSEND, INC	6490	1	9,905.07
		2	11,159.96
		3	7,748.14
		4	7,619.38
		5	5,955.58
		6	3,178.51

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
INFOSEND, INC	6490	7	2,980.74
INFOSEND, INC Total			48,547.38
INLAND EMPIRE MAGAZINE	8898	7	895.00
INLAND EMPIRE MAGAZINE Total			895.00
INNER-TITE CORP	3748	1	2,918.80
INNER-TITE CORP Total			2,918.80
INNOVATIVE EMERGENCY EQUIPMENT	7066	2	0.00
		3	4,734.74
		4	82.43
INNOVATIVE EMERGENCY EQUIPMENT Total			4,817.17
INNOVATIVE FEDERAL STRATEGIES	6624	1	4,750.00
		2	4,750.00
		3	4,750.00
		4	4,750.00
		5	4,750.00
		6	4,750.00
		7	4,750.00
INNOVATIVE FEDERAL STRATEGIES Total			33,250.00
INTEGRITY ARBORIST & ECOSCAPE INC	8754	1	25,564.50
		2	35,656.50
		5	64,258.00
INTEGRITY ARBORIST & ECOSCAPE INC Total			125,479.00
INTERNAL REVENUE SERVICE	2484	1	853,218.69
		2	516,288.80
		3	540,651.25
		4	455,603.44
		5	485,970.61
		6	668,441.70
		7	521,869.52
INTERNAL REVENUE SERVICE Total			4,042,044.01
IRON MOUNTAIN INFORMATION MGMT, LLC	6816	1	141.66
		2	98.31
		3	197.48
		4	98.32
		6	193.29
IRON MOUNTAIN INFORMATION MGMT, LLC Total			729.06

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
ITRON, INC.	2483	1	41,611.50
		2	0.00
ITRON, INC. Total			41,611.50
JACKSON, JENNIFER	7746	1	300.00
JACKSON, JENNIFER Total			300.00
JACKSON, NYLIA	8851	4	294.00
JACKSON, NYLIA Total			294.00
JACOBS, GAVIN	8852	4	357.00
JACOBS, GAVIN Total			357.00
JAUREGUI, ROBERTO	7122	3	16.50
		4	16.50
JAUREGUI, ROBERTO Total			33.00
JAVOR, GEORG & SHIRLEY	7597	7	40.17
JAVOR, GEORG & SHIRLEY Total			40.17
JEREMY D WEINSTEIN	8819	2	1,995.00
		4	332.50
JEREMY D WEINSTEIN Total			2,327.50
JEWS, NICOLE	8232	3	478.71
		4	410.43
		5	114.00
		7	92.75
JEWS, NICOLE Total			1,095.89
JNE POLYGRAPH LLC	8039	1	850.00
		2	1,700.00
		5	425.00
JNE POLYGRAPH LLC Total			2,975.00
JOE A GONSALVES & SON	5701	1	3,850.00
		2	3,850.00
		3	3,850.00
		4	3,850.00
		5	3,850.00
		6	3,850.00
		7	3,850.00
JOE A GONSALVES & SON Total			26,950.00
JON'S FLAGS & POLES, INC	7776	1	348.00
JON'S FLAGS & POLES, INC Total			348.00

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Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
KAKISH, BISHARA	8195	5	195.00
KAKISH, BISHARA Total			195.00
KEITH KILMER	7884	4	9,547.64
KEITH KILMER Total			9,547.64
KEMIRA WATER SOLUTIONS INC	5794	6	4,819.74
KEMIRA WATER SOLUTIONS INC Total			4,819.74
KEN GRODY FORD REDLANDS	7850	1	6,773.36
		2	55.17
		4	1,308.29
		5	9,149.68
		7	6,948.99
KEN GRODY FORD REDLANDS Total			24,235.49
KIMLEY-HORN AND ASSOCIATES, INC	8101	1	10,027.50
		2	31,837.50
		3	35,612.50
		4	13,562.50
		6	20,841.75
KIMLEY-HORN AND ASSOCIATES, INC Total			111,881.75
KOBES, JOHN & ROSEMARIE	7595	7	175.18
KOBES, JOHN & ROSEMARIE Total			175.18
KOLLER, MARIE	7103	1	21.00
		2	8.40
		4	21.00
		5	205.50
		6	4.20
		7	18.90
KOLLER, MARIE Total			279.00
KOSMONT & ASSOCIATES, INC	5781	1	0.00
		4	1,728.76
		5	1,730.64
KOSMONT & ASSOCIATES, INC Total			3,459.40
KV'S FLOORING	7709	5	1,693.61
KV'S FLOORING Total			1,693.61
LAND ENGINEERING CONSULTANTS, INC	6632	1	0.00
		4	1,000.00
LAND ENGINEERING CONSULTANTS, INC Total			1,000.00

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Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
LARA, TORIBIO	6856	5	195.00
LARA, TORIBIO Total			195.00
LASKO, ROBERT	7259	4	250.00
LASKO, ROBERT Total			250.00
LEADSONLINE, LLC.	8011	1	3,886.00
LEADSONLINE, LLC. Total			3,886.00
LEAGUE OF CA CITIES-RIVERSIDE DIV	2426	7	14,898.00
LEAGUE OF CA CITIES-RIVERSIDE DIV Total			14,898.00
LEIGHTRONIX INC	8614	4	5,376.00
LEIGHTRONIX INC Total			5,376.00
LEVEL II, INC	1670	1	27,812.00
		2	0.00
LEVEL II, INC Total			27,812.00
LEWIN, DEBORAH	8827	3	2,400.00
LEWIN, DEBORAH Total			2,400.00
LEXIPOL LLC	7046	1	7,999.20
		2	0.00
LEXIPOL LLC Total			7,999.20
LEXISNEXIS RISK SOLUTIONS	6618	1	7,783.43
		2	112.55
		3	112.55
		4	112.55
		5	112.55
		6	112.55
		7	112.55
LEXISNEXIS RISK SOLUTIONS Total			8,458.73
LIEBERT CASSIDY WHITMORE	4249	1	45,953.37
		2	43,741.78
		3	38,919.78
		4	64,612.05
		5	46,018.00
		6	49,463.90
LIEBERT CASSIDY WHITMORE Total			288,708.88
LIEVANOS, MANUEL	8652	5	390.00
LIEVANOS, MANUEL Total			390.00
LINCOLN FINANCIAL GROUP	8577	1	10,940.66

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
LINCOLN FINANCIAL GROUP	8577	2	11,646.37
		3	11,432.30
		4	10,552.96
		5	11,117.56
		6	11,656.16
		7	11,335.37
LINCOLN FINANCIAL GROUP Total			78,681.38
LINN-FURY, CAROL	8878	5	162.50
LINN-FURY, CAROL Total			162.50
LOFTIS, MILDRED	6345	5	195.00
LOFTIS, MILDRED Total			195.00
LOPEZ, ALFONSO	7939	2	250.00
LOPEZ, ALFONSO Total			250.00
LOPEZ, JOSEPH	8849	4	336.00
LOPEZ, JOSEPH Total			336.00
LOPEZ, MARISOL	8279	3	140.06
		4	587.24
		6	80.00
LOPEZ, MARISOL Total			807.30
LOY, JOYCE	8919	7	1,104.87
LOY, JOYCE Total			1,104.87
LOZANO SMITH LLP	7550	3	5,425.00
		4	350.00
		5	1,570.50
		6	875.00
LOZANO SMITH LLP Total			8,220.50
MACDONALD, DOUGLAS	7119	5	195.00
MACDONALD, DOUGLAS Total			195.00
MACIAS, RUBEN	6813	4	250.00
MACIAS, RUBEN Total			250.00
MACIEL, JOSE	6330	5	195.00
MACIEL, JOSE Total			195.00
MAHAN, JOHN & APRIL	8920	7	984.98
MAHAN, JOHN & APRIL Total			984.98
MAINSTREAM UNLIMITED	8845	4	1,233.05
		5	0.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
MAINSTREAM UNLIMITED Total			1,233.05
MARIACHI COACHELLA LLC	8816	2	3,900.00
MARIACHI COACHELLA LLC Total			3,900.00
MARIPOSA LANDSCAPES, INC	8055	1	90,037.28
		2	44,838.66
		3	28,846.86
		4	33,763.75
		5	33,005.49
		6	34,878.86
		7	28,846.86
MARIPOSA LANDSCAPES, INC Total			294,217.76
MARTINEZ, ROBERT	8723	4	307.50
		5	258.71
MARTINEZ, ROBERT Total			566.21
MASON, BARBARA	8498	1	158.16
		3	193.92
MASON, BARBARA Total			352.08
MASTEN, STAR	7104	5	195.00
MASTEN, STAR Total			195.00
MATA, ELISIA	8921	7	382.72
MATA, ELISIA Total			382.72
MC ARRON, SUSAN	7962	5	195.00
MC ARRON, SUSAN Total			195.00
MC AVOY & MARKHAM	287	2	4,015.00
		3	20,990.78
		6	14,273.73
		7	41,264.80
MC AVOY & MARKHAM Total			80,544.31
MC CALL'S METER SALES	1757	2	1,403.79
		3	743.28
		4	50.00
		5	300.00
		6	300.00
MC CALL'S METER SALES Total			2,797.07
MCCLEAN, DOROTHY	8825	3	1,500.00
MCCLEAN, DOROTHY Total			1,500.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
MCFARLAND, DARLENE	7489	5	195.00
MCFARLAND, DARLENE Total			195.00
MEGATRONICS INTERNATIONAL CORP	4043	4	2,995.00
		5	0.00
MEGATRONICS INTERNATIONAL CORP Total			2,995.00
MEINICKE, ALAN	6697	7	6.46
MEINICKE, ALAN Total			6.46
MELLEBY, MARY ANN	8922	7	47.63
MELLEBY, MARY ANN Total			47.63
MENDEZ, JUAN & VARGAS, VICTORIA	8923	7	265.68
MENDEZ, JUAN & VARGAS, VICTORIA Total			265.68
MENDOZA, ROSALIA & DAVID	8924	7	25.71
MENDOZA, ROSALIA & DAVID Total			25.71
MENDOZA, SAMUEL	8340	6	21.00
		7	0.00
MENDOZA, SAMUEL Total			21.00
MERAS, DAVID	8797	5	195.00
MERAS, DAVID Total			195.00
MERCFUEL, INC	7980	5	32,853.59
MERCFUEL, INC Total			32,853.59
MERLIN JOHNSON CONSTRUCTION, INC	3577	1	0.00
		2	981.24
		4	1,594.52
		5	1,962.48
		6	1,962.48
MERLIN JOHNSON CONSTRUCTION, INC Total			6,500.72
MESSERER, ELIZABETH & RAY	8832	4	1,800.00
MESSERER, ELIZABETH & RAY Total			1,800.00
MEZA, TOMMY & GLORIA	7126	5	195.00
MEZA, TOMMY & GLORIA Total			195.00
MGT OF AMERICA CONSULTING, LLC	7693	1	0.00
		2	0.00
		4	3,780.00
		6	2,500.00
MGT OF AMERICA CONSULTING, LLC Total			6,280.00
MICHAEL BAKER INTERNATIONAL, INC	7379	1	0.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
MICHAEL BAKER INTERNATIONAL, INC	7379	2	6,257.50
		3	4,282.50
		5	1,710.00
MICHAEL BAKER INTERNATIONAL, INC Total			12,250.00
MIDDLETON, SHARON	7458	5	195.00
MIDDLETON, SHARON Total			195.00
MILLER, LARRY & BARBARA	6262	7	165.50
MILLER, LARRY & BARBARA Total			165.50
MILLER, LEROY	8891	7	131.25
MILLER, LEROY Total			131.25
MILLER, NINA	6344	5	195.00
MILLER, NINA Total			195.00
MILSOFT UTILITY SOLUTIONS, INC	7548	1	10,900.00
		2	5,129.00
		3	5,129.00
		4	5,129.00
		5	18,819.48
		6	12,085.99
		7	9,450.00
MILSOFT UTILITY SOLUTIONS, INC Total			66,642.47
MISC VENDOR	99001	1	2,713.48
		2	4,710.91
		3	4,208.86
		4	12,229.92
		6	100.00
		7	400.00
MISC VENDOR Total			24,363.17
MITSUBISHI ELECTRIC & ELECTRONICS	6402	1	353.87
		2	353.87
		3	353.87
		4	353.87
		5	353.87
		6	353.87
		7	353.87
MITSUBISHI ELECTRIC & ELECTRONICS Total			2,477.09
MIXON, FRANKLEN	8493	1	17.25

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
MIXON, FRANKLEN	8493	3	16.50
		4	16.50
MIXON, FRANKLEN Total			50.25
MODEL 1 COMMERCIAL VEHICLES	3412	3	2,115.73
		4	4,141.40
		7	443.50
MODEL 1 COMMERCIAL VEHICLES Total			6,700.63
MOLINA, JUANA	8513	5	195.00
MOLINA, JUANA Total			195.00
MOODY, TERRY & SANDRA	6440	7	15.54
MOODY, TERRY & SANDRA Total			15.54
MORENO, ANGELA	6741	5	195.00
MORENO, ANGELA Total			195.00
MORENO, MELBA	8801	5	195.00
MORENO, MELBA Total			195.00
MORGAN, DEIDRA J	7406	3	31.50
		4	157.50
		5	189.00
		6	157.50
		7	126.00
MORGAN, DEIDRA J Total			661.50
MORGAN, MIKECOE	8806	2	94.50
MORGAN, MIKECOE Total			94.50
MOTOROLA SOLUTIONS, INC.	1250	1	0.00
		3	9,345.16
MOTOROLA SOLUTIONS, INC. Total			9,345.16
MSW CONSULTANTS	8750	2	0.00
		3	3,650.00
MSW CONSULTANTS Total			3,650.00
MUNICIPAL CODE CORPORATION	6013	4	0.00
		6	7,696.75
MUNICIPAL CODE CORPORATION Total			7,696.75
MUNOZ, MARIBEL	6370	2	88.67
		3	192.39
		4	14.34
		7	264.99

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
MUNOZ, MARIBEL Total			560.39
MUNOZ, RENE	7564	3	16.50
MUNOZ, RENE Total			16.50
MY COI LLC	8322	1	1,600.00
		2	800.00
		3	800.00
		5	8,400.00
		7	0.00
MY COI LLC Total			11,600.00
MYERING, NEAL	8301	5	195.00
MYERING, NEAL Total			195.00
MYERS & SONS HI-WAY SAFETY INC.	3909	1	3,899.44
		3	2,313.07
		5	1,564.25
		6	2,370.45
		7	889.39
MYERS & SONS HI-WAY SAFETY INC. Total			11,036.60
N2W ENGINEERING, INC	8001	1	0.00
		2	36,406.88
		3	39,107.88
		4	24,817.50
		5	46,988.99
		6	18,184.38
		7	12,053.75
N2W ENGINEERING, INC Total			177,559.38
NADING, JOHN	8835	4	3,000.00
NADING, JOHN Total			3,000.00
NAPA AUTO PARTS	7805	1	6.99
		2	277.30
		4	161.50
		7	159.94
NAPA AUTO PARTS Total			605.73
NEARMAP US INC	8748	2	12,000.00
		4	0.00
NEARMAP US INC Total			12,000.00
NEW GEN STRATEGIES AND SOLUTIONS	8854	5	0.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
NEW GEN STRATEGIES AND SOLUTIONS	8854	7	16,542.18
NEW GEN STRATEGIES AND SOLUTIONS Total			16,542.18
NEXTREQUEST	7519	1	7,019.55
NEXTREQUEST Total			7,019.55
NHA ADVISORS, LLC	8350	1	2,231.25
		2	10,175.00
		3	11,462.50
		4	12,181.25
		5	10,150.00
NHA ADVISORS, LLC Total			46,200.00
NIELSON, KATHLEEN & CLYDE	8925	7	243.63
NIELSON, KATHLEEN & CLYDE Total			243.63
NIELSON, SVEND & MARIA	8926	7	295.51
NIELSON, SVEND & MARIA Total			295.51
NIETO, FRANCISCO	7563	3	55.00
		4	16.50
		5	32.25
NIETO, FRANCISCO Total			103.75
NIGP	8460	7	395.00
NIGP Total			395.00
NORTHWEST INDUSTRIAL ENGINE	8618	2	0.00
		5	18,809.67
NORTHWEST INDUSTRIAL ENGINE Total			18,809.67
NOTTINGHAM, MICHAEL	7032	4	288.75
NOTTINGHAM, MICHAEL Total			288.75
NUNEZ, FIDEL	8837	4	2,400.00
NUNEZ, FIDEL Total			2,400.00
OERTEL, ERICH	5811	1	17.25
		3	684.21
		4	505.01
		5	21.00
		6	21.00
OERTEL, ERICH Total			1,248.47
ONESOURCE DISTRIBUTORS	5076	1	5,779.07
		2	22,739.56
		3	3,687.21

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
ONESOURCE DISTRIBUTORS	5076	4	202,791.76
		5	5,834.67
		6	2,548.12
ONESOURCE DISTRIBUTORS Total			243,380.39
ONLINE INFORMATION SERVICES	7435	1	822.71
		2	529.92
		4	912.88
		5	428.68
		6	641.90
		7	476.13
ONLINE INFORMATION SERVICES Total			3,812.22
OPENGOV, INC	7618	3	999.00
		6	96,369.00
		7	0.00
OPENGOV, INC Total			97,368.00
ORACLE AMERICA INC	8458	1	40,963.23
		2	13,267.92
		3	24,778.56
		4	76.92
		6	17,548.50
		7	0.00
ORACLE AMERICA INC Total			96,635.13
ORANGE COUNTY WINWATER WORKS	4434	6	1,373.37
		7	401.20
ORANGE COUNTY WINWATER WORKS Total			1,774.57
ORAVECZ-SMALL, PATTY	8933	7	177.61
ORAVECZ-SMALL, PATTY Total			177.61
O'REILLY AUTO PARTS	4076	1	451.44
		2	24.85
		3	701.02
		6	251.96
		7	153.01
O'REILLY AUTO PARTS Total			1,582.28
P&P UNIFORMS	6764	3	673.37
		4	19.38
		5	277.96

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
P&P UNIFORMS Total			970.71
PACKHAM & TOOMEY, INC	7787	1	260.00
		2	260.00
		3	1,639.43
		4	260.00
		5	260.00
		6	1,110.00
PACKHAM & TOOMEY, INC Total			3,789.43
PAREDES, GUADALUPE	8927	7	357.28
PAREDES, GUADALUPE Total			357.28
PARKHOUSE TIRE, INC.	2487	1	5,119.05
		2	2,386.54
		3	4,832.09
		4	7,688.77
		5	6,854.19
		6	1,713.70
		7	1,610.60
PARKHOUSE TIRE, INC. Total			30,204.94
PARLET'S JEWELRY & LOAN	7377	7	154.56
PARLET'S JEWELRY & LOAN Total			154.56
PARR, GERALDINE	8872	6	2,400.00
PARR, GERALDINE Total			2,400.00
PARS	5191	1	4,910.37
		2	3,564.59
		3	951.64
		4	707.39
		5	891.45
		6	697.63
		7	1,022.32
PARS Total			12,745.39
PARTS AUTHORITY	7789	1	2,791.23
		2	2,865.79
		3	2,224.55
		4	3,798.81
		5	1,225.64
		6	2,030.23

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
PARTS AUTHORITY	7789	7	3,873.98
PARTS AUTHORITY Total			18,810.23
PASS EDA	1591	4	150.00
		5	75.00
PASS EDA Total			225.00
PATINO, JORGE	8094	5	195.00
PATINO, JORGE Total			195.00
PATTON, CAROLINE	8138	3	164.63
		4	135.37
PATTON, CAROLINE Total			300.00
PAYPRO ADMINISTRATORS	5752	1	171.00
		3	115.00
		4	115.00
		5	115.00
		6	171.00
		7	115.00
PAYPRO ADMINISTRATORS Total			802.00
PERRY, SONJA	8929	7	168.46
PERRY, SONJA Total			168.46
PETRUCCI, TERESA	8111	5	195.00
PETRUCCI, TERESA Total			195.00
PETTY CASH CUSTODIAN-COMM SVCS	1974	5	56.78
PETTY CASH CUSTODIAN-COMM SVCS Total			56.78
PETTY CASH CUSTODIAN-SR CENTER	3015	6	69.11
PETTY CASH CUSTODIAN-SR CENTER Total			69.11
PINNACLE PETROMLEUM INC	8787	2	26,954.93
		3	29,416.89
		4	56,367.83
		5	24,277.86
		6	23,517.41
		7	20,678.56
PINNACLE PETROMLEUM INC Total			181,213.48
PIONEER AMERICAS LLC	8386	1	0.00
		2	6,678.25
		3	6,783.92
		5	6,424.38

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
PIONEER AMERICAS LLC	8386	7	5,799.41
PIONEER AMERICAS LLC Total			25,685.96
PIPPENGER HOLDINGS INC	8911	7	1,800.00
PIPPENGER HOLDINGS INC Total			1,800.00
PITSIKOS, DINO & AYDEE	8931	7	413.86
PITSIKOS, DINO & AYDEE Total			413.86
PITTMAN, DAVID	7506	5	195.00
PITTMAN, DAVID Total			195.00
PLATT, JEFFREY	8481	4	198.32
		5	(110.01)
		7	(88.00)
PLATT, JEFFREY Total			0.31
PLAYHOUSE BOWL ASSOCIATION, INC.	3560	1	12,500.00
PLAYHOUSE BOWL ASSOCIATION, INC. Total			12,500.00
POULTER, HANNAH	8226	1	17.25
		2	459.00
		3	459.00
		4	1,374.25
		5	49.50
POULTER, HANNAH Total			2,359.00
PRATT, DEREK	8901	5	32.50
PRATT, DEREK Total			32.50
PRATT, FRANCIS & JUDITH	6266	7	197.60
PRATT, FRANCIS & JUDITH Total			197.60
PRE-PAID LEGAL SERVICES, INC	4411	1	313.91
		2	297.96
		3	272.06
		4	423.51
		5	397.61
		6	381.66
PRE-PAID LEGAL SERVICES, INC Total			2,086.71
PRESCOTT, KEVIN	8324	1	17.25
		4	631.50
PRESCOTT, KEVIN Total			648.75
PRESS-ENTERPRISE, THE	1295	1	126.17
		2	915.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
PRESS-ENTERPRISE, THE	1295	3	136.77
		4	804.74
		6	630.87
PRESS-ENTERPRISE, THE Total			2,613.55
PRITCHARD, RESHAY	8834	4	1,800.00
PRITCHARD, RESHAY Total			1,800.00
PRUITT, CARMEN	8293	5	195.00
PRUITT, CARMEN Total			195.00
PUBLIC AGENCY RETIREMENT SERVICES	5242	3	300.00
		4	300.00
		5	300.00
		6	300.00
		7	300.00
PUBLIC AGENCY RETIREMENT SERVICES Total			1,500.00
PUBLIC ENTITY RISK MANAGEMENT	978	1	3,593,240.00
		5	71,387.00
		7	241.00
PUBLIC ENTITY RISK MANAGEMENT Total			3,664,868.00
PULVER, JODEANE V	8168	1	248.50
		2	189.00
		3	255.50
		4	206.50
		5	154.00
		6	136.50
		7	178.50
PULVER, JODEANE V Total			1,368.50
QT POD	8674	1	0.00
		2	1,195.00
QT POD Total			1,195.00
QUADIENT LEASING USA, INC	6694	1	0.00
		2	521.66
		4	0.00
		5	0.00
		6	940.04
QUADIENT LEASING USA, INC Total			1,461.70
QUADIENT POSTAGE FUNDING	8211	1	5,000.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
QUADIENT POSTAGE FUNDING	8211	2	(5,000.00)
		3	1,030.00
		4	1,000.00
		5	1,000.00
QUADIENT POSTAGE FUNDING Total			3,030.00
QUINN COMPANY	7271	6	403.30
QUINN COMPANY Total			403.30
R&R ROOFING & WATERPROOFING INC	8747	1	0.00
		2	8,667.00
R&R ROOFING & WATERPROOFING INC Total			8,667.00
R.F. MACDONALD CO	6655	6	1,597.49
R.F. MACDONALD CO Total			1,597.49
RACEWAY FORD INC	4759	1	90.30
		3	7.72
		4	2,076.79
		5	787.58
		6	4,609.48
		7	28.05
RACEWAY FORD INC Total			7,599.92
RAILROAD MANAGEMENT CO, LLC	4536	1	1,409.34
RAILROAD MANAGEMENT CO, LLC Total			1,409.34
REAVIS CODE UTILITY SOLUTIONS, LLC	7648	1	51,300.00
REAVIS CODE UTILITY SOLUTIONS, LLC Total			51,300.00
RECORD GAZETTE, THE	1555	1	368.58
	8813	5	900.00
RECORD GAZETTE, THE Total			1,268.58
RED HAWK SERVICES	7290	1	103,216.48
		3	0.00
RED HAWK SERVICES Total			103,216.48
REZENDES, DILLON	8243	2	379.50
		5	4,363.05
		6	33.00
REZENDES, DILLON Total			4,775.55
RICHARD HEATH & ASSOCIATES INC	8763	1	0.00
		4	460.65
RICHARD HEATH & ASSOCIATES INC Total			460.65

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
RICHARDS WATSON GERSHON	7337	2	74,006.79
		3	94,130.90
		4	81,654.78
		5	127,825.34
		6	59,036.76
		7	63,084.20
RICHARDS WATSON GERSHON Total			499,738.77
RICK ENGINEERING COMPANY	8632	1	0.00
		2	5,975.39
		3	23,574.55
		4	7,519.20
		5	4,925.90
		7	754.78
RICK ENGINEERING COMPANY Total			42,749.82
RILEY, ANTHONY	8615	1	86.64
RILEY, ANTHONY Total			86.64
RINALDI, LORETTA	5424	5	195.00
RINALDI, LORETTA Total			195.00
RINCON CONSULTANTS, INC.	8003	1	0.00
		2	2,896.50
		4	733.25
RINCON CONSULTANTS, INC. Total			3,629.75
RIOS, MARIA FRANCISCO	8802	5	195.00
RIOS, MARIA FRANCISCO Total			195.00
RISCHARD, ROBERT	8512	5	195.00
RISCHARD, ROBERT Total			195.00
RIV CO OFFICE OF ECONOMIC DEV	8695	7	4,000.00
RIV CO OFFICE OF ECONOMIC DEV Total			4,000.00
RIV. CO. DEPT OF ENVIRONMENTAL	3097	3	1,922.23
RIV. CO. DEPT OF ENVIRONMENTAL Total			1,922.23
RIV. CO. DIV. OF WEIGHTS & MEASURES	1612	5	148.20
RIV. CO. DIV. OF WEIGHTS & MEASURES Total			148.20
RIV. CO. FIRE DEPARTMENT	1643	3	907,198.19
		7	939,499.35
RIV. CO. FIRE DEPARTMENT Total			1,846,697.54
RIV. CO. HEALTH SVCS AGENCY	2526	2	366.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
RIV. CO. HEALTH SVCS AGENCY Total			366.00
RIV. CO. SHERIFF'S DEPARTMENT	1642	1	31,250.00
RIV. CO. SHERIFF'S DEPARTMENT Total			31,250.00
RIV. CO. TLMA ADMINISTRATION	1329	2	10,000.00
RIV. CO. TLMA ADMINISTRATION Total			10,000.00
RIVERA, KATHLEEN	7529	5	195.00
RIVERA, KATHLEEN Total			195.00
RIVERSIDE COUNTY SHERIFF-PSEC	2938	3	5,157.40
		4	5,768.44
		5	6,699.80
		6	6,699.80
RIVERSIDE COUNTY SHERIFF-PSEC Total			24,325.44
RIVERSIDE PUBLIC UTILITIES	4433	1	1,472,841.79
		2	3,054,511.61
		3	2,701,396.14
		4	2,672,505.19
		5	1,543,484.04
		6	1,618,208.66
		7	1,565,002.49
RIVERSIDE PUBLIC UTILITIES Total			14,627,949.92
RIVERSIDE UNIVERSITY HEALTH SYSTEM	7998	3	2,400.00
RIVERSIDE UNIVERSITY HEALTH SYSTEM Total			2,400.00
RIVERSIDE, COUNTY OF	1317	3	147.00
		6	245.00
	1319	1	8,481.25
RIVERSIDE, COUNTY OF Total			8,873.25
ROADWAY ASSET SERVICES LLC	8758	1	0.00
		5	24,930.07
		6	14,015.04
		7	36,039.00
ROADWAY ASSET SERVICES LLC Total			74,984.11
ROBERT HALF INTERNATIONAL	5151	1	15,493.00
		2	(21.74)
ROBERT HALF INTERNATIONAL Total			15,471.26
ROBINSON, BRANDON A	6532	3	154.94
ROBINSON, BRANDON A Total			154.94

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
ROBINSON, CHRISTINE	8877	5	260.00
ROBINSON, CHRISTINE Total			260.00
ROCHA, JUAN JOSE	8930	7	203.88
ROCHA, JUAN JOSE Total			203.88
ROCHA, MARGARET	8511	5	195.00
ROCHA, MARGARET Total			195.00
ROCKWELL, AMBER	6071	4	71.25
ROCKWELL, AMBER Total			71.25
RODRIGUEZ, MANUEL	8794	3	55.00
		7	3,678.93
RODRIGUEZ, MANUEL Total			3,733.93
RODRIGUEZ, MONIQUE	8762	2	99.00
		6	33.00
RODRIGUEZ, MONIQUE Total			132.00
RODRIGUEZ, SANDRA	8655	5	195.00
RODRIGUEZ, SANDRA Total			195.00
ROEBUCK, ALYSSA	8086	2	193.50
		3	33.00
		4	16.50
		5	15.75
		7	792.50
ROEBUCK, ALYSSA Total			1,051.25
RON TURLEY ASSOCIATES INC	1341	1	7,200.00
		2	0.00
RON TURLEY ASSOCIATES INC Total			7,200.00
ROSSETTI, ANTHONY	8874	5	224.00
ROSSETTI, ANTHONY Total			224.00
ROSSOVICH, EDMUND & DIANE	7028	7	211.61
ROSSOVICH, EDMUND & DIANE Total			211.61
ROWLEY, KATHLEEN	7590	7	109.18
ROWLEY, KATHLEEN Total			109.18
ROYCE, RICHARD	8893	7	131.25
ROYCE, RICHARD Total			131.25
RUBIO, SERGIO	7983	3	296.00
RUBIO, SERGIO Total			296.00
RUELAS, ELIAS	7006	3	150.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
RUELAS, ELIAS Total			150.00
RUFFIN, STEPHEN	6268	7	247.55
RUFFIN, STEPHEN Total			247.55
RWC GROUP	8456	5	170.02
		6	301.57
		7	323.77
RWC GROUP Total			795.36
SAN BERNARDINO CO TAX COLLECTOR	3762	4	1,620.86
SAN BERNARDINO CO TAX COLLECTOR Total			1,620.86
SAN BERNARDINO PUBLIC EMPLOYEES	5998	1	2,769.17
		2	2,721.23
		3	2,527.57
		4	2,371.89
		5	2,363.37
		6	2,498.86
SAN BERNARDINO PUBLIC EMPLOYEES Total			15,252.09
SAN GORGONIO PASS WATER AGENCY	3125	6	199,500.00
SAN GORGONIO PASS WATER AGENCY Total			199,500.00
SANCHEZ, ALBERTO	8024	4	232.08
SANCHEZ, ALBERTO Total			232.08
SANTA ANA WATERSHED PROJ AUTHORITY	6965	1	28,484.21
SANTA ANA WATERSHED PROJ AUTHORITY Total			28,484.21
SATELLITE PHONE STORE	8235	1	307.95
		2	307.95
		3	307.95
		4	307.95
		5	307.95
		7	307.95
SATELLITE PHONE STORE Total			1,847.70
SC FUELS	7727	1	54,632.56
		2	592.00
		3	4,908.49
		6	5,007.30
SC FUELS Total			65,140.35
SCA OF CA, LLC	8231	1	0.00
		4	11,919.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
SCA OF CA, LLC	8231	5	11,559.00
		6	12,159.00
		7	11,559.00
SCA OF CA, LLC Total			47,196.00
SCCI, INC DBA	5336	1	500.00
		2	500.00
		3	250.00
		4	250.00
		5	500.00
		6	500.00
		7	250.00
SCCI, INC DBA Total			2,750.00
SCOTT, CHASTITY	8828	4	94.15
SCOTT, CHASTITY Total			94.15
SCPPA	8626	1	299.00
		2	14,365.40
		3	114,495.44
		4	347.54
		5	48,267.40
		6	23,701.50
		7	4,116.10
SCPPA Total			205,592.38
SERVIAM BY WRIGHT LLP	7131	2	19,946.13
		3	9,773.39
		4	9,968.88
		5	14,938.24
		6	9,627.56
		7	16,371.98
SERVIAM BY WRIGHT LLP Total			80,626.18
SFPP, LLC	8871	5	0.00
		6	128,938.00
SFPP, LLC Total			128,938.00
SGP DESIGN AND PRINT	5901	1	546.43
		3	93.74
		5	134.69
		6	129.30

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
SGP DESIGN AND PRINT	5901	7	413.76
SGP DESIGN AND PRINT Total			1,317.92
SHRED-IT USA, LLC	6993	1	152.97
		2	163.68
		3	417.94
		4	381.30
		5	144.50
		6	222.44
		7	485.47
SHRED-IT USA, LLC Total			1,968.30
SIBOLE, KOLEEN	7876	7	142.31
SIBOLE, KOLEEN Total			142.31
SIQUEIROS, JUANA	8415	5	195.00
SIQUEIROS, JUANA Total			195.00
SIRLS, STEPHANIE	8601	1	380.60
		5	158.10
SIRLS, STEPHANIE Total			538.70
SITEONE LANDSCAPE SUPPLY	7095	1	1,843.35
		3	1,056.30
		4	1,281.27
		5	113.10
		7	2,695.85
SITEONE LANDSCAPE SUPPLY Total			6,989.87
SKINNER, DEBORAH & ROY	7199	5	315.00
SKINNER, DEBORAH & ROY Total			315.00
SLOVAK BARON EMPEY MURPHY & PINKNEY	8904	7	5,080.00
SLOVAK BARON EMPEY MURPHY & PINKNEY Total			5,080.00
SMART & FINAL	1561	1	1,614.18
		2	132.30
		3	520.80
		4	193.89
		5	308.82
		6	438.97
		7	116.21
SMART & FINAL Total			3,325.17
SMELKER, CHARLES & SALLIE	8928	7	215.37

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
SMELKER, CHARLES & SALLIE Total			215.37
SMITH, BRANDON	6127	3	274.50
		4	288.75
SMITH, BRANDON Total			563.25
SMITH, FRED	8510	5	195.00
SMITH, FRED Total			195.00
SMITH, HAROLD A	8799	5	150.00
SMITH, HAROLD A Total			150.00
SO CAL JOINT POLE COMMITTEE	1373	1	1,192.21
		2	1,692.12
		3	1,682.78
		4	1,127.31
		5	2,157.51
		6	1,184.26
SO CAL JOINT POLE COMMITTEE Total			9,036.19
SOCAL PROPANE LLC	8625	1	80.00
SOCAL PROPANE LLC Total			80.00
SOFTWARE ONE, INC	7083	1	0.00
		2	93,861.92
		3	3,401.74
		4	3,680.23
		5	4,143.15
		6	3,918.19
		7	4,529.98
SOFTWARE ONE, INC Total			113,535.21
SONSRAY FLEET SERVICES	4753	1	0.00
		3	766.40
SONSRAY FLEET SERVICES Total			766.40
SONSRAY MACHINERY LLC	6565	7	2,572.55
SONSRAY MACHINERY LLC Total			2,572.55
SORIANO, NATLLELY	7671	4	0.00
		7	42.00
SORIANO, NATLLELY Total			42.00
SOUTH COAST AIR QUALITY	1370	1	28.14
		2	3,676.80
		3	3,535.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
SOUTH COAST AIR QUALITY	1370	4	902.38
SOUTH COAST AIR QUALITY Total			8,142.32
SOUTHERN CALIF ASSN OF GOVERNMENTS	1346	1	4,600.00
SOUTHERN CALIF ASSN OF GOVERNMENTS Total			4,600.00
SOUTHERN CALIFORNIA EDISON	1371	1	5,189.44
		2	4,480.73
		3	4,532.93
		4	3,804.91
		5	4,123.95
		6	3,487.99
		7	4,457.73
SOUTHERN CALIFORNIA EDISON Total			30,077.68
SOUTHERN CALIFORNIA GAS CO	1376	2	6,297.92
		3	8,662.95
		4	8,135.05
		5	17,659.61
		6	7,512.13
SOUTHERN CALIFORNIA GAS CO Total			48,267.66
SOUTHERN CALIFORNIA WEST COAST ELEC	1377	1	8,218.01
		2	5,780.00
		3	3,346.05
		4	5,960.51
		5	787.73
		6	1,436.75
SOUTHERN CALIFORNIA WEST COAST ELEC Total			25,529.05
SOUTHWEST POWER POOL, INC	7488	1	312.79
		2	0.00
SOUTHWEST POWER POOL, INC Total			312.79
SPS VAR, LLC	4796	1	9,030.00
		2	0.00
SPS VAR, LLC Total			9,030.00
STAFFORD, CHERYL	7246	2	300.00
		3	30.45
		4	82.68
		7	9.68
STAFFORD, CHERYL Total			422.81

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
STAGECOACH DAYS ASSOCIATION	6989	1	30,500.00
		3	555.00
		4	15.00
STAGECOACH DAYS ASSOCIATION Total			31,070.00
STAPLES BUSINESS ADVANTAGE	7084	1	4,418.26
		2	2,989.07
		3	1,895.30
		4	3,559.88
		5	10,867.22
		6	7,033.17
		7	1,924.55
STAPLES BUSINESS ADVANTAGE Total			32,687.45
STATE OF CALIFORNIA DOJ	4000	1	571.00
		2	1,299.00
		3	1,936.00
		4	1,985.00
		5	3,453.98
		6	1,590.00
		7	3,747.98
STATE OF CALIFORNIA DOJ Total			14,582.96
STATE WATER RESOURCES CONTROL	6849	1	105.00
		2	60.00
		5	140.00
	2452	4	17,270.00
		6	94,175.60
STATE WATER RESOURCES CONTROL Total			111,750.60
STATEWIDE TOWING & RECOVERY, INC	3952	3	990.00
STATEWIDE TOWING & RECOVERY, INC Total			990.00
STC TRAFFIC INC	8249	1	0.00
		2	0.00
		3	815.00
		4	15,480.00
		5	8,000.00
		6	1,315.00
		7	620.00
STC TRAFFIC INC Total			26,230.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
STOCKMAN, JULIA	8735	1	542.50
STOCKMAN, JULIA Total			542.50
STOCKTON CONSULTING	6222	1	0.00
		3	3,712.50
		4	861.75
STOCKTON CONSULTING Total			4,574.25
STONE, BRADLEY	8855	4	273.00
STONE, BRADLEY Total			273.00
STONE, DIANE	6270	7	216.00
STONE, DIANE Total			216.00
STONE, PAMELA	5524	7	42.00
STONE, PAMELA Total			42.00
STURM, ADAM	8452	1	250.00
STURM, ADAM Total			250.00
SUN RIDGE SYSTEMS INC	4772	3	26,175.00
		5	0.00
SUN RIDGE SYSTEMS INC Total			26,175.00
SUPERC AI INC	8640	5	15,175.00
SUPERC AI INC Total			15,175.00
SUPERION, LLC	7961	1	26,807.18
		2	26,807.18
		5	26,807.18
SUPERION, LLC Total			80,421.54
SWIFTLY INC	8526	5	2,585.00
		7	0.00
SWIFTLY INC Total			2,585.00
SYNAGRO-WWT, INC	7152	1	4,442.84
		7	15,928.95
SYNAGRO-WWT, INC Total			20,371.79
TAPIA, SALOMON	8538	5	195.00
TAPIA, SALOMON Total			195.00
TASC	5885	1	4,903.98
		2	3,490.00
		3	2,280.82
		4	2,280.82
		5	3,490.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
TASC	5885	6	1,093.82
		7	1,093.82
TASC Total			18,633.26
TEAMCALIFORNIA ECONOMIC DEV CORP	8670	2	2,500.00
TEAMCALIFORNIA ECONOMIC DEV CORP Total			2,500.00
TEC EQUIPMENT, INC	7997	1	2,549.43
		2	636.41
		3	15.65
		4	772.74
		6	338.55
		7	848.49
TEC EQUIPMENT, INC Total			5,161.27
TECHNOLOGY UNLIMITED INC	5005	3	825.00
		5	0.00
TECHNOLOGY UNLIMITED INC Total			825.00
TELEPACIFIC COMMUNICATIONS	6583	1	1,560.86
		2	1,560.86
		3	1,560.86
		4	1,561.74
		5	1,561.74
		6	1,561.74
		7	1,565.09
TELEPACIFIC COMMUNICATIONS Total			10,932.89
TERMINIX COMMERCIAL	1802	1	16,212.04
		2	0.00
		3	0.00
TERMINIX COMMERCIAL Total			16,212.04
TETRA TECH INC.	7297	1	0.00
		2	13,153.09
		3	6,000.00
		4	10,555.00
		5	33,160.00
		6	18,235.00
TETRA TECH INC. Total			81,103.09
TEXAS LIFE INSURANCE COMPANY	8576	1	6,258.63
		2	5,886.08

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
TEXAS LIFE INSURANCE COMPANY	8576	3	5,886.08
		4	5,813.33
		5	5,569.87
		6	5,463.62
TEXAS LIFE INSURANCE COMPANY Total			34,877.61
THE HOUSE OF PORTRAITS INC	8818	4	880.78
THE HOUSE OF PORTRAITS INC Total			880.78
THESIER, DEREK	4985	4	404.30
THESIER, DEREK Total			404.30
THOMPSON COBURN, LLP	6895	1	34,294.41
		3	8,596.85
		4	6,437.39
		5	5,339.76
		6	6,370.49
		7	4,014.17
THOMPSON COBURN, LLP Total			65,053.07
THOMSON REUTERS - WEST	1447	7	274.44
THOMSON REUTERS - WEST Total			274.44
THORNTON, CHRIS	5804	2	249.50
THORNTON, CHRIS Total			249.50
THORNTON, MEL	6766	5	315.00
THORNTON, MEL Total			315.00
TIMECLOCK PLUS, LLC	8387	7	1,861.20
TIMECLOCK PLUS, LLC Total			1,861.20
T-MOBILE	6743	6	115.00
T-MOBILE Total			115.00
TOLAR MANUFACTURING CO, INC	6409	1	4,536.28
		4	0.00
TOLAR MANUFACTURING CO, INC Total			4,536.28
TOM BELL CHEVROLET	416	3	314.97
TOM BELL CHEVROLET Total			314.97
TOP-LINE INDUSTRIAL SUPPLY, LCC	7976	3	60.75
		6	37.52
		7	113.50
TOP-LINE INDUSTRIAL SUPPLY, LCC Total			211.77
TRAN, LOAN	8900	5	32.50

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
TRAN, LOAN Total			32.50
TRANSWEST TRUCK CENTER, LLC	420	1	180,783.75
		2	0.00
TRANSWEST TRUCK CENTER, LLC Total			180,783.75
TRENCH SHORING COMPANY	4540	2	267.50
		3	313.00
		4	306.00
		5	275.00
		7	44.80
TRENCH SHORING COMPANY Total			1,206.30
TRI COUNTY PUMP COMPANY	6808	1	0.00
		2	37,921.46
		5	13,881.84
TRI COUNTY PUMP COMPANY Total			51,803.30
TRI-GLOBAL TECHNOLOGIES, LLC	7874	3	4,185.00
TRI-GLOBAL TECHNOLOGIES, LLC Total			4,185.00
TROUP, ERNEST	6980	7	263.56
TROUP, ERNEST Total			263.56
TURBO DATA SYSTEMS INC	2403	1	157.10
		2	150.00
		3	151.44
		4	152.88
		5	150.00
		6	150.00
TURBO DATA SYSTEMS INC Total			911.42
TURBOSCAPE, INC	8081	1	6,540.00
TURBOSCAPE, INC Total			6,540.00
U.S. BANK	3590	1	3,757.50
		2	1,924,702.67
		3	5,500.00
		4	1,998,156.26
		5	476,521.88
U.S. BANK Total			4,408,638.31
ULINE	3623	3	860.06
ULINE Total			860.06
ULTIMATE ROOF	8760	1	1,758.35

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
ULTIMATE ROOF Total			1,758.35
UNDERGROUND SERVICE ALERT	871	1	248.28
		2	198.87
		3	174.82
		4	171.12
		5	213.67
		6	154.47
		7	143.37
UNDERGROUND SERVICE ALERT Total			1,304.60
UNITED STATES POSTAL SERVICE	1422	6	1,056.00
UNITED STATES POSTAL SERVICE Total			1,056.00
URIAS, JOSE ROSARIO	8804	5	292.50
URIAS, JOSE ROSARIO Total			292.50
USABLUEBOOK	1993	1	290.93
		4	0.00
		5	0.00
USABLUEBOOK Total			290.93
VACA, YVETTE	7933	5	21.00
		7	770.50
VACA, YVETTE Total			791.50
VALDEZ JR, MARY ALICE & ANTONIO	8534	5	195.00
VALDEZ JR, MARY ALICE & ANTONIO Total			195.00
VALENCIA, MARIBEL	7503	5	195.00
VALENCIA, MARIBEL Total			195.00
VAN WINKLE, THOMAS & LINDA	7541	7	212.57
VAN WINKLE, THOMAS & LINDA Total			212.57
VANCE CORPORATION	8175	1	0.00
		3	1,128,927.12
		4	44,802.77
		5	61,775.26
VANCE CORPORATION Total			1,235,505.15
VELA, ARTURO M	7159	5	195.00
VELA, ARTURO M Total			195.00
VEOLIA WATER CONTRACT OPERATIONS US	7007	1	76,371.36
		2	76,371.36
		3	76,371.36

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
VEOLIA WATER CONTRACT OPERATIONS US	7007	4	76,371.36
		5	76,371.36
		6	76,371.36
		7	76,371.36
VEOLIA WATER CONTRACT OPERATIONS US Total			534,599.52
VERIZON WIRELESS SERVICES, LLC	5369	1	13,729.09
		2	10,042.00
		3	10,524.31
		4	9,515.23
		5	10,930.04
		6	9,971.80
		7	9,728.07
VERIZON WIRELESS SERVICES, LLC Total			74,440.54
VESTIS SERVICES LLC	7743	1	369.96
		2	470.47
		3	403.00
		4	403.00
		5	503.75
		6	403.00
		7	552.71
VESTIS SERVICES LLC Total			3,105.89
VIGILANT LLC	8631	1	8,379.53
		2	8,341.72
		3	8,266.10
		4	8,341.72
		5	8,370.08
		6	8,426.79
		7	8,474.05
VIGILANT LLC Total			58,599.99
VILLEGAS, JOSE	7042	5	315.00
VILLEGAS, JOSE Total			315.00
VIRTUAL PROJECT MANAGER, LLC	7885	1	1,000.00
		2	2,000.00
		4	2,000.00
		6	2,000.00
VIRTUAL PROJECT MANAGER, LLC Total			7,000.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
VISION SECURITY SYSTEMS	6143	1	2,355.00
		2	12,426.15
		3	756.02
		4	42,540.06
		5	800.00
		7	2,355.00
VISION SECURITY SYSTEMS Total			61,232.23
VISTA PAINT	1890	1	1,740.94
		2	180.48
		3	455.45
		5	830.24
		7	381.28
VISTA PAINT Total			3,588.39
VORISEK, ADAM	7375	7	223.49
VORISEK, ADAM Total			223.49
VREF INC	8883	7	6,000.00
VREF INC Total			6,000.00
VULCAN MATERIALS	6650	2	2,779.24
		7	2,820.91
VULCAN MATERIALS Total			5,600.15
WAGES, ROBERT & ANN	7182	7	104.87
WAGES, ROBERT & ANN Total			104.87
WALKER, BRIAN	4984	3	274.50
		4	16.50
WALKER, BRIAN Total			291.00
WALKER, LORRAINE	8449	2	300.00
		3	166.70
		5	228.78
WALKER, LORRAINE Total			695.48
WALLACE, A'JA	8189	4	300.00
WALLACE, A'JA Total			300.00
WALLACE, COLLEEN	7576	1	54.61
		2	102.51
		3	41.47
		4	325.55
		5	126.16

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
WALLACE, COLLEEN	7576	6	420.38
		7	216.75
WALLACE, COLLEEN Total			1,287.43
WALTER STANLEY COS, LLC	7282	1	1,903.67
		2	95.17
		4	519.68
WALTER STANLEY COS, LLC Total			2,518.52
WASHINGTON, MARK	6962	4	86.09
WASHINGTON, MARK Total			86.09
WASTE MANAGEMENT 0F THE IE	1437	3	10,105.21
		4	10.91
		5	140.67
		6	3,000.77
WASTE MANAGEMENT 0F THE IE Total			13,257.56
WASTE MANAGEMENT OF THE IE	1436	1	0.00
		6	224,820.24
		7	0.00
WASTE MANAGEMENT OF THE IE Total			224,820.24
WATER ENVIRONMENT FEDERATION	6165	6	383.00
WATER ENVIRONMENT FEDERATION Total			383.00
WATERLINE TECHNOLOGIES, INC	6918	1	3,537.78
		2	1,985.57
		3	1,260.75
		5	616.76
WATERLINE TECHNOLOGIES, INC Total			7,400.86
WEINBERG, MARK & JUDY	7183	7	179.11
WEINBERG, MARK & JUDY Total			179.11
WELDOR'S SUPPLY AND STEEL	7249	1	4,500.00
		4	313.62
		6	49.49
WELDOR'S SUPPLY AND STEEL Total			4,863.11
WELLS FARGO BANK	2256	1	1,400,473.39
		2	1,233,193.44
		3	1,368,811.72
		4	1,196,546.41
		5	1,934,418.35

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
WELLS FARGO BANK	2256	6	1,241,342.95
		7	1,236,930.53
	4228	1	900.00
		2	600.00
		3	600.00
		4	600.00
		5	600.00
		6	600.00
		7	900.00
WELLS FARGO BANK Total			9,616,516.79
WELLS FARGO CARD SERVICES INC	4821	1	45,808.69
		2	49,481.30
		3	42,645.13
		4	66,207.78
		5	52,492.91
		6	36,291.68
WELLS FARGO CARD SERVICES INC Total			292,927.49
WEST & ASSOCIATES ENGINEERING, INC	8018	1	0.00
		4	0.00
		5	4,950.00
WEST & ASSOCIATES ENGINEERING, INC Total			4,950.00
WEST COAST ARBORISTS, INC	3999	1	3,150.00
		2	10,500.00
WEST COAST ARBORISTS, INC Total			13,650.00
WEST COAST SAND & GRAVEL, INC.	7381	4	1,159.94
		5	2,399.25
		6	591.68
		7	1,808.92
WEST COAST SAND & GRAVEL, INC. Total			5,959.79
WESTERN WATER WORKS SUPPLY CO	464	3	5,151.10
		4	32,126.52
		5	33,847.40
		6	4,665.80
		7	4,124.88
WESTERN WATER WORKS SUPPLY CO Total			79,915.70
WESTPHALL, LARRY	8875	6	2,400.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
WESTPHALL, LARRY Total			2,400.00
WESTRUX INTERNATIONAL INC	143	1	488.01
		2	0.00
WESTRUX INTERNATIONAL INC Total			488.01
WHITAKER, RENEE & DAVID	8869	5	618.10
WHITAKER, RENEE & DAVID Total			618.10
WHITE CAP LP	2836	1	5,874.58
		5	0.00
WHITE CAP LP Total			5,874.58
WILBUR'S POWER EQUIPMENT	466	4	1,053.17
WILBUR'S POWER EQUIPMENT Total			1,053.17
WILDLIFE CONTROL SERVICE INC	7605	1	1,250.00
		2	1,250.00
		3	1,250.00
		4	1,250.00
WILDLIFE CONTROL SERVICE INC Total			5,000.00
WILLDAN ENGINEERING	6184	1	877.50
		2	49,577.50
		3	73,992.50
		4	44,617.50
		5	52,652.50
		6	49,440.00
		7	42,025.00
WILLDAN ENGINEERING Total			313,182.50
WILLDAN FINANCIAL SERVICES	2971	1	983.36
		3	782.20
		5	440.59
		6	873.30
WILLDAN FINANCIAL SERVICES Total			3,079.45
WILLIAMS SCOTSMAN, INC	1357	1	1,611.94
WILLIAMS SCOTSMAN, INC Total			1,611.94
WILLIAMS, JOHN	7867	7	265.50
WILLIAMS, JOHN Total			265.50
WILLIAMS, JOHN	7585	7	132.24
WILLIAMS, JOHN Total			132.24
WINDSTREAM SERVICES, LLC	8344	1	6,579.08

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
WINDSTREAM SERVICES, LLC	8344	2	6,584.39
		3	6,558.69
		4	6,553.58
		5	6,570.93
		6	7,463.74
WINDSTREAM SERVICES, LLC Total			40,310.41
WIRZ & COMPANY INC	8779	1	3,749.70
WIRZ & COMPANY INC Total			3,749.70
WITTMAN ENTERPRISES, LLC	8022	1	3,102.75
		2	3,417.75
		3	2,583.00
		4	3,496.50
		5	2,961.00
		6	3,087.00
		7	3,827.25
WITTMAN ENTERPRISES, LLC Total			22,475.25
WOOD, RONALD & JUDY	7868	7	145.46
WOOD, RONALD & JUDY Total			145.46
WOODARD & CURRAN, INC	7220	1	0.00
		2	12,576.25
WOODARD & CURRAN, INC Total			12,576.25
WRCOG	2690	4	18,171.11
		5	(175.64)
WRCOG Total			17,995.47
XENIA PACIFIC, INC	6662	3	1,042.49
		4	38.79
XENIA PACIFIC, INC Total			1,081.28
YARDISTRY US LLC	8836	5	9,753.53
YARDISTRY US LLC Total			9,753.53
YARYAN, MARY	8738	1	517.86
		4	4,500.00
YARYAN, MARY Total			5,017.86
YOUNG, CARLA	5375	4	71.25
YOUNG, CARLA Total			71.25
YOUNG, CHRISTY	8656	5	195.00
YOUNG, CHRISTY Total			195.00

Vendor Total FY 2024-25

Sum of Tran Amt			FY
Vendor Name	Vendor No	Period	25
YUNEX, LLC	8096	1	0.00
		2	1,037.00
		3	2,694.01
		4	2,167.54
		5	4,923.23
		6	1,463.00
		7	4,763.50
YUNEX, LLC Total			17,048.28
ZENCITY TECHNOLOGIES US, INC	8190	5	42,000.00
		6	0.00
ZENCITY TECHNOLOGIES US, INC Total			42,000.00
ZENNER PERFORMANCE METERS, INC	6499	1	22,405.82
		3	8,411.22
		6	23,507.73
ZENNER PERFORMANCE METERS, INC Total			54,324.77
ZOELLER, SUSAN	5471	5	195.00
ZOELLER, SUSAN Total			195.00
ZOLLAR, WILLIAM	8843	4	2,000.00
ZOLLAR, WILLIAM Total			2,000.00
Grand Total			61,088,605.86

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
ABBOTT, CELIA	7508	5	675	195.00
		5 Total		195.00
ABBOTT, CELIA Total				195.00
ADVANCED WORKPLACE STRATEGIES INC	4781	1	001	1,166.55
		1 Total		1,166.55
		2	001	272.18
		2 Total		272.18
		3	001	194.85
		3 Total		194.85
		4	001	129.90
		4 Total		129.90
ADVANCED WORKPLACE STRATEGIES INC Total				1,763.48
AIRGAS USA, LLC	2454	5	680	272.82
		5 Total		272.82
AIRGAS USA, LLC Total				272.82
ALBERT A. WEBB ASSOCIATES	3065	1	101	39,211.75
			661	1,120.14
			681	0.00
			683	0.00
		1 Total		40,331.89
		2	101	14,759.75
			661	0.00
			681	26,728.19
		2 Total		41,487.94
		3	101	27,408.54
			661	5,791.76
			681	825.13
		3 Total		34,025.43
		4	101	59,074.03
			661	2,293.44
		4 Total		61,367.47
		5	101	10,575.75
			661	486.24
			681	8,673.00
		5 Total		19,734.99
		6	101	5,735.50
			661	2,106.79
			681	8,047.13
		6 Total		15,889.42

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
ALBERT A. WEBB ASSOCIATES Total				212,837.14
ALL STAR ELITE SPORTS	7098	1	001	175.81
		1 Total		175.81
		3	001	1,178.83
		3 Total		1,178.83
		4	001	466.86
		4 Total		466.86
		7	001	6,363.96
		7 Total		6,363.96
ALL STAR ELITE SPORTS Total				8,185.46
ALTEC INDUSTRIES, INC.	1616	1	702	10,453.82
		1 Total		10,453.82
		4	702	1,858.56
		4 Total		1,858.56
		5	702	689.37
		5 Total		689.37
ALTEC INDUSTRIES, INC. Total				13,001.75
AMAZON BUSINESS	7468	1	001	2,413.31
			222	0.00
			660	258.82
			670	1,315.24
			675	2,153.32
			702	444.59
			705	0.00
			761	727.57
			810	1,278.92
		1 Total		8,591.77
		2	001	3,069.10
			660	497.60
			670	256.52
			675	1,514.64
			704	97.45
			761	527.81
		2 Total		5,963.12
		3	001	3,437.81
			201	46.30
			660	160.06
			670	397.10
			675	458.73

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
AMAZON BUSINESS	7468	3	703	183.51
			704	123.89
			761	65.42
		3 Total		4,872.82
		4	001	2,398.77
			100	157.84
			201	643.31
			660	(183.28)
			670	472.81
			675	916.98
			702	67.73
			705	176.81
			761	836.84
			810	1,402.30
		4 Total		6,890.11
		5	001	2,591.41
			100	124.76
			600	14.99
			660	3,445.26
			670	66.91
			675	610.40
			702	422.45
			705	168.43
			810	741.07
		5 Total		8,185.68
		6	001	4,287.20
			660	15.85
			670	22.90
			675	590.45
			702	(52.15)
			705	1,009.07
			761	47.29
		6 Total		5,920.61
		7	001	3,923.37
			702	226.49
			703	158.21
			705	87.72
			761	88.68
		7 Total		4,484.47

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
AMAZON BUSINESS Total				44,908.58
AMERICAN FIDELITY ASSURANCE	8584	1	001	25,109.20
		1 Total		25,109.20
		2	001	24,826.60
		2 Total		24,826.60
		3	001	25,445.18
		3 Total		25,445.18
		4	001	25,334.92
		4 Total		25,334.92
		5	001	25,294.84
		5 Total		25,294.84
		6	001	25,294.84
		6 Total		25,294.84
	2295	1	001	7,554.16
		1 Total		7,554.16
		2	001	7,554.16
		2 Total		7,554.16
		3	001	7,100.00
		3 Total		7,100.00
		4	001	7,066.68
		4 Total		7,066.68
		5	001	7,601.38
		5 Total		7,601.38
		6	001	7,601.38
		6 Total		7,601.38
AMERICAN FIDELITY ASSURANCE Total				195,783.34
AMERICAN FORENSIC NURSES	4265	1	001	1,021.02
		1 Total		1,021.02
		2	001	1,021.02
		2 Total		1,021.02
		3	001	3,349.76
		3 Total		3,349.76
		4	001	1,174.17
		4 Total		1,174.17
		5	001	1,174.17
		5 Total		1,174.17
		7	001	4,029.49
		7 Total		4,029.49
AMERICAN FORENSIC NURSES Total				11,769.63

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
ANIXTER, INC	7048	1	670	3,496.38
		1 Total		3,496.38
		2	670	9,983.98
		2 Total		9,983.98
		3	670	1,098.64
		3 Total		1,098.64
		4	670	1,256.54
		4 Total		1,256.54
		5	670	168,826.89
		5 Total		168,826.89
		6	670	28,430.92
		6 Total		28,430.92
ANIXTER, INC Total				213,093.35
ARCE, PAUL	8331	3	001	84.00
		3 Total		84.00
		4	001	112.00
		4 Total		112.00
		5	001	112.00
		5 Total		112.00
		6	001	84.00
		6 Total		84.00
ARCE, PAUL Total				392.00
ARIAS DE RAMIREZ, LEONILA	8509	5	675	195.00
		5 Total		195.00
ARIAS DE RAMIREZ, LEONILA Total				195.00
AT&T CALNET 2	6175	1	001	412.59
		1 Total		412.59
		2	001	661.67
		2 Total		661.67
		3	001	655.72
		3 Total		655.72
		4	001	976.74
		4 Total		976.74
		5	001	980.72
		5 Total		980.72
		6	001	537.90
		6 Total		537.90
		7	001	1,439.74
		7 Total		1,439.74

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
AT&T CALNET 2 Total				5,665.08
AT&T MOBILITY LLC	8147	1	001	1,737.14
		1 Total		1,737.14
		2	001	3,044.34
		2 Total		3,044.34
		3	001	2,924.34
		3 Total		2,924.34
		4	001	3,264.34
		4 Total		3,264.34
		5	001	3,302.30
		5 Total		3,302.30
		6	001	3,317.30
		6 Total		3,317.30
		7	001	3,307.30
		7 Total		3,307.30
AT&T MOBILITY LLC Total				20,897.06
ATBACKGROUNDS	7667	2	001	462.30
		2 Total		462.30
		5	001	88.06
		5 Total		88.06
		6	001	88.06
		6 Total		88.06
ATBACKGROUNDS Total				638.42
ATWORK PERSONNEL SERVICES	7937	1	001	1,381.13
			660	1,216.28
			680	1,216.28
			702	810.86
		1 Total		4,624.55
		2	001	2,344.07
			660	2,072.66
			680	2,072.66
			702	1,381.76
		2 Total		7,871.15
		3	001	2,036.18
			660	1,610.82
			680	1,610.81
			702	1,073.87
		3 Total		6,331.68
		4	001	1,861.30

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
ATWORK PERSONNEL SERVICES	7937	4	660	1,774.15
			680	1,774.15
			702	1,182.75
			761	5,522.20
		4 Total		12,114.55
		5	001	4,596.75
			660	1,818.61
			680	1,818.61
			702	1,212.41
			761	13,691.23
			810	4,106.83
		5 Total		27,244.44
		6	001	6,662.75
			660	1,428.12
			680	1,428.11
			702	952.06
			761	5,925.47
			810	5,553.98
		6 Total		21,950.49
		7	001	6,787.86
			660	1,651.26
			680	1,651.26
			702	1,100.83
			761	5,784.04
			810	10,795.14
		7 Total		27,770.39
ATWORK PERSONNEL SERVICES Total				107,907.25
AURIGA CORPORATION	8259	1	673	2,800.00
		1 Total		2,800.00
		2	673	1,550.00
		2 Total		1,550.00
		3	673	2,200.00
		3 Total		2,200.00
		4	673	1,200.00
		4 Total		1,200.00
		5	673	1,400.00
		5 Total		1,400.00
		6	673	800.00
		6 Total		800.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
AURIGA CORPORATION Total				9,950.00
BABCOCK LABORATORIES, INC	6774	1	660	3,906.00
			680	3,804.65
		1 Total		7,710.65
		2	660	5,414.25
			680	422.00
		2 Total		5,836.25
		3	660	14,220.06
			680	1,859.53
		3 Total		16,079.59
		4	660	7,277.45
			680	196.70
		4 Total		7,474.15
		5	660	2,164.39
			680	1,901.27
		5 Total		4,065.66
		6	660	14,636.13
			680	157.36
		6 Total		14,793.49
		7	660	4,708.49
			680	196.70
		7 Total		4,905.19
BABCOCK LABORATORIES, INC Total				60,864.98
BANNING POLICE OFFICERS ASSOC.	7990	1	001	2,910.30
		1 Total		2,910.30
		2	001	2,860.30
		2 Total		2,860.30
		3	001	2,960.30
		3 Total		2,960.30
		4	001	2,960.30
		4 Total		2,960.30
		5	001	2,960.30
		5 Total		2,960.30
		6	001	2,910.30
		6 Total		2,910.30
BANNING POLICE OFFICERS ASSOC. Total				17,561.80
BARR DOOR, INC	6710	2	704	4,124.39
		2 Total		4,124.39
		3	704	1,254.03

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
BARR DOOR, INC	6710	3 Total		1,254.03
		4	704	15,048.15
		4 Total		15,048.15
		5	704	625.00
		5 Total		625.00
		7	704	750.00
		7 Total		750.00
BARR DOOR, INC Total				21,801.57
BATDORF, JACQUELINE	8650	5	675	195.00
		5 Total		195.00
BATDORF, JACQUELINE Total				195.00
BEAUMONT CHERRY VALLEY WATER	3674	1	660	2,402.74
		1 Total		2,402.74
		2	660	227.56
		2 Total		227.56
		3	660	378.51
		3 Total		378.51
		6	660	3,702.27
		6 Total		3,702.27
BEAUMONT CHERRY VALLEY WATER Total				6,711.08
BEAUMONT DO IT BEST HOME CENTER	6091	1	001	2,045.16
			100	287.92
			101	38.75
			704	788.00
			810	76.63
		1 Total		3,236.46
		2	001	477.68
			100	361.22
			111	3.21
			660	11.59
			704	548.78
			810	381.95
		2 Total		1,784.43
		3	001	578.29
			100	315.77
			111	51.16
			610	71.09
			660	10.20
			704	300.75

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
BEAUMONT DO IT BEST HOME CENTER	6091	3	810	92.61
		3 Total		1,419.87
		4	001	739.72
			100	135.13
			111	72.23
			610	84.01
			704	1,028.02
			810	216.03
		4 Total		2,275.14
		5	001	33.26
			100	37.68
			704	382.70
			810	9.64
		5 Total		463.28
		6	001	245.56
			100	162.18
			610	14.96
			704	810.80
			810	94.95
		6 Total		1,328.45
		7	001	462.83
			100	43.49
			704	570.52
			810	216.79
		7 Total		1,293.63
BEAUMONT DO IT BEST HOME CENTER Total				11,801.26
BEAUMONT SAFE & LOCK	951	1	001	6.43
			810	267.29
		1 Total		273.72
		2	660	37.54
			704	731.31
		2 Total		768.85
		4	001	10.72
			704	104.00
			810	134.05
		4 Total		248.77
		5	001	259.67
			810	444.11
		5 Total		703.78

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
BEAUMONT SAFE & LOCK	951	6	001	25.73
			810	170.11
		6 Total		195.84
		7	660	20.00
			704	902.22
		7 Total		922.22
BEAUMONT SAFE & LOCK Total				3,113.18
BECERRA, ELADIO	6575	5	675	195.00
		5 Total		195.00
BECERRA, ELADIO Total				195.00
BENHAR, DIANA T	7099	1	001	1,025.50
		1 Total		1,025.50
		2	001	626.50
		2 Total		626.50
		3	001	287.00
		3 Total		287.00
		4	001	479.50
		4 Total		479.50
		5	001	311.50
		5 Total		311.50
		6	001	252.00
		6 Total		252.00
		7	001	430.50
		7 Total		430.50
BENHAR, DIANA T Total				3,412.50
BIO-TOX LABORATORIES	2051	1	001	0.00
		1 Total		0.00
		2	001	2,224.00
		2 Total		2,224.00
		3	001	574.00
		3 Total		574.00
		4	001	1,348.00
		4 Total		1,348.00
		5	001	605.00
		5 Total		605.00
		6	001	945.00
		6 Total		945.00
		7	001	2,343.00
		7 Total		2,343.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
BIO-TOX LABORATORIES Total				8,039.00
BLAIS & ASSOCIATES, LLC	7612	1	001	0.00
			100	2,102.50
			660	0.00
			705	0.00
		1 Total		2,102.50
		2	100	0.00
		2 Total		0.00
		3	100	917.50
			660	375.00
		3 Total		1,292.50
		4	100	670.00
			660	7,575.00
		4 Total		8,245.00
BLAIS & ASSOCIATES, LLC Total				11,640.00
BLAISDELL'S BUSINESS PRODUCTS	8271	1	001	0.00
		1 Total		0.00
		2	001	753.50
			702	107.64
			705	1,345.53
		2 Total		2,206.67
		5	001	376.75
			670	645.85
			705	1,184.06
		5 Total		2,206.66
BLAISDELL'S BUSINESS PRODUCTS Total				4,413.33
BLEIER, TODD	7816	5	670	120.00
			675	195.00
		5 Total		315.00
BLEIER, TODD Total				315.00
BLOOMHUFF, NINA	5704	5	670	120.00
			675	195.00
		5 Total		315.00
BLOOMHUFF, NINA Total				315.00
BLUEBEAM, INC	8338	4	705	2,340.00
		4 Total		2,340.00
		7	705	5,640.00
		7 Total		5,640.00
BLUEBEAM, INC Total				7,980.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
BOGARD, LINCOLN	8420	3	001	179.75
		3 Total		179.75
		4	001	285.48
		4 Total		285.48
		6	001	146.50
		6 Total		146.50
BOGARD, LINCOLN Total				611.73
BOOTH, CATHY	7085	5	675	195.00
		5 Total		195.00
BOOTH, CATHY Total				195.00
BOSTON, LINDA	6362	5	675	195.00
		5 Total		195.00
BOSTON, LINDA Total				195.00
BUSINESS TELECOMMUNICATION	6702	1	001	0.00
			702	0.00
		1 Total		0.00
		2	001	533.06
		2 Total		533.06
BUSINESS TELECOMMUNICATION Total				533.06
CA. ST. EMPLOYMENT DEV. DEPT.	985	1	001	164,376.47
		1 Total		164,376.47
		2	001	97,050.52
		2 Total		97,050.52
		3	001	106,529.95
		3 Total		106,529.95
		4	001	89,542.74
		4 Total		89,542.74
		5	001	99,212.04
		5 Total		99,212.04
		6	001	146,398.02
		6 Total		146,398.02
		7	001	95,062.60
		7 Total		95,062.60
CA. ST. EMPLOYMENT DEV. DEPT. Total				798,172.34
CA. ST. PUBLIC EMPLOYEES	997	1	001	4,674,291.88
		1 Total		4,674,291.88
		2	001	526,473.84
		2 Total		526,473.84
		3	001	681,279.02

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
CA. ST. PUBLIC EMPLOYEES	997	3 Total		681,279.02
		4	001	531,690.90
		4 Total		531,690.90
		5	001	526,744.60
		5 Total		526,744.60
		6	001	504,056.47
		6 Total		504,056.47
		7	001	519,987.81
			670	7,257.00
		7 Total		527,244.81
CA. ST. PUBLIC EMPLOYEES Total				7,971,781.52
CALIFORNIA DEPT OF TAX AND FEE ADMN	1756	3	670	17,578.00
		3 Total		17,578.00
		6	670	10,422.00
		6 Total		10,422.00
CALIFORNIA DEPT OF TAX AND FEE ADMN Total				28,000.00
CALIFORNIA LAW ENFORCE ASSN	3780	1	001	1,056.00
		1 Total		1,056.00
		2	001	1,120.00
		2 Total		1,120.00
		3	001	1,088.00
		3 Total		1,088.00
		4	001	1,152.00
		4 Total		1,152.00
		5	001	1,152.00
		5 Total		1,152.00
		6	001	1,088.00
		6 Total		1,088.00
		7	001	1,088.00
		7 Total		1,088.00
CALIFORNIA LAW ENFORCE ASSN Total				7,744.00
CALIFORNIA WATER ENVIRONMENT	4042	2	660	572.00
		2 Total		572.00
		5	680	239.00
		5 Total		239.00
		6	660	478.00
		6 Total		478.00
		7	680	239.00
		7 Total		239.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
CALIFORNIA WATER ENVIRONMENT Total				1,528.00
CAMPA, ERIC	7287	1	001	851.00
		1 Total		851.00
		3	001	259.00
		3 Total		259.00
		6	001	42.00
		6 Total		42.00
CAMPA, ERIC Total				1,152.00
CANALES, SILVERIO	7796	5	675	195.00
		5 Total		195.00
CANALES, SILVERIO Total				195.00
CANON FINANCIAL SERVICES, INC	7078	1	001	510.61
			660	178.45
			670	572.03
			705	613.99
			761	178.45
		1 Total		2,053.53
		2	001	541.44
			660	178.45
			670	571.83
			705	774.68
			761	178.45
		2 Total		2,244.85
		3	001	510.60
			660	178.44
			670	548.12
			705	637.26
			761	178.44
		3 Total		2,052.86
		4	001	541.43
			660	178.44
			670	548.12
			705	797.68
			761	178.44
		4 Total		2,244.11
		5	001	510.60
			660	178.44
			670	548.12
			705	958.10

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
CANON FINANCIAL SERVICES, INC	7078	5	761	178.44
		5 Total		2,373.70
		6	001	563.76
			660	178.44
			670	548.12
			705	637.26
			761	178.44
		6 Total		2,106.02
		7	001	362.99
			705	1,647.78
		7 Total		2,010.77
CANON FINANCIAL SERVICES, INC Total				15,085.84
CASC ENGINEERING AND CONSULTING INC	6874	1	001	0.00
			100	1,011.25
		1 Total		1,011.25
		2	001	8,476.50
			100	8,223.75
		2 Total		16,700.25
		3	001	1,591.50
			100	2,940.00
		3 Total		4,531.50
		4	100	2,867.50
		4 Total		2,867.50
		5	001	2,532.00
		5 Total		2,532.00
		6	100	5,517.50
		6 Total		5,517.50
		7	105	0.00
		7 Total		0.00
CASC ENGINEERING AND CONSULTING INC Total				33,160.00
CELL BUSINESS EQUIP-LEASING	7561	1	670	2,082.04
			705	0.00
		1 Total		2,082.04
		2	670	1,260.54
			705	439.04
		2 Total		1,699.58
		3	670	821.50
		3 Total		821.50
		4	670	1,987.81

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
CELL BUSINESS EQUIP-LEASING	7561	4	705	1,013.64
		4 Total		3,001.45
		5	670	844.10
		5 Total		844.10
		6	670	108.73
		6 Total		108.73
		7	670	844.10
		7 Total		844.10
CELL BUSINESS EQUIP-LEASING Total				9,401.50
CELL BUSINESS EQUIPMENT (CBE)	7033	1	001	816.17
			660	66.34
			670	145.14
			705	801.58
			761	243.67
		1 Total		2,072.90
		2	001	620.91
			660	19.67
			670	81.93
			705	282.10
			761	99.53
		2 Total		1,104.14
		3	001	329.04
			660	41.40
			670	109.05
			705	524.59
			761	141.97
		3 Total		1,146.05
		4	001	435.45
			660	31.51
			670	152.25
			705	1,046.78
			761	164.46
		4 Total		1,830.45
		5	001	409.55
			670	0.00
			705	508.19
			761	56.62
		5 Total		974.36
		6	001	565.79

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
CELL BUSINESS EQUIPMENT (CBE)	7033	6	660	172.72
			670	242.73
			705	1,573.98
			761	240.67
		6 Total		2,795.89
		7	001	422.72
		7 Total		422.72
CELL BUSINESS EQUIPMENT (CBE) Total				10,346.51
CENTER ELECTRIC SERVICES, INC	5307	1	660	3,499.77
		1 Total		3,499.77
		5	660	515.44
		5 Total		515.44
CENTER ELECTRIC SERVICES, INC Total				4,015.21
CHANDLER ASSET MANAGEMENT INC	8471	1	001	0.00
		1 Total		0.00
		2	001	2,062.39
		2 Total		2,062.39
		3	001	2,091.93
		3 Total		2,091.93
		4	001	2,104.00
		4 Total		2,104.00
		5	001	2,100.76
		5 Total		2,100.76
		6	001	2,095.30
		6 Total		2,095.30
		7	001	2,115.53
		7 Total		2,115.53
CHANDLER ASSET MANAGEMENT INC Total				12,569.91
CICCS	8578	1	001	1,051.67
		1 Total		1,051.67
		2	001	1,108.23
		2 Total		1,108.23
		3	001	1,129.75
		3 Total		1,129.75
		4	001	1,136.33
		4 Total		1,136.33
		5	001	1,256.26
		5 Total		1,256.26
		6	001	1,114.54

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
CICCS	8578	6 Total		1,114.54
		7	001	90.03
		7 Total		90.03
CICCS Total				6,886.81
CINTAS CORPORATION	7061	1	001	280.20
			100	311.68
			610	523.68
			660	790.60
			670	1,391.71
			680	237.88
			702	238.84
			704	43.12
		1 Total		3,817.71
		2	001	973.57
			100	389.60
			610	654.60
			660	1,060.35
			670	1,782.42
			680	297.35
			702	298.55
			704	53.90
		2 Total		5,510.34
		3	001	280.20
			100	311.68
			610	523.68
			660	963.56
			670	1,390.69
			680	237.88
			702	238.84
			704	43.12
		3 Total		3,989.65
		4	001	377.32
			100	389.60
			610	654.60
			660	1,204.45
			670	2,827.04
			680	297.35
			702	298.55
			704	53.90

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
CINTAS CORPORATION	7061	4 Total		6,102.81
		5	001	770.62
			100	398.85
			610	476.05
			660	986.44
			670	1,412.43
			680	230.06
			702	759.38
			704	55.15
		5 Total		5,088.98
		6	001	333.99
			100	319.08
			610	476.04
			660	986.44
			670	1,380.09
			680	185.82
			702	245.04
			704	44.12
		6 Total		3,970.62
		7	001	463.88
			100	398.85
			610	596.75
			660	246.61
			670	1,696.71
			680	46.13
			702	306.30
			704	55.15
		7 Total		3,810.38
CINTAS CORPORATION Total				32,290.49
CITY OF BANNING (BNG)	8274	1	001	778.34
			705	185.89
		1 Total		964.23
		2	001	778.34
			705	185.89
		2 Total		964.23
		3	001	778.34
			705	185.89
		3 Total		964.23
		4	001	778.34

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
CITY OF BANNING (BNG)	8274	4	705	185.89
		4 Total		964.23
		5	001	778.34
			705	185.89
		5 Total		964.23
		6	001	778.34
			705	185.89
		6 Total		964.23
		7	001	778.34
			705	185.89
		7 Total		964.23
CITY OF BANNING (BNG) Total				6,749.61
CIVICPLUS	5418	1	705	31,203.88
		1 Total		31,203.88
		2	001	0.00
			610	0.00
			705	0.00
		2 Total		0.00
		3	001	3,000.15
			610	1,499.85
			705	0.00
		3 Total		4,500.00
CIVICPLUS Total				35,703.88
CLA-VAL	2125	1	660	0.00
			661	0.00
		1 Total		0.00
		2	660	19,737.66
		2 Total		19,737.66
		3	660	12,950.81
		3 Total		12,950.81
		4	660	10,671.60
		4 Total		10,671.60
CLA-VAL Total				43,360.07
COMCATE SOFTWARE, INC	6863	1	001	11,263.97
		1 Total		11,263.97
COMCATE SOFTWARE, INC Total				11,263.97
CONCENTRA MEDICAL CENTERS	8153	1	001	967.00
		1 Total		967.00
		2	001	690.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
CONCENTRA MEDICAL CENTERS	8153	2 Total		690.00
		3	001	532.00
		3 Total		532.00
		4	001	251.00
		4 Total		251.00
		5	001	286.00
		5 Total		286.00
		6	001	918.00
		6 Total		918.00
		7	001	512.00
		7 Total		512.00
CONCENTRA MEDICAL CENTERS Total				4,156.00
CORE & MAIN, LP	7772	1	001	0.00
			660	359.89
			680	4,876.77
		1 Total		5,236.66
		2	660	2,541.83
		2 Total		2,541.83
		3	660	1,574.88
		3 Total		1,574.88
		4	660	10,474.26
		4 Total		10,474.26
		5	660	10,569.74
		5 Total		10,569.74
		6	660	8,177.81
		6 Total		8,177.81
		7	660	2,994.79
		7 Total		2,994.79
CORE & MAIN, LP Total				41,569.97
CORNELL, JOE	8380	5	675	195.00
		5 Total		195.00
CORNELL, JOE Total				195.00
CORNERSTONE DEVELOPMENT CO.	8000	1	673	0.00
		1 Total		0.00
		2	673	8,310.00
		2 Total		8,310.00
		3	673	2,770.00
		3 Total		2,770.00
CORNERSTONE DEVELOPMENT CO. Total				11,080.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
CORPORATION SERVICE COMPANY	8102	1	001	318.00
		1 Total		318.00
		2	001	201.00
		2 Total		201.00
		3	001	56.00
		3 Total		56.00
		4	001	217.00
		4 Total		217.00
		5	001	21.00
		5 Total		21.00
		6	001	82.00
		6 Total		82.00
		7	001	368.00
			680	109.00
		7 Total		477.00
CORPORATION SERVICE COMPANY Total				1,372.00
COUNSELING TEAM INTERNATIONAL, THE	2232	1	700	1,560.00
		1 Total		1,560.00
		2	700	910.00
		2 Total		910.00
		3	700	910.00
		3 Total		910.00
		4	700	1,462.50
		4 Total		1,462.50
		5	700	910.00
		5 Total		910.00
		6	700	910.00
		6 Total		910.00
COUNSELING TEAM INTERNATIONAL, THE Total				6,662.50
COUTS HEATING & COOLING, INC	5345	1	001	0.00
			670	0.00
			704	7,444.34
		1 Total		7,444.34
		2	704	10,250.29
		2 Total		10,250.29
		3	704	10,080.76
		3 Total		10,080.76
		4	704	10,697.60
			810	12,270.40

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
COUTS HEATING & COOLING, INC	5345	4 Total		22,968.00
		5	704	3,972.62
			810	645.81
		5 Total		4,618.43
		6	704	1,635.81
		6 Total		1,635.81
		7	704	1,100.00
		7 Total		1,100.00
COUTS HEATING & COOLING, INC Total				58,097.63
CRABTREE, JEFFREY	7626	5	675	195.00
		5 Total		195.00
CRABTREE, JEFFREY Total				195.00
CRAIN, MARK	8385	5	675	195.00
		5 Total		195.00
CRAIN, MARK Total				195.00
CUMMINS SALES AND SERVICE	4047	5	702	840.00
		5 Total		840.00
CUMMINS SALES AND SERVICE Total				840.00
CYBERTIME NETWORK COMMUNICATIONS	6189	1	660	1,900.00
			703	699.00
		1 Total		2,599.00
		2	660	1,900.00
			703	699.00
		2 Total		2,599.00
		3	660	1,900.00
			703	699.00
		3 Total		2,599.00
		4	660	1,900.00
			703	699.00
		4 Total		2,599.00
		5	660	1,900.00
			703	699.00
			810	500.00
		5 Total		3,099.00
		6	660	1,900.00
			703	699.00
		6 Total		2,599.00
		7	660	1,900.00
			703	699.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
CYBERTIME NETWORK COMMUNICATIONS	6189	7 Total		2,599.00
CYBERTIME NETWORK COMMUNICATIONS Total				18,693.00
D&M JOB INC.	7696	1	001	215.50
			100	134.69
		1 Total		350.19
		3	001	1,206.80
			761	120.97
		3 Total		1,327.77
		4	001	280.15
		4 Total		280.15
		5	001	170.07
			100	134.69
			761	113.14
		5 Total		417.90
		6	610	134.31
		6 Total		134.31
		7	610	491.34
			670	242.44
			761	226.28
		7 Total		960.06
D&M JOB INC. Total				3,470.38
DATUIN JR, CORNELIO	5335	6	001	146.50
		6 Total		146.50
DATUIN JR, CORNELIO Total				146.50
DE LA HOYA, JUAN	8651	5	675	357.50
		5 Total		357.50
DE LA HOYA, JUAN Total				357.50
DELTA DENTAL INSURANCE COMPANY	8123	1	001	814.89
		1 Total		814.89
		2	001	885.61
		2 Total		885.61
		3	001	902.51
		3 Total		902.51
		4	001	894.06
		4 Total		894.06
		5	001	984.24
		5 Total		984.24
		6	001	924.12
		6 Total		924.12

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
DELTA DENTAL INSURANCE COMPANY Total				5,405.43
DELTA DENTAL OF CALIFORNIA	8108	1	001	7,581.00
		1 Total		7,581.00
		2	001	7,530.86
		2 Total		7,530.86
		3	001	7,522.62
		3 Total		7,522.62
		4	001	7,360.13
		4 Total		7,360.13
		5	001	8,065.07
		5 Total		8,065.07
		6	001	7,699.03
		6 Total		7,699.03
DELTA DENTAL OF CALIFORNIA Total				45,758.71
DEUSENBERRY, DANIEL	7070	1	001	15.75
		1 Total		15.75
		2	001	16.50
		2 Total		16.50
		3	001	16.50
		3 Total		16.50
		4	001	16.50
		4 Total		16.50
		6	001	42.00
		6 Total		42.00
DEUSENBERRY, DANIEL Total				107.25
DEWALT, RICK	8663	5	675	195.00
		5 Total		195.00
DEWALT, RICK Total				195.00
DIAMOND ENVIRONMENTAL SERVICES	6517	1	001	1,509.58
		1 Total		1,509.58
		2	001	416.54
			810	225.24
		2 Total		641.78
		3	001	290.60
			810	416.54
		3 Total		707.14
		4	001	456.00
			810	427.64
		4 Total		883.64

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
DIAMOND ENVIRONMENTAL SERVICES	6517	5	810	427.64
		5 Total		427.64
		7	001	165.40
		7 Total		165.40
DIAMOND ENVIRONMENTAL SERVICES Total				4,335.18
DIAMOND HILLS CHEVROLET BUICK GMC	7082	1	001	53,984.26
			702	21.12
		1 Total		54,005.38
		3	702	239.95
		3 Total		239.95
		5	702	341.68
		5 Total		341.68
		7	702	820.27
		7 Total		820.27
DIAMOND HILLS CHEVROLET BUICK GMC Total				55,407.28
DLT SOLUTIONS, LLC	5302	1	001	477.64
			100	477.64
			660	477.64
			680	477.64
		1 Total		1,910.56
DLT SOLUTIONS, LLC Total				1,910.56
DOBBINS, DEANN LOUISE	7512	1	001	218.40
		1 Total		218.40
		2	001	193.20
		2 Total		193.20
		3	001	98.00
		3 Total		98.00
		4	001	417.50
		4 Total		417.50
		5	001	116.20
		5 Total		116.20
		6	001	138.60
		6 Total		138.60
		7	001	61.60
		7 Total		61.60
DOBBINS, DEANN LOUISE Total				1,243.50
DUDEK	7112	1	660	0.00
		1 Total		0.00
		2	660	2,565.45

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
DUDEK	7112	2 Total		2,565.45
		3	660	31,301.59
		3 Total		31,301.59
		5	660	2,926.12
		5 Total		2,926.12
		6	660	28,017.00
		6 Total		28,017.00
		7	660	3,271.50
		7 Total		3,271.50
DUDEK Total				68,081.66
ECCLESTONE, CHERYL	7195	5	675	195.00
		5 Total		195.00
ECCLESTONE, CHERYL Total				195.00
EIDE BAILLY LLP	8531	1	001	4,304.00
			705	0.00
		1 Total		4,304.00
		2	001	9,497.31
			705	51,180.00
		2 Total		60,677.31
		3	001	6,976.24
		3 Total		6,976.24
		4	001	4,928.95
		4 Total		4,928.95
		5	001	25,230.85
			705	27,000.00
		5 Total		52,230.85
		6	001	4,464.20
		6 Total		4,464.20
		7	001	18,893.63
		7 Total		18,893.63
EIDE BAILLY LLP Total				152,475.18
ELECTRIC POWER SYSTEMS INT, INC.	7380	1	670	0.00
			673	0.00
		1 Total		0.00
		3	673	0.00
		3 Total		0.00
		4	673	3,499.80
		4 Total		3,499.80
		6	673	0.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
ELECTRIC POWER SYSTEMS INT, INC.	7380	6 Total		0.00
ELECTRIC POWER SYSTEMS INT, INC. Total				3,499.80
ELLIOTT, PATRICIA	8144	5	675	195.00
		5 Total		195.00
ELLIOTT, PATRICIA Total				195.00
ENGINEERING RESOURCES OF SO CA	7565	1	001	0.00
			660	0.00
			673	0.00
			680	0.00
		1 Total		0.00
		2	001	117,154.15
			660	12,642.00
			680	5,418.00
		2 Total		135,214.15
		3	001	92,237.83
			660	9,933.00
			680	4,257.00
		3 Total		106,427.83
		4	001	101,256.70
			660	10,459.75
			680	4,482.75
		4 Total		116,199.20
		5	001	118,622.59
			660	12,040.00
			680	5,160.00
		5 Total		135,822.59
		6	001	75,556.73
			660	9,632.00
			673	0.00
			680	4,128.00
		6 Total		89,316.73
ENGINEERING RESOURCES OF SO CA Total				582,980.50
ENTERPRISE FM TRUST	7536	1	001	5,092.73
			100	3,514.47
			660	29,080.78
			670	3,495.95
			702	728.19
			761	441.65
			810	275.79

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
ENTERPRISE FM TRUST	7536	1 Total		42,629.56
		2	001	5,083.98
			100	3,444.07
			660	10,940.43
			670	3,495.95
			702	948.02
			761	441.65
			810	275.79
		2 Total		24,629.89
		3	001	5,083.98
			100	2,833.83
			660	10,919.43
			670	3,495.95
			702	314.77
			761	441.65
			810	275.79
		3 Total		23,365.40
		4	001	4,525.45
			100	2,719.57
			660	10,835.26
			670	3,495.95
			702	1,228.55
			761	441.65
			810	303.89
		4 Total		23,550.32
		5	001	4,525.45
			100	8,621.85
			660	10,835.26
			670	3,495.95
			702	873.30
			761	441.65
			810	275.79
		5 Total		29,069.25
		6	001	22,398.01
			100	5,409.52
			660	10,835.26
			670	3,495.95
			702	750.82
			761	441.65

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
ENTERPRISE FM TRUST	7536	6	810	281.49
		6 Total		43,612.70
		7	001	18,971.75
			100	4,962.21
			660	10,835.26
			670	3,495.95
			702	314.77
			761	441.65
			810	282.69
		7 Total		39,304.28
ENTERPRISE FM TRUST Total				226,161.40
ENTERPRISE RENT-A-CAR	2753	1	001	190.70
		1 Total		190.70
		2	001	266.71
		2 Total		266.71
		3	001	141.77
		3 Total		141.77
		4	001	513.40
		4 Total		513.40
		6	001	384.15
		6 Total		384.15
		7	001	271.54
		7 Total		271.54
ENTERPRISE RENT-A-CAR Total				1,768.27
ESTERSON, LORI	7969	5	675	195.00
		5 Total		195.00
ESTERSON, LORI Total				195.00
ETHIER, GREG	8302	5	675	195.00
		5 Total		195.00
ETHIER, GREG Total				195.00
EXECUTIVE FACILTIES SERVICES INC	8518	1	704	17,835.81
		1 Total		17,835.81
		2	704	17,840.06
		2 Total		17,840.06
		3	704	17,838.80
		3 Total		17,838.80
		4	704	17,838.89
		4 Total		17,838.89
		5	704	17,838.22

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
EXECUTIVE FACILTIES SERVICES INC	8518	5 Total		17,838.22
		6	704	17,838.89
		6 Total		17,838.89
EXECUTIVE FACILTIES SERVICES INC Total				107,030.67
FALTO, CONSTANCE	7102	5	675	195.00
		5 Total		195.00
FALTO, CONSTANCE Total				195.00
FAST LUBE & TUNE	6794	1	702	1,211.02
		1 Total		1,211.02
		2	702	63.16
		2 Total		63.16
		3	702	369.93
		3 Total		369.93
		4	702	351.81
		4 Total		351.81
		5	702	49.99
		5 Total		49.99
		7	702	141.49
		7 Total		141.49
FAST LUBE & TUNE Total				2,187.40
FLETCHER, CORAL	8535	5	675	195.00
		5 Total		195.00
FLETCHER, CORAL Total				195.00
FLETCHER, TERRI	5651	5	675	195.00
		5 Total		195.00
FLETCHER, TERRI Total				195.00
FRONTIER COMMUNICATIONS	7053	1	001	2,944.73
			610	393.39
			660	463.15
			670	1,305.66
			703	468.88
			705	440.86
		1 Total		6,016.67
		2	001	2,892.46
			610	393.39
			660	463.15
			670	1,305.66
			703	468.88
			705	456.42

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
FRONTIER COMMUNICATIONS	7053	2 Total		5,979.96
		3	001	2,983.54
			610	454.11
			660	478.33
			670	1,336.02
			703	473.74
			705	442.25
		3 Total		6,167.99
		4	001	3,024.13
			610	456.39
			660	479.97
			670	1,337.40
			703	478.88
			705	503.72
		4 Total		6,280.49
		5	001	3,236.97
			610	456.39
			660	525.51
			670	1,352.58
			703	478.88
			705	518.90
		5 Total		6,569.23
		6	001	3,815.73
			610	456.39
			660	525.51
			670	1,352.58
			703	478.88
			705	132.25
		6 Total		6,761.34
		7	001	2,665.70
			610	457.22
			660	526.13
			670	1,353.09
			703	483.74
			705	459.62
		7 Total		5,945.50
FRONTIER COMMUNICATIONS Total				43,721.18
FUN EXPRESS	7117	2	001	265.82
		2 Total		265.82

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
FUN EXPRESS	7117	3	001	1,735.42
		3 Total		1,735.42
		4	001	177.48
		4 Total		177.48
		5	001	157.21
			201	329.33
		5 Total		486.54
FUN EXPRESS Total				2,665.26
G & G ENVIRONMENTAL COMPLIANCE, INC	5602	1	660	0.00
			680	0.00
		1 Total		0.00
		2	680	2,271.90
		2 Total		2,271.90
G & G ENVIRONMENTAL COMPLIANCE, INC Total				2,271.90
GAS COMPANY, THE	1375	1	001	1,834.70
			100	12.90
			600	22.52
			660	28.78
			670	28.78
			702	28.78
			704	15.00
			705	9.24
		1 Total		1,980.70
		2	001	1,365.60
			100	17.68
			600	23.76
			660	39.41
			670	39.41
			702	39.41
			704	14.79
			705	9.39
		2 Total		1,549.45
		3	001	1,782.96
			100	12.20
			600	23.11
			660	27.21
			670	27.21
			702	27.21
			704	16.37

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
GAS COMPANY, THE	1375	3	705	32.84
		3 Total		1,949.11
		4	001	837.84
			100	18.11
			600	25.62
			660	40.40
			670	40.40
			702	40.40
			704	14.30
			705	41.62
		4 Total		1,058.69
		5	001	1,196.03
			100	87.58
			600	44.84
			660	195.36
			670	195.36
			702	195.36
			704	16.27
			705	48.12
		5 Total		1,978.92
		6	001	2,051.19
			100	121.67
			600	94.19
			660	271.44
			670	271.44
			702	271.44
			704	57.14
			705	54.33
		6 Total		3,192.84
		7	001	2,211.57
			100	167.70
			600	135.90
			660	374.13
			670	374.13
			702	374.13
			704	67.58
			705	63.40
		7 Total		3,768.54
GAS COMPANY, THE Total				15,478.25

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
GRAINGER	448	1	702	1,592.70
		1 Total		1,592.70
		2	610	112.70
			660	103.18
			702	1,012.39
		2 Total		1,228.27
		3	660	347.07
			702	1,125.94
		3 Total		1,473.01
		4	702	1,888.36
			704	164.99
		4 Total		2,053.35
		5	702	668.37
			704	796.67
		5 Total		1,465.04
		6	702	965.59
			704	272.18
		6 Total		1,237.77
		7	702	1,076.60
			704	608.67
		7 Total		1,685.27
GRAINGER Total				10,735.41
GREEN DREAM INTERNATIONAL LLC	8536	2	660	711.71
		2 Total		711.71
		3	660	1,030.86
		3 Total		1,030.86
GREEN DREAM INTERNATIONAL LLC Total				1,742.57
GREYBAR PRINTING	2470	7	001	536.09
		7 Total		536.09
GREYBAR PRINTING Total				536.09
GUZMAN, SUSANA	7288	5	675	195.00
		5 Total		195.00
GUZMAN, SUSANA Total				195.00
HAAKER EQUIPMENT COMPANY	205	3	702	851.09
		3 Total		851.09
		5	680	3,008.74
		5 Total		3,008.74
HAAKER EQUIPMENT COMPANY Total				3,859.83
HALLOCK, DENNIS	6232	5	675	195.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
HALLOCK, DENNIS	6232	5 Total		195.00
HALLOCK, DENNIS Total				195.00
HARDEE, TIMOTHY	8665	5	675	195.00
		5 Total		195.00
HARDEE, TIMOTHY Total				195.00
HARDY & HARPER, INC	6817	1	101	0.00
			102	0.00
			660	25,500.75
		1 Total		25,500.75
HARDY & HARPER, INC Total				25,500.75
HARGROVE, JOHN	7777	1	761	16.76
		1 Total		16.76
		4	761	250.00
		4 Total		250.00
HARGROVE, JOHN Total				266.76
HAZEN AND SAWYER	6977	1	660	0.00
			661	1,190.75
		1 Total		1,190.75
		3	661	2,160.00
		3 Total		2,160.00
		5	660	11,387.50
		5 Total		11,387.50
HAZEN AND SAWYER Total				14,738.25
HEISS, SUZANNA	7987	5	675	195.00
		5 Total		195.00
HEISS, SUZANNA Total				195.00
HEMET VALLEY TOOL, INC	7766	1	660	544.75
		1 Total		544.75
		2	660	95.00
		2 Total		95.00
		5	100	82.63
		5 Total		82.63
		7	100	178.98
			660	458.17
		7 Total		637.15
HEMET VALLEY TOOL, INC Total				1,359.53
HERC RENTALS INC.	6746	3	704	872.54
		3 Total		872.54
		4	100	416.85

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
HERC RENTALS INC.	6746	4	704	452.44
		4 Total		869.29
HERC RENTALS INC. Total				1,741.83
HERNANDEZ, CARLA	7557	1	001	70.00
		1 Total		70.00
		2	001	875.00
		2 Total		875.00
		3	001	665.00
		3 Total		665.00
		4	001	913.50
		4 Total		913.50
		5	001	910.00
		5 Total		910.00
		6	001	1,190.00
		6 Total		1,190.00
		7	001	1,022.00
		7 Total		1,022.00
HERNANDEZ, CARLA Total				5,645.50
HERRERA, SANDRA	8036	5	675	195.00
		5 Total		195.00
HERRERA, SANDRA Total				195.00
HINDERLITER DE LLAMAS & ASSOCIATES	2370	1	001	0.00
		1 Total		0.00
		2	001	1,439.80
		2 Total		1,439.80
		3	001	0.00
		3 Total		0.00
		5	001	1,393.08
		5 Total		1,393.08
HINDERLITER DE LLAMAS & ASSOCIATES Total				2,832.88
HOME DEPOT #8987	5365	1	001	807.65
			110	0.00
			660	0.00
			670	643.68
			675	164.66
			704	68.67
			761	378.57
		1 Total		2,063.23
		2	001	164.64

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
HOME DEPOT #8987	5365	2	660	1,126.46
			670	267.76
			704	323.87
			761	8.06
			810	511.36
		2 Total		2,402.15
		3	111	64.61
			660	501.15
			670	746.25
			675	1,515.10
			704	127.68
			810	193.74
		3 Total		3,148.53
		4	660	864.67
			670	608.37
			675	598.49
			680	253.35
			704	440.88
		4 Total		2,765.76
		5	001	0.00
			670	66.13
			675	1,932.38
			704	665.30
		5 Total		2,663.81
		6	100	96.94
			660	1,520.78
			670	33.31
			675	211.75
			680	246.89
			704	250.71
		6 Total		2,360.38
		7	001	295.61
			660	648.84
			675	1,841.83
			704	0.00
		7 Total		2,786.28
HOME DEPOT #8987 Total				18,190.14
HOPKINS, VICKI	7624	5	675	195.00
		5 Total		195.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
HOPKINS, VICKI Total				195.00
HUERTA JR., GILBERT	7697	1	001	420.00
		1 Total		420.00
		2	001	542.50
		2 Total		542.50
		3	001	437.50
		3 Total		437.50
		4	001	612.50
		4 Total		612.50
		5	001	577.50
		5 Total		577.50
		6	001	455.00
		6 Total		455.00
		7	001	420.00
		7 Total		420.00
HUERTA JR., GILBERT Total				3,465.00
I.B.E.W. LOCAL 47	1146	1	001	10,960.34
		1 Total		10,960.34
		2	001	10,576.65
		2 Total		10,576.65
		3	001	10,501.65
		3 Total		10,501.65
		4	001	10,508.12
		4 Total		10,508.12
		5	001	10,346.42
		5 Total		10,346.42
		6	001	10,281.46
		6 Total		10,281.46
I.B.E.W. LOCAL 47 Total				63,174.64
I.B.E.W. LOCAL 47 (PAC)	4086	1	001	40.00
		1 Total		40.00
		2	001	48.00
		2 Total		48.00
		3	001	48.00
		3 Total		48.00
		4	001	48.00
		4 Total		48.00
		5	001	48.00
		5 Total		48.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
I.B.E.W. LOCAL 47 (PAC)	4086	6	001	48.00
		6 Total		48.00
I.B.E.W. LOCAL 47 (PAC) Total				280.00
IBEW LOCAL 47 RETIREE MEDICAL TRUST	5217	1	001	6,094.03
		1 Total		6,094.03
		2	001	5,941.92
		2 Total		5,941.92
		3	001	5,866.36
		3 Total		5,866.36
		4	001	5,822.58
		4 Total		5,822.58
		5	001	8,661.87
		5 Total		8,661.87
		6	001	5,820.89
		6 Total		5,820.89
		7	001	6,131.72
		7 Total		6,131.72
IBEW LOCAL 47 RETIREE MEDICAL TRUST Total				44,339.37
IMEG CONSULTANTS CORP	8667	1	810	4,150.50
		1 Total		4,150.50
		3	810	12,177.39
		3 Total		12,177.39
		4	810	3,519.90
		4 Total		3,519.90
		6	810	1,932.50
		6 Total		1,932.50
		7	810	6,688.61
		7 Total		6,688.61
IMEG CONSULTANTS CORP Total				28,468.90
IMPERIAL SUPPLIES, LLC	7970	2	702	113.22
		2 Total		113.22
		3	702	243.03
		3 Total		243.03
		6	702	159.68
		6 Total		159.68
IMPERIAL SUPPLIES, LLC Total				515.93
INFOSEND, INC	6490	1	001	0.00
			100	0.00
			610	0.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
INFOSEND, INC	6490	1	660	821.15
			670	0.00
			675	0.00
			680	0.00
			690	0.00
			761	9,083.92
		1 Total		9,905.07
		2	761	11,159.96
		2 Total		11,159.96
		3	761	7,748.14
		3 Total		7,748.14
		4	761	7,619.38
		4 Total		7,619.38
		5	761	5,955.58
		5 Total		5,955.58
		6	761	3,178.51
		6 Total		3,178.51
		7	761	2,980.74
		7 Total		2,980.74
INFOSEND, INC Total				48,547.38
INNOVATIVE EMERGENCY EQUIPMENT	7066	2	001	0.00
		2 Total		0.00
		3	001	4,734.74
		3 Total		4,734.74
		4	001	0.00
			702	82.43
		4 Total		82.43
INNOVATIVE EMERGENCY EQUIPMENT Total				4,817.17
INNOVATIVE FEDERAL STRATEGIES	6624	1	001	0.00
			660	0.00
			670	0.00
			680	0.00
			705	4,750.00
		1 Total		4,750.00
		2	705	4,750.00
		2 Total		4,750.00
		3	705	4,750.00
		3 Total		4,750.00
		4	705	4,750.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
INNOVATIVE FEDERAL STRATEGIES	6624	4 Total		4,750.00
		5	705	4,750.00
		5 Total		4,750.00
		6	705	4,750.00
		6 Total		4,750.00
		7	705	4,750.00
		7 Total		4,750.00
INNOVATIVE FEDERAL STRATEGIES Total				33,250.00
INTERNAL REVENUE SERVICE	2484	1	001	853,218.69
		1 Total		853,218.69
		2	001	516,288.80
		2 Total		516,288.80
		3	001	540,651.25
		3 Total		540,651.25
		4	001	455,603.44
		4 Total		455,603.44
		5	001	485,970.61
		5 Total		485,970.61
		6	001	668,441.70
		6 Total		668,441.70
		7	001	521,869.52
		7 Total		521,869.52
INTERNAL REVENUE SERVICE Total				4,042,044.01
IRON MOUNTAIN INFORMATION MGMT, LLC	6816	1	670	141.66
		1 Total		141.66
		2	670	98.31
		2 Total		98.31
		3	670	197.48
		3 Total		197.48
		4	670	98.32
		4 Total		98.32
		6	670	193.29
		6 Total		193.29
IRON MOUNTAIN INFORMATION MGMT, LLC Total				729.06
JACKSON, JENNIFER	7746	1	001	300.00
		1 Total		300.00
JACKSON, JENNIFER Total				300.00
JEWS, NICOLE	8232	3	001	478.71
		3 Total		478.71

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
JEWS, NICOLE	8232	4	001	410.43
		4 Total		410.43
		5	001	114.00
		5 Total		114.00
		7	001	92.75
		7 Total		92.75
JEWS, NICOLE Total				1,095.89
JNE POLYGRAPH LLC	8039	1	001	850.00
		1 Total		850.00
		2	001	1,700.00
		2 Total		1,700.00
		5	001	425.00
		5 Total		425.00
JNE POLYGRAPH LLC Total				2,975.00
JOE A GONSALVES & SON	5701	1	001	1,925.00
			705	1,925.00
		1 Total		3,850.00
		2	001	1,925.00
			705	1,925.00
		2 Total		3,850.00
		3	001	1,925.00
			705	1,925.00
		3 Total		3,850.00
		4	001	1,925.00
			705	1,925.00
		4 Total		3,850.00
		5	001	1,925.00
			705	1,925.00
		5 Total		3,850.00
		6	001	1,925.00
			705	1,925.00
		6 Total		3,850.00
		7	001	1,925.00
			705	1,925.00
		7 Total		3,850.00
JOE A GONSALVES & SON Total				26,950.00
KAKISH, BISHARA	8195	5	675	195.00
		5 Total		195.00
KAKISH, BISHARA Total				195.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
KEMIRA WATER SOLUTIONS INC	5794	6	680	4,819.74
		6 Total		4,819.74
KEMIRA WATER SOLUTIONS INC Total				4,819.74
KEN GRODY FORD REDLANDS	7850	1	702	6,773.36
		1 Total		6,773.36
		2	702	55.17
		2 Total		55.17
		4	702	1,308.29
		4 Total		1,308.29
		5	702	9,149.68
		5 Total		9,149.68
		7	702	6,948.99
		7 Total		6,948.99
KEN GRODY FORD REDLANDS Total				24,235.49
KIMLEY-HORN AND ASSOCIATES, INC	8101	1	001	10,027.50
			681	0.00
		1 Total		10,027.50
		2	001	20,582.50
			681	11,255.00
		2 Total		31,837.50
		3	001	8,342.50
			681	27,270.00
		3 Total		35,612.50
		4	001	3,962.50
			681	9,600.00
		4 Total		13,562.50
		6	681	20,841.75
		6 Total		20,841.75
KIMLEY-HORN AND ASSOCIATES, INC Total				111,881.75
KOLLER, MARIE	7103	1	001	21.00
		1 Total		21.00
		2	001	8.40
		2 Total		8.40
		4	001	21.00
		4 Total		21.00
		5	001	10.50
			675	195.00
		5 Total		205.50
		6	001	4.20

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
KOLLER, MARIE	7103	6 Total		4.20
		7	001	18.90
		7 Total		18.90
KOLLER, MARIE Total				279.00
KV'S FLOORING	7709	5	704	0.00
			810	1,693.61
		5 Total		1,693.61
KV'S FLOORING Total				1,693.61
LARA, TORIBIO	6856	5	675	195.00
		5 Total		195.00
LARA, TORIBIO Total				195.00
LEADSONLINE, LLC.	8011	1	001	3,886.00
		1 Total		3,886.00
LEADSONLINE, LLC. Total				3,886.00
LEXISNEXIS RISK SOLUTIONS	6618	1	001	7,783.43
		1 Total		7,783.43
		2	001	112.55
		2 Total		112.55
		3	001	112.55
		3 Total		112.55
		4	001	112.55
		4 Total		112.55
		5	001	112.55
		5 Total		112.55
		6	001	112.55
		6 Total		112.55
		7	001	112.55
		7 Total		112.55
LEXISNEXIS RISK SOLUTIONS Total				8,458.73
LIEBERT CASSIDY WHITMORE	4249	1	700	45,953.37
		1 Total		45,953.37
		2	700	43,741.78
		2 Total		43,741.78
		3	700	38,919.78
		3 Total		38,919.78
		4	700	64,612.05
		4 Total		64,612.05
		5	700	46,018.00
		5 Total		46,018.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
LIEBERT CASSIDY WHITMORE	4249	6	700	49,463.90
		6 Total		49,463.90
LIEBERT CASSIDY WHITMORE Total				288,708.88
LINCOLN FINANCIAL GROUP	8577	1	001	10,940.66
		1 Total		10,940.66
		2	001	11,646.37
		2 Total		11,646.37
		3	001	11,432.30
		3 Total		11,432.30
		4	001	10,552.96
		4 Total		10,552.96
		5	001	11,117.56
		5 Total		11,117.56
		6	001	11,656.16
		6 Total		11,656.16
		7	001	11,335.37
		7 Total		11,335.37
LINCOLN FINANCIAL GROUP Total				78,681.38
LOFTIS, MILDRED	6345	5	675	195.00
		5 Total		195.00
LOFTIS, MILDRED Total				195.00
MACIEL, JOSE	6330	5	675	195.00
		5 Total		195.00
MACIEL, JOSE Total				195.00
MARIPOSA LANDSCAPES, INC	8055	1	001	62,242.39
			100	0.00
			111	7,080.60
			660	1,963.44
			704	12,523.85
			810	6,227.00
		1 Total		90,037.28
		2	001	26,581.77
			111	6,517.60
			660	1,963.44
			704	9,775.85
		2 Total		44,838.66
		3	001	10,589.97
			111	6,517.60
			660	1,963.44

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
MARIPOSA LANDSCAPES, INC	8055	3	704	9,775.85
		3 Total		28,846.86
		4	001	14,286.86
			111	7,737.60
			660	1,963.44
			704	9,775.85
		4 Total		33,763.75
		5	001	13,471.60
			111	6,954.60
			660	1,963.44
			704	10,615.85
		5 Total		33,005.49
		6	001	14,339.97
			111	7,333.60
			660	1,963.44
			704	11,241.85
		6 Total		34,878.86
		7	001	10,589.97
			111	6,517.60
			660	1,963.44
			704	9,775.85
		7 Total		28,846.86
MARIPOSA LANDSCAPES, INC Total				294,217.76
MASON, BARBARA	8498	1	001	158.16
		1 Total		158.16
		3	001	193.92
		3 Total		193.92
MASON, BARBARA Total				352.08
MASTEN, STAR	7104	5	675	195.00
		5 Total		195.00
MASTEN, STAR Total				195.00
MC ARRON, SUSAN	7962	5	675	195.00
		5 Total		195.00
MC ARRON, SUSAN Total				195.00
MC AVOY & MARKHAM	287	2	670	4,015.00
		2 Total		4,015.00
		3	670	20,990.78
		3 Total		20,990.78
		6	670	14,273.73

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
MC AVOY & MARKHAM	287	6 Total		14,273.73
		7	670	41,264.80
		7 Total		41,264.80
MC AVOY & MARKHAM Total				80,544.31
MCFARLAND, DARLENE	7489	5	675	195.00
		5 Total		195.00
MCFARLAND, DARLENE Total				195.00
MERCFUEL, INC	7980	5	600	32,853.59
		5 Total		32,853.59
MERCFUEL, INC Total				32,853.59
MERLIN JOHNSON CONSTRUCTION, INC	3577	1	660	0.00
		1 Total		0.00
		2	660	981.24
		2 Total		981.24
		4	660	1,594.52
		4 Total		1,594.52
		5	660	1,962.48
		5 Total		1,962.48
		6	660	1,962.48
		6 Total		1,962.48
MERLIN JOHNSON CONSTRUCTION, INC Total				6,500.72
MEZA, TOMMY & GLORIA	7126	5	675	195.00
		5 Total		195.00
MEZA, TOMMY & GLORIA Total				195.00
MICHAEL BAKER INTERNATIONAL, INC	7379	1	002	0.00
			673	0.00
		1 Total		0.00
		2	002	6,257.50
		2 Total		6,257.50
		3	002	4,282.50
		3 Total		4,282.50
		5	002	1,710.00
		5 Total		1,710.00
MICHAEL BAKER INTERNATIONAL, INC Total				12,250.00
MIDDLETON, SHARON	7458	5	675	195.00
		5 Total		195.00
MIDDLETON, SHARON Total				195.00
MILLER, NINA	6344	5	675	195.00
		5 Total		195.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
MILLER, NINA Total				195.00
MILSOFT UTILITY SOLUTIONS, INC	7548	1	761	10,900.00
		1 Total		10,900.00
		2	670	1,929.00
			761	3,200.00
		2 Total		5,129.00
		3	670	1,929.00
			761	3,200.00
		3 Total		5,129.00
		4	670	0.00
			761	5,129.00
		4 Total		5,129.00
		5	670	290.48
			761	18,529.00
		5 Total		18,819.48
		6	670	6,956.99
			761	5,129.00
		6 Total		12,085.99
		7	670	6,250.00
			761	3,200.00
		7 Total		9,450.00
MILSOFT UTILITY SOLUTIONS, INC Total				66,642.47
MISC VENDOR	99001	1	001	2,370.91
			600	342.57
		1 Total		2,713.48
		2	001	4,360.91
			675	350.00
		2 Total		4,710.91
		3	001	4,208.86
		3 Total		4,208.86
		4	001	12,229.92
		4 Total		12,229.92
		6	001	100.00
		6 Total		100.00
		7	001	400.00
		7 Total		400.00
MISC VENDOR Total				24,363.17
MITSUBISHI ELECTRIC & ELECTRONICS	6402	1	001	0.00
			704	353.87

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
MITSUBISHI ELECTRIC & ELECTRONICS	6402	1 Total		353.87
		2	704	353.87
		2 Total		353.87
		3	704	353.87
		3 Total		353.87
		4	704	353.87
		4 Total		353.87
		5	704	353.87
		5 Total		353.87
		6	704	353.87
		6 Total		353.87
		7	704	353.87
		7 Total		353.87
MITSUBISHI ELECTRIC & ELECTRONICS Total				2,477.09
MOLINA, JUANA	8513	5	675	195.00
		5 Total		195.00
MOLINA, JUANA Total				195.00
MORENO, ANGELA	6741	5	675	195.00
		5 Total		195.00
MORENO, ANGELA Total				195.00
MY COI LLC	8322	1	705	1,600.00
		1 Total		1,600.00
		2	705	800.00
		2 Total		800.00
		3	705	800.00
		3 Total		800.00
		5	705	8,400.00
		5 Total		8,400.00
		7	705	0.00
		7 Total		0.00
MY COI LLC Total				11,600.00
MYERING, NEAL	8301	5	675	195.00
		5 Total		195.00
MYERING, NEAL Total				195.00
MYERS & SONS HI-WAY SAFETY INC.	3909	1	610	0.00
			670	3,899.44
		1 Total		3,899.44
		3	100	2,313.07
		3 Total		2,313.07

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
MYERS & SONS HI-WAY SAFETY INC.	3909	5	100	1,564.25
		5 Total		1,564.25
		6	100	2,370.45
		6 Total		2,370.45
		7	100	889.39
		7 Total		889.39
MYERS & SONS HI-WAY SAFETY INC. Total				11,036.60
N2W ENGINEERING, INC	8001	1	680	0.00
			681	0.00
		1 Total		0.00
		2	680	36,406.88
		2 Total		36,406.88
		3	680	39,107.88
		3 Total		39,107.88
		4	680	24,817.50
		4 Total		24,817.50
		5	680	46,988.99
		5 Total		46,988.99
		6	680	18,184.38
		6 Total		18,184.38
		7	680	12,053.75
		7 Total		12,053.75
N2W ENGINEERING, INC Total				177,559.38
NEXTREQUEST	7519	1	705	7,019.55
		1 Total		7,019.55
NEXTREQUEST Total				7,019.55
NHA ADVISORS, LLC	8350	1	680	2,231.25
		1 Total		2,231.25
		2	670	8,693.75
			680	1,481.25
		2 Total		10,175.00
		3	670	11,462.50
		3 Total		11,462.50
		4	670	12,181.25
		4 Total		12,181.25
		5	670	10,150.00
		5 Total		10,150.00
NHA ADVISORS, LLC Total				46,200.00
NIETO, FRANCISCO	7563	3	001	55.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
NIETO, FRANCISCO	7563	3 Total		55.00
		4	001	16.50
		4 Total		16.50
		5	001	32.25
		5 Total		32.25
NIETO, FRANCISCO Total				103.75
ONESOURCE DISTRIBUTORS	5076	1	660	377.13
			670	5,401.94
		1 Total		5,779.07
		2	670	22,739.56
		2 Total		22,739.56
		3	670	3,687.21
		3 Total		3,687.21
		4	670	202,791.76
		4 Total		202,791.76
		5	670	5,834.67
		5 Total		5,834.67
		6	670	2,548.12
		6 Total		2,548.12
ONESOURCE DISTRIBUTORS Total				243,380.39
ORACLE AMERICA INC	8458	1	222	40,963.23
			705	0.00
		1 Total		40,963.23
		2	222	13,267.92
			705	0.00
		2 Total		13,267.92
		3	222	7,230.06
			705	17,548.50
		3 Total		24,778.56
		4	222	76.92
			705	0.00
		4 Total		76.92
		6	705	17,548.50
		6 Total		17,548.50
		7	222	0.00
		7 Total		0.00
ORACLE AMERICA INC Total				96,635.13
P&P UNIFORMS	6764	3	001	673.37
		3 Total		673.37

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
P&P UNIFORMS	6764	4	001	19.38
		4 Total		19.38
		5	001	277.96
		5 Total		277.96
P&P UNIFORMS Total				970.71
PACKHAM & TOOMEY, INC	7787	1	600	125.00
			702	135.00
		1 Total		260.00
		2	600	125.00
			702	135.00
		2 Total		260.00
		3	600	125.00
			702	1,514.43
		3 Total		1,639.43
		4	600	125.00
			702	135.00
		4 Total		260.00
		5	600	125.00
			702	135.00
		5 Total		260.00
		6	600	125.00
			702	985.00
		6 Total		1,110.00
PACKHAM & TOOMEY, INC Total				3,789.43
PARKHOUSE TIRE, INC.	2487	1	702	5,119.05
		1 Total		5,119.05
		2	702	2,386.54
		2 Total		2,386.54
		3	702	4,832.09
		3 Total		4,832.09
		4	702	7,688.77
		4 Total		7,688.77
		5	702	6,854.19
		5 Total		6,854.19
		6	702	1,713.70
		6 Total		1,713.70
		7	702	1,610.60
		7 Total		1,610.60
PARKHOUSE TIRE, INC. Total				30,204.94

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
PARS	5191	1	001	4,910.37
		1 Total		4,910.37
		2	001	3,564.59
		2 Total		3,564.59
		3	001	951.64
		3 Total		951.64
		4	001	707.39
		4 Total		707.39
		5	001	891.45
		5 Total		891.45
		6	001	697.63
		6 Total		697.63
		7	001	1,022.32
		7 Total		1,022.32
PARS Total				12,745.39
PARTS AUTHORITY	7789	1	702	2,791.23
		1 Total		2,791.23
		2	702	2,865.79
		2 Total		2,865.79
		3	702	2,224.55
		3 Total		2,224.55
		4	702	3,798.81
		4 Total		3,798.81
		5	702	1,225.64
		5 Total		1,225.64
		6	702	2,030.23
		6 Total		2,030.23
		7	702	3,873.98
		7 Total		3,873.98
PARTS AUTHORITY Total				18,810.23
PATTON, CAROLINE	8138	3	001	164.63
		3 Total		164.63
		4	001	135.37
		4 Total		135.37
PATTON, CAROLINE Total				300.00
PAYPRO ADMINISTRATORS	5752	1	001	171.00
		1 Total		171.00
		3	001	115.00
		3 Total		115.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
PAYPRO ADMINISTRATORS	5752	4	001	115.00
		4 Total		115.00
		5	001	115.00
		5 Total		115.00
		6	001	171.00
		6 Total		171.00
		7	001	115.00
		7 Total		115.00
PAYPRO ADMINISTRATORS Total				802.00
PETRUCCI, TERESA	8111	5	675	195.00
		5 Total		195.00
PETRUCCI, TERESA Total				195.00
PETTY CASH CUSTODIAN-COMM SVCS	1974	5	001	56.78
		5 Total		56.78
PETTY CASH CUSTODIAN-COMM SVCS Total				56.78
PETTY CASH CUSTODIAN-SR CENTER	3015	6	001	69.11
		6 Total		69.11
PETTY CASH CUSTODIAN-SR CENTER Total				69.11
PITTMAN, DAVID	7506	5	675	195.00
		5 Total		195.00
PITTMAN, DAVID Total				195.00
PLAYHOUSE BOWL ASSOCIATION, INC.	3560	1	001	12,500.00
		1 Total		12,500.00
PLAYHOUSE BOWL ASSOCIATION, INC. Total				12,500.00
POULTER, HANNAH	8226	1	001	17.25
		1 Total		17.25
		2	001	459.00
		2 Total		459.00
		3	001	459.00
		3 Total		459.00
		4	001	1,374.25
		4 Total		1,374.25
		5	001	49.50
		5 Total		49.50
POULTER, HANNAH Total				2,359.00
PRE-PAID LEGAL SERVICES, INC	4411	1	001	313.91
		1 Total		313.91
		2	001	297.96
		2 Total		297.96

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
PRE-PAID LEGAL SERVICES, INC	4411	3	001	272.06
		3 Total		272.06
		4	001	423.51
		4 Total		423.51
		5	001	397.61
		5 Total		397.61
		6	001	381.66
		6 Total		381.66
PRE-PAID LEGAL SERVICES, INC Total				2,086.71
PRUITT, CARMEN	8293	5	675	195.00
		5 Total		195.00
PRUITT, CARMEN Total				195.00
PUBLIC AGENCY RETIREMENT SERVICES	5242	3	001	300.00
		3 Total		300.00
		4	001	300.00
		4 Total		300.00
		5	001	300.00
		5 Total		300.00
		6	001	300.00
		6 Total		300.00
		7	001	300.00
		7 Total		300.00
PUBLIC AGENCY RETIREMENT SERVICES Total				1,500.00
PULVER, JODEANE V	8168	1	001	248.50
		1 Total		248.50
		2	001	189.00
		2 Total		189.00
		3	001	255.50
		3 Total		255.50
		4	001	206.50
		4 Total		206.50
		5	001	154.00
		5 Total		154.00
		6	001	136.50
		6 Total		136.50
		7	001	178.50
		7 Total		178.50
PULVER, JODEANE V Total				1,368.50
QUINN COMPANY	7271	6	702	403.30

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
QUINN COMPANY	7271	6 Total		403.30
QUINN COMPANY Total				403.30
RACEWAY FORD INC	4759	1	702	90.30
		1 Total		90.30
		3	702	7.72
		3 Total		7.72
		4	702	2,076.79
		4 Total		2,076.79
		5	702	787.58
		5 Total		787.58
		6	702	4,609.48
		6 Total		4,609.48
		7	702	28.05
		7 Total		28.05
RACEWAY FORD INC Total				7,599.92
REAVIS CODE UTILITY SOLUTIONS, LLC	7648	1	670	51,300.00
		1 Total		51,300.00
REAVIS CODE UTILITY SOLUTIONS, LLC Total				51,300.00
RECORD GAZETTE, THE	1555	1	001	368.58
		1 Total		368.58
	8813	5	001	900.00
		5 Total		900.00
RECORD GAZETTE, THE Total				1,268.58
REZENDES, DILLON	8243	2	001	379.50
		2 Total		379.50
		5	001	4,363.05
		5 Total		4,363.05
		6	001	33.00
		6 Total		33.00
REZENDES, DILLON Total				4,775.55
RICHARDS WATSON GERSHON	7337	2	002	23,580.35
			700	50,426.44
		2 Total		74,006.79
		3	002	18,998.54
			700	75,132.36
		3 Total		94,130.90
		4	002	17,148.37
			700	64,506.41
		4 Total		81,654.78

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
RICHARDS WATSON GERSHON	7337	5	002	48,479.90
			700	79,345.44
		5 Total		127,825.34
		6	002	8,098.67
			700	50,938.09
		6 Total		59,036.76
		7	002	9,763.20
			700	53,321.00
		7 Total		63,084.20
RICHARDS WATSON GERSHON Total				499,738.77
RICK ENGINEERING COMPANY	8632	1	660	0.00
		1 Total		0.00
		2	660	5,975.39
		2 Total		5,975.39
		3	660	23,574.55
		3 Total		23,574.55
		4	660	7,519.20
		4 Total		7,519.20
		5	660	4,925.90
		5 Total		4,925.90
		7	660	754.78
		7 Total		754.78
RICK ENGINEERING COMPANY Total				42,749.82
RINALDI, LORETTA	5424	5	675	195.00
		5 Total		195.00
RINALDI, LORETTA Total				195.00
RINCON CONSULTANTS, INC.	8003	1	001	0.00
			420	0.00
			660	0.00
		1 Total		0.00
		2	001	2,560.50
			420	336.00
		2 Total		2,896.50
		4	001	733.25
		4 Total		733.25
RINCON CONSULTANTS, INC. Total				3,629.75
RISCHARD, ROBERT	8512	5	675	195.00
		5 Total		195.00
RISCHARD, ROBERT Total				195.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
RIV. CO. HEALTH SVCS AGENCY	2526	2	001	366.00
		2 Total		366.00
RIV. CO. HEALTH SVCS AGENCY Total				366.00
RIVERA, KATHLEEN	7529	5	675	195.00
		5 Total		195.00
RIVERA, KATHLEEN Total				195.00
RIVERSIDE COUNTY SHERIFF-PSEC	2938	3	001	5,157.40
		3 Total		5,157.40
		4	001	5,768.44
		4 Total		5,768.44
		5	001	6,699.80
		5 Total		6,699.80
		6	001	6,699.80
		6 Total		6,699.80
RIVERSIDE COUNTY SHERIFF-PSEC Total				24,325.44
RIVERSIDE PUBLIC UTILITIES	4433	1	670	1,472,841.79
		1 Total		1,472,841.79
		2	670	3,054,511.61
		2 Total		3,054,511.61
		3	670	2,701,396.14
		3 Total		2,701,396.14
		4	670	2,672,505.19
		4 Total		2,672,505.19
		5	670	1,543,484.04
		5 Total		1,543,484.04
		6	670	1,618,208.66
		6 Total		1,618,208.66
		7	670	1,565,002.49
		7 Total		1,565,002.49
RIVERSIDE PUBLIC UTILITIES Total				14,627,949.92
RIVERSIDE UNIVERSITY HEALTH SYSTEM	7998	3	001	2,400.00
		3 Total		2,400.00
RIVERSIDE UNIVERSITY HEALTH SYSTEM Total				2,400.00
RIVERSIDE, COUNTY OF	1317	3	001	147.00
		3 Total		147.00
		6	001	245.00
		6 Total		245.00
	1319	1	001	8,481.25
		1 Total		8,481.25

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
RIVERSIDE, COUNTY OF Total				8,873.25
ROBERT HALF INTERNATIONAL	5151	1	001	15,493.00
		1 Total		15,493.00
		2	001	(21.74)
		2 Total		(21.74)
ROBERT HALF INTERNATIONAL Total				15,471.26
ROBINSON, BRANDON A	6532	3	670	154.94
		3 Total		154.94
ROBINSON, BRANDON A Total				154.94
ROCHA, MARGARET	8511	5	675	195.00
		5 Total		195.00
ROCHA, MARGARET Total				195.00
RODRIGUEZ, SANDRA	8655	5	675	195.00
		5 Total		195.00
RODRIGUEZ, SANDRA Total				195.00
SAN BERNARDINO PUBLIC EMPLOYEES	5998	1	001	2,769.17
		1 Total		2,769.17
		2	001	2,721.23
		2 Total		2,721.23
		3	001	2,527.57
		3 Total		2,527.57
		4	001	2,371.89
		4 Total		2,371.89
		5	001	2,363.37
		5 Total		2,363.37
		6	001	2,498.86
		6 Total		2,498.86
SAN BERNARDINO PUBLIC EMPLOYEES Total				15,252.09
SAN GORGONIO PASS WATER AGENCY	3125	6	660	199,500.00
		6 Total		199,500.00
SAN GORGONIO PASS WATER AGENCY Total				199,500.00
SATELLITE PHONE STORE	8235	1	703	307.95
		1 Total		307.95
		2	703	307.95
		2 Total		307.95
		3	703	307.95
		3 Total		307.95
		4	703	307.95
		4 Total		307.95

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
SATELLITE PHONE STORE	8235	5	703	307.95
		5 Total		307.95
		7	703	307.95
		7 Total		307.95
SATELLITE PHONE STORE Total				1,847.70
SC FUELS	7727	1	702	54,632.56
		1 Total		54,632.56
		2	702	592.00
		2 Total		592.00
		3	702	4,908.49
		3 Total		4,908.49
		6	702	5,007.30
		6 Total		5,007.30
SC FUELS Total				65,140.35
SCA OF CA, LLC	8231	1	100	0.00
		1 Total		0.00
		4	001	0.00
			100	11,919.00
		4 Total		11,919.00
		5	100	11,559.00
		5 Total		11,559.00
		6	100	12,159.00
		6 Total		12,159.00
		7	100	11,559.00
		7 Total		11,559.00
SCA OF CA, LLC Total				47,196.00
SCPPA	8626	1	670	299.00
			675	0.00
		1 Total		299.00
		2	670	14,365.40
			675	0.00
		2 Total		14,365.40
		3	675	114,495.44
		3 Total		114,495.44
		4	670	347.54
		4 Total		347.54
		5	675	48,267.40
		5 Total		48,267.40
		6	670	7,566.29

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
SCPPA	8626	6	675	16,135.21
		6 Total		23,701.50
		7	675	4,116.10
		7 Total		4,116.10
SCPPA Total				205,592.38
SGP DESIGN AND PRINT	5901	1	610	481.78
			702	64.65
		1 Total		546.43
		3	610	93.74
		3 Total		93.74
		5	610	134.69
		5 Total		134.69
		6	702	129.30
		6 Total		129.30
		7	610	0.00
			702	413.76
		7 Total		413.76
SGP DESIGN AND PRINT Total				1,317.92
SHRED-IT USA, LLC	6993	1	001	152.97
			705	0.00
		1 Total		152.97
		2	001	163.68
		2 Total		163.68
		3	001	417.94
		3 Total		417.94
		4	001	381.30
		4 Total		381.30
		5	001	144.50
		5 Total		144.50
		6	001	162.44
			670	60.00
			705	0.00
		6 Total		222.44
		7	001	163.19
			670	152.40
			705	169.88
		7 Total		485.47
SHRED-IT USA, LLC Total				1,968.30
SIQUEIROS, JUANA	8415	5	675	195.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
SIQUEIROS, JUANA	8415	5 Total		195.00
SIQUEIROS, JUANA Total				195.00
SITEONE LANDSCAPE SUPPLY	7095	1	111	1,524.95
			810	318.40
		1 Total		1,843.35
		3	111	1,056.30
		3 Total		1,056.30
		4	111	1,281.27
		4 Total		1,281.27
		5	704	113.10
		5 Total		113.10
		7	001	2,695.85
		7 Total		2,695.85
SITEONE LANDSCAPE SUPPLY Total				6,989.87
SKINNER, DEBORAH & ROY	7199	5	670	120.00
			675	195.00
		5 Total		315.00
SKINNER, DEBORAH & ROY Total				315.00
SMART & FINAL	1561	1	001	1,614.18
		1 Total		1,614.18
		2	201	132.30
		2 Total		132.30
		3	001	423.82
			201	96.98
		3 Total		520.80
		4	001	77.83
			201	116.06
		4 Total		193.89
		5	001	232.11
			201	76.71
		5 Total		308.82
		6	001	393.53
			201	45.44
		6 Total		438.97
		7	001	89.24
			201	26.97
		7 Total		116.21
SMART & FINAL Total				3,325.17
SMITH, FRED	8510	5	675	195.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
SMITH, FRED	8510	5 Total		195.00
SMITH, FRED Total				195.00
SO CAL JOINT POLE COMMITTEE	1373	1	670	1,192.21
		1 Total		1,192.21
		2	670	1,692.12
		2 Total		1,692.12
		3	670	1,682.78
		3 Total		1,682.78
		4	670	1,127.31
		4 Total		1,127.31
		5	670	2,157.51
		5 Total		2,157.51
		6	670	1,184.26
		6 Total		1,184.26
SO CAL JOINT POLE COMMITTEE Total				9,036.19
SOFTWARE ONE, INC	7083	1	001	0.00
			703	0.00
		1 Total		0.00
		2	703	93,861.92
		2 Total		93,861.92
		3	703	3,401.74
		3 Total		3,401.74
		4	703	3,680.23
		4 Total		3,680.23
		5	703	4,143.15
		5 Total		4,143.15
		6	703	3,918.19
		6 Total		3,918.19
		7	703	4,529.98
		7 Total		4,529.98
SOFTWARE ONE, INC Total				113,535.21
SONSRAY FLEET SERVICES	4753	1	702	0.00
		1 Total		0.00
		3	702	766.40
		3 Total		766.40
SONSRAY FLEET SERVICES Total				766.40
SONSRAY MACHINERY LLC	6565	7	702	2,572.55
		7 Total		2,572.55
SONSRAY MACHINERY LLC Total				2,572.55

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
SOUTH COAST AIR QUALITY	1370	1	001	(251.11)
			680	279.25
		1 Total		28.14
		2	600	541.04
			680	1,955.04
			702	1,180.72
		2 Total		3,676.80
		3	001	707.00
			680	1,414.00
			704	1,414.00
		3 Total		3,535.00
		4	001	902.38
		4 Total		902.38
SOUTH COAST AIR QUALITY Total				8,142.32
SOUTHERN CALIFORNIA EDISON	1371	1	660	5,095.99
			670	93.45
		1 Total		5,189.44
		2	660	4,387.29
			670	93.44
		2 Total		4,480.73
		3	001	24.48
			660	4,416.12
			670	92.33
		3 Total		4,532.93
		4	001	24.83
			660	3,688.09
			670	91.99
		4 Total		3,804.91
		5	660	3,727.29
			670	396.66
		5 Total		4,123.95
		6	660	3,396.00
			670	91.99
		6 Total		3,487.99
		7	660	4,363.27
			670	94.46
		7 Total		4,457.73
SOUTHERN CALIFORNIA EDISON Total				30,077.68
STAFFORD, CHERYL	7246	2	001	300.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
STAFFORD, CHERYL	7246	2 Total		300.00
		3	001	30.45
		3 Total		30.45
		4	705	82.68
		4 Total		82.68
		7	001	9.68
		7 Total		9.68
STAFFORD, CHERYL Total				422.81
STAPLES BUSINESS ADVANTAGE	7084	1	001	2,737.16
			610	0.00
			670	116.13
			704	1,170.33
			705	394.64
			761	0.00
		1 Total		4,418.26
		2	001	1,647.47
			660	323.62
			670	111.99
			705	617.35
			761	288.64
		2 Total		2,989.07
		3	001	1,469.69
			660	96.55
			670	129.62
			705	199.44
		3 Total		1,895.30
		4	001	567.38
			660	66.24
			670	947.71
			705	1,978.55
		4 Total		3,559.88
		5	001	2,874.86
			660	40.50
			670	337.03
			705	7,614.83
		5 Total		10,867.22
		6	001	1,607.81
			660	323.62
			670	3,437.28

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
STAPLES BUSINESS ADVANTAGE	7084	6	705	1,544.92
			761	119.54
		6 Total		7,033.17
		7	001	1,428.17
			670	376.96
			705	119.42
		7 Total		1,924.55
STAPLES BUSINESS ADVANTAGE Total				32,687.45
STATE OF CALIFORNIA DOJ	4000	1	001	571.00
		1 Total		571.00
		2	001	1,299.00
		2 Total		1,299.00
		3	001	1,936.00
		3 Total		1,936.00
		4	001	1,985.00
		4 Total		1,985.00
		5	001	3,453.98
		5 Total		3,453.98
		6	001	1,590.00
		6 Total		1,590.00
		7	001	3,747.98
		7 Total		3,747.98
STATE OF CALIFORNIA DOJ Total				14,582.96
TAPIA, SALOMON	8538	5	675	195.00
		5 Total		195.00
TAPIA, SALOMON Total				195.00
TASC	5885	1	001	4,903.98
		1 Total		4,903.98
		2	001	3,490.00
		2 Total		3,490.00
		3	001	2,280.82
		3 Total		2,280.82
		4	001	2,280.82
		4 Total		2,280.82
		5	001	3,490.00
		5 Total		3,490.00
		6	001	1,093.82
		6 Total		1,093.82
		7	001	1,093.82

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
TASC	5885	7 Total		1,093.82
TASC Total				18,633.26
TECHNOLOGY UNLIMITED INC	5005	3	610	825.00
		3 Total		825.00
		5	610	0.00
		5 Total		0.00
TECHNOLOGY UNLIMITED INC Total				825.00
TELEPACIFIC COMMUNICATIONS	6583	1	705	1,560.86
		1 Total		1,560.86
		2	705	1,560.86
		2 Total		1,560.86
		3	705	1,560.86
		3 Total		1,560.86
		4	705	1,561.74
		4 Total		1,561.74
		5	705	1,561.74
		5 Total		1,561.74
		6	705	1,561.74
		6 Total		1,561.74
		7	705	1,565.09
		7 Total		1,565.09
TELEPACIFIC COMMUNICATIONS Total				10,932.89
TERMINIX COMMERCIAL	1802	1	001	5,726.88
			660	1,262.68
			670	5,800.32
			704	3,422.16
		1 Total		16,212.04
		2	001	0.00
			660	0.00
			670	0.00
			704	0.00
		2 Total		0.00
		3	670	0.00
		3 Total		0.00
TERMINIX COMMERCIAL Total				16,212.04
TEXAS LIFE INSURANCE COMPANY	8576	1	001	6,258.63
		1 Total		6,258.63
		2	001	5,886.08
		2 Total		5,886.08

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
TEXAS LIFE INSURANCE COMPANY	8576	3	001	5,886.08
		3 Total		5,886.08
		4	001	5,813.33
		4 Total		5,813.33
		5	001	5,569.87
		5 Total		5,569.87
		6	001	5,463.62
		6 Total		5,463.62
TEXAS LIFE INSURANCE COMPANY Total				34,877.61
TOP-LINE INDUSTRIAL SUPPLY, LCC	7976	3	702	60.75
		3 Total		60.75
		6	702	37.52
		6 Total		37.52
		7	702	113.50
		7 Total		113.50
TOP-LINE INDUSTRIAL SUPPLY, LCC Total				211.77
TRENCH SHORING COMPANY	4540	2	660	267.50
		2 Total		267.50
		3	660	313.00
		3 Total		313.00
		4	660	306.00
		4 Total		306.00
		5	660	275.00
		5 Total		275.00
		7	660	44.80
		7 Total		44.80
TRENCH SHORING COMPANY Total				1,206.30
TRI COUNTY PUMP COMPANY	6808	1	660	0.00
		1 Total		0.00
		2	660	37,921.46
		2 Total		37,921.46
		5	660	13,881.84
		5 Total		13,881.84
TRI COUNTY PUMP COMPANY Total				51,803.30
TURBO DATA SYSTEMS INC	2403	1	001	157.10
		1 Total		157.10
		2	001	150.00
		2 Total		150.00
		3	001	151.44

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
TURBO DATA SYSTEMS INC	2403	3 Total		151.44
		4	001	152.88
		4 Total		152.88
		5	001	150.00
		5 Total		150.00
		6	001	150.00
		6 Total		150.00
TURBO DATA SYSTEMS INC Total				911.42
TURBOSCAPE, INC	8081	1	001	6,540.00
		1 Total		6,540.00
TURBOSCAPE, INC Total				6,540.00
UNDERGROUND SERVICE ALERT	871	1	100	82.76
			660	82.77
			670	82.75
		1 Total		248.28
		2	100	66.30
			660	66.28
			670	66.29
		2 Total		198.87
		3	100	58.28
			660	58.28
			670	58.26
		3 Total		174.82
		4	100	57.04
			660	57.04
			670	57.04
		4 Total		171.12
		5	100	71.23
			660	71.22
			670	71.22
		5 Total		213.67
		6	100	51.50
			660	51.48
			670	51.49
		6 Total		154.47
		7	100	47.78
			660	47.79
			670	47.80
		7 Total		143.37

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
UNDERGROUND SERVICE ALERT Total				1,304.60
USABLUEBOOK	1993	1	660	290.93
		1 Total		290.93
		4	660	0.00
		4 Total		0.00
		5	660	0.00
		5 Total		0.00
USABLUEBOOK Total				290.93
VALDEZ JR, MARY ALICE & ANTONIO	8534	5	675	195.00
		5 Total		195.00
VALDEZ JR, MARY ALICE & ANTONIO Total				195.00
VALENCIA, MARIBEL	7503	5	675	195.00
		5 Total		195.00
VALENCIA, MARIBEL Total				195.00
VANCE CORPORATION	8175	1	101	0.00
			102	0.00
		1 Total		0.00
		3	101	470,875.51
			102	658,051.61
		3 Total		1,128,927.12
		4	101	13,185.00
			102	9,434.67
			810	22,183.10
		4 Total		44,802.77
		5	101	25,476.87
			102	35,130.86
			810	1,167.53
		5 Total		61,775.26
VANCE CORPORATION Total				1,235,505.15
VELA, ARTURO M	7159	5	675	195.00
		5 Total		195.00
VELA, ARTURO M Total				195.00
VEOLIA WATER CONTRACT OPERATIONS US	7007	1	680	76,371.36
		1 Total		76,371.36
		2	680	76,371.36
		2 Total		76,371.36
		3	680	76,371.36
		3 Total		76,371.36
		4	680	76,371.36

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
VEOLIA WATER CONTRACT OPERATIONS US	7007	4 Total		76,371.36
		5	680	76,371.36
		5 Total		76,371.36
		6	680	76,371.36
		6 Total		76,371.36
		7	680	76,371.36
		7 Total		76,371.36
VEOLIA WATER CONTRACT OPERATIONS US Total				534,599.52
VERIZON WIRELESS SERVICES, LLC	5369	1	001	5,061.54
			100	302.05
			610	1,276.70
			660	890.35
			670	5,496.45
			680	151.24
			702	88.65
			703	186.12
			761	275.99
		1 Total		13,729.09
		2	001	5,004.00
			100	275.33
			610	1,139.17
			660	957.36
			670	1,964.32
			680	153.30
			702	87.43
			703	186.12
			761	274.97
		2 Total		10,042.00
		3	001	4,757.05
			100	302.68
			610	1,140.35
			660	1,449.76
			670	1,951.71
			680	379.25
			702	83.13
			703	186.24
			761	274.14
		3 Total		10,524.31
		4	001	4,509.01

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
VERIZON WIRELESS SERVICES, LLC	5369	4	100	301.50
			610	1,146.38
			660	916.27
			670	1,949.51
			680	151.98
			702	77.43
			703	186.28
			761	276.87
		4 Total		9,515.23
		5	001	4,860.96
			100	504.14
			610	1,144.12
			660	1,007.50
			670	1,826.73
			680	172.01
			702	953.14
			703	186.28
			761	275.16
		5 Total		10,930.04
		6	001	4,876.94
			100	290.99
			610	1,138.88
			660	1,200.51
			670	1,813.04
			680	166.28
			702	73.45
			703	186.28
			761	225.43
		6 Total		9,971.80
		7	001	4,723.69
			100	290.99
			610	1,146.30
			660	1,092.31
			670	1,809.05
			680	166.28
			702	77.12
			703	186.28
			761	236.05
		7 Total		9,728.07

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
VERIZON WIRELESS SERVICES, LLC Total				74,440.54
VIGILANT LLC	8631	1	703	8,379.53
		1 Total		8,379.53
		2	703	8,341.72
		2 Total		8,341.72
		3	703	8,266.10
		3 Total		8,266.10
		4	703	8,341.72
		4 Total		8,341.72
		5	703	8,370.08
		5 Total		8,370.08
		6	703	8,426.79
		6 Total		8,426.79
		7	703	8,474.05
		7 Total		8,474.05
VIGILANT LLC Total				58,599.99
VILLEGAS, JOSE	7042	5	670	120.00
			675	195.00
		5 Total		315.00
VILLEGAS, JOSE Total				315.00
VIRTUAL PROJECT MANAGER, LLC	7885	1	660	249.90
			670	500.10
			680	250.00
		1 Total		1,000.00
		2	660	499.80
			670	1,000.20
			680	500.00
		2 Total		2,000.00
		4	100	200.00
			660	649.90
			670	500.10
			680	550.00
			704	100.00
		4 Total		2,000.00
		6	100	400.00
			660	800.00
			670	0.00
			680	600.00
			704	200.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
VIRTUAL PROJECT MANAGER, LLC	7885	6 Total		2,000.00
VIRTUAL PROJECT MANAGER, LLC Total				7,000.00
VISION SECURITY SYSTEMS	6143	1	660	0.00
			704	2,355.00
		1 Total		2,355.00
		2	703	251.09
			704	12,175.06
		2 Total		12,426.15
		3	670	0.00
			704	756.02
		3 Total		756.02
		4	660	16,059.11
			670	9,676.39
			680	13,329.56
			704	2,355.00
			810	1,120.00
		4 Total		42,540.06
		5	703	0.00
			810	800.00
		5 Total		800.00
		7	704	2,355.00
		7 Total		2,355.00
VISION SECURITY SYSTEMS Total				61,232.23
VISTA PAINT	1890	1	001	397.31
			100	1,343.63
		1 Total		1,740.94
		2	001	180.48
		2 Total		180.48
		3	100	455.45
		3 Total		455.45
		5	001	830.24
		5 Total		830.24
		7	001	381.28
		7 Total		381.28
VISTA PAINT Total				3,588.39
VULCAN MATERIALS	6650	2	660	2,779.24
		2 Total		2,779.24
		7	660	2,820.91
		7 Total		2,820.91

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
VULCAN MATERIALS Total				5,600.15
WALKER, LORRAINE	8449	2	001	300.00
		2 Total		300.00
		3	001	166.70
		3 Total		166.70
		5	001	228.78
		5 Total		228.78
WALKER, LORRAINE Total				695.48
WALLACE, COLLEEN	7576	1	001	54.61
		1 Total		54.61
		2	001	102.51
		2 Total		102.51
		3	001	41.47
		3 Total		41.47
		4	001	325.55
		4 Total		325.55
		5	001	126.16
		5 Total		126.16
		6	001	420.38
		6 Total		420.38
		7	001	216.75
		7 Total		216.75
WALLACE, COLLEEN Total				1,287.43
WALTER STANLEY COS, LLC	7282	1	704	1,903.67
		1 Total		1,903.67
		2	704	95.17
		2 Total		95.17
		4	704	519.68
		4 Total		519.68
WALTER STANLEY COS, LLC Total				2,518.52
WASTE MANAGEMENT 0F THE IE	1437	3	670	10,105.21
		3 Total		10,105.21
		4	670	10.91
		4 Total		10.91
		5	670	140.67
		5 Total		140.67
		6	670	3,000.77
		6 Total		3,000.77
WASTE MANAGEMENT 0F THE IE Total				13,257.56

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
WATERLINE TECHNOLOGIES, INC	6918	1	001	3,537.78
		1 Total		3,537.78
		2	001	1,985.57
		2 Total		1,985.57
		3	001	1,260.75
		3 Total		1,260.75
		5	001	616.76
		5 Total		616.76
WATERLINE TECHNOLOGIES, INC Total				7,400.86
WELDOR'S SUPPLY AND STEEL	7249	1	001	4,500.00
		1 Total		4,500.00
		4	660	313.62
		4 Total		313.62
		6	660	49.49
		6 Total		49.49
WELDOR'S SUPPLY AND STEEL Total				4,863.11
WELLS FARGO BANK	2256	1	001	1,400,473.39
		1 Total		1,400,473.39
		2	001	1,233,193.44
		2 Total		1,233,193.44
		3	001	1,368,811.72
		3 Total		1,368,811.72
		4	001	1,196,546.41
		4 Total		1,196,546.41
		5	001	1,934,418.35
		5 Total		1,934,418.35
		6	001	1,241,342.95
		6 Total		1,241,342.95
		7	001	1,236,930.53
		7 Total		1,236,930.53
	4228	1	001	900.00
		1 Total		900.00
		2	001	600.00
		2 Total		600.00
		3	001	600.00
		3 Total		600.00
		4	001	600.00
		4 Total		600.00
		5	001	600.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
WELLS FARGO BANK	4228	5 Total		600.00
		6	001	600.00
		6 Total		600.00
		7	001	900.00
		7 Total		900.00
WELLS FARGO BANK Total				9,616,516.79
WELLS FARGO CARD SERVICES INC	4821	1	001	37,581.91
			660	473.75
			670	2,717.58
			675	14.98
			680	473.75
			702	2,324.03
			703	569.52
			810	1,653.17
		1 Total		45,808.69
		2	001	47,043.27
			610	89.10
			660	250.14
			670	1,020.67
			675	281.48
			680	234.00
			702	(1,508.07)
			703	48.24
			761	170.67
			810	1,851.80
		2 Total		49,481.30
		3	001	35,757.97
			100	450.00
			610	485.68
			670	2,785.04
			675	95.36
			702	1,566.44
			810	1,504.64
		3 Total		42,645.13
		4	001	52,515.94
			610	485.97
			660	139.75
			670	1,199.83
			675	5,472.96

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
WELLS FARGO CARD SERVICES INC	4821	4	680	212.03
			690	506.22
			702	645.84
			703	2,913.76
			704	640.94
			810	1,474.54
		4 Total		66,207.78
		5	001	39,044.10
			201	909.79
			610	83.52
			670	1,128.49
			675	2,214.11
			702	76.92
			703	3,000.00
			761	349.67
			810	5,686.31
		5 Total		52,492.91
		6	001	28,115.04
			660	1,048.00
			670	3,051.12
			675	1,854.56
			703	(240.00)
			761	1,149.00
			810	1,313.96
		6 Total		36,291.68
WELLS FARGO CARD SERVICES INC Total				292,927.49
WESTERN WATER WORKS SUPPLY CO	464	3	660	5,151.10
		3 Total		5,151.10
		4	660	32,126.52
		4 Total		32,126.52
		5	660	33,847.40
		5 Total		33,847.40
		6	660	4,665.80
		6 Total		4,665.80
		7	660	4,124.88
		7 Total		4,124.88
WESTERN WATER WORKS SUPPLY CO Total				79,915.70
WESTRUX INTERNATIONAL INC	143	1	702	488.01
		1 Total		488.01

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
WESTRUX INTERNATIONAL INC	143	2	702	0.00
		2 Total		0.00
WESTRUX INTERNATIONAL INC Total				488.01
WILBUR'S POWER EQUIPMENT	466	4	100	1,053.17
		4 Total		1,053.17
WILBUR'S POWER EQUIPMENT Total				1,053.17
WILLDAN ENGINEERING	6184	1	001	292.56
			660	292.47
			680	292.47
		1 Total		877.50
		2	001	49,577.50
			660	0.00
			680	0.00
		2 Total		49,577.50
		3	001	73,525.88
			660	233.31
			680	233.31
		3 Total		73,992.50
		4	001	44,080.88
			660	268.31
			680	268.31
		4 Total		44,617.50
		5	001	52,139.22
			660	256.64
			680	256.64
		5 Total		52,652.50
		6	001	49,043.38
			660	198.31
			680	198.31
		6 Total		49,440.00
		7	001	41,675.04
			660	174.98
			680	174.98
		7 Total		42,025.00
WILLDAN ENGINEERING Total				313,182.50
WILLDAN FINANCIAL SERVICES	2971	1	375	983.36
			689	0.00
		1 Total		983.36
		3	375	782.20

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
WILLDAN FINANCIAL SERVICES	2971	3 Total		782.20
		5	678	250.00
			375	190.59
		5 Total		440.59
		6	375	873.30
		6 Total		873.30
WILLDAN FINANCIAL SERVICES Total				3,079.45
WILLIAMS SCOTSMAN, INC	1357	1	810	1,611.94
		1 Total		1,611.94
WILLIAMS SCOTSMAN, INC Total				1,611.94
WITTMAN ENTERPRISES, LLC	8022	1	001	3,102.75
		1 Total		3,102.75
		2	001	3,417.75
		2 Total		3,417.75
		3	001	2,583.00
		3 Total		2,583.00
		4	001	3,496.50
		4 Total		3,496.50
		5	001	2,961.00
		5 Total		2,961.00
		6	001	3,087.00
		6 Total		3,087.00
		7	001	3,827.25
		7 Total		3,827.25
WITTMAN ENTERPRISES, LLC Total				22,475.25
XENIA PACIFIC, INC	6662	3	001	973.53
			810	68.96
		3 Total		1,042.49
		4	001	38.79
		4 Total		38.79
XENIA PACIFIC, INC Total				1,081.28
YOUNG, CHRISTY	8656	5	675	195.00
		5 Total		195.00
YOUNG, CHRISTY Total				195.00
YUNEX, LLC	8096	1	100	0.00
		1 Total		0.00
		2	100	1,037.00
		2 Total		1,037.00
		3	100	2,694.01

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
YUNEX, LLC	8096	3 Total		2,694.01
		4	100	2,167.54
		4 Total		2,167.54
		5	100	4,923.23
		5 Total		4,923.23
		6	100	1,463.00
		6 Total		1,463.00
		7	100	4,763.50
		7 Total		4,763.50
YUNEX, LLC Total				17,048.28
ZENNER PERFORMANCE METERS, INC	6499	1	660	22,405.82
		1 Total		22,405.82
		3	660	8,411.22
		3 Total		8,411.22
		6	660	23,507.73
		6 Total		23,507.73
ZENNER PERFORMANCE METERS, INC Total				54,324.77
ZOELLER, SUSAN	5471	5	675	195.00
		5 Total		195.00
ZOELLER, SUSAN Total				195.00
RED HAWK SERVICES	7290	1	001	0.00
			660	47,304.11
			670	0.00
			680	12,902.06
			690	43,010.31
		1 Total		103,216.48
		3	660	0.00
			680	0.00
			690	0.00
		3 Total		0.00
RED HAWK SERVICES Total				103,216.48
EMPOWER ANNUITY INSURANCE COMPANY	8702	1	001	97,374.58
		1 Total		97,374.58
		2	001	149,280.53
		2 Total		149,280.53
		3	001	95,370.38
		3 Total		95,370.38
		4	001	89,972.41
		4 Total		89,972.41

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
EMPOWER ANNUITY INSURANCE COMPANY	8702	5	001	114,703.32
		5 Total		114,703.32
		6	001	120,011.01
		6 Total		120,011.01
		7	001	158,353.14
		7 Total		158,353.14
EMPOWER ANNUITY INSURANCE COMPANY Total				825,065.37
AED ENERGY SERVICES LLC	8694	1	702	0.00
		1 Total		0.00
		2	702	3,630.00
		2 Total		3,630.00
		3	702	2,115.00
		3 Total		2,115.00
		4	702	18,280.00
		4 Total		18,280.00
		5	702	15,517.50
		5 Total		15,517.50
		6	702	9,672.50
		6 Total		9,672.50
		7	702	7,830.00
		7 Total		7,830.00
AED ENERGY SERVICES LLC Total				57,045.00
ALTA LANGUAGE SERVICES INC	8714	1	001	198.00
		1 Total		198.00
		4	001	138.00
		4 Total		138.00
ALTA LANGUAGE SERVICES INC Total				336.00
CTC TECHNOLOGY AND ENERGY	8661	1	673	0.00
		1 Total		0.00
		2	673	18,506.25
		2 Total		18,506.25
		4	673	40,700.00
		4 Total		40,700.00
		5	673	12,593.10
		5 Total		12,593.10
CTC TECHNOLOGY AND ENERGY Total				71,799.35
LAND ENGINEERING CONSULTANTS, INC	6632	1	660	0.00
		1 Total		0.00
		4	660	1,000.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
LAND ENGINEERING CONSULTANTS, INC	6632	4 Total		1,000.00
LAND ENGINEERING CONSULTANTS, INC Total				1,000.00
SERVIAM BY WRIGHT LLP	7131	2	700	19,946.13
		2 Total		19,946.13
		3	700	9,773.39
		3 Total		9,773.39
		4	700	9,968.88
		4 Total		9,968.88
		5	700	14,938.24
		5 Total		14,938.24
		6	700	9,627.56
		6 Total		9,627.56
		7	700	16,371.98
		7 Total		16,371.98
SERVIAM BY WRIGHT LLP Total				80,626.18
WILDLIFE CONTROL SERVICE INC	7605	1	001	1,250.00
		1 Total		1,250.00
		2	001	1,250.00
		2 Total		1,250.00
		3	001	1,250.00
		3 Total		1,250.00
		4	001	1,250.00
		4 Total		1,250.00
WILDLIFE CONTROL SERVICE INC Total				5,000.00
BUDD-FALEN LAW OFFICES, LLC.	7651	1	660	2,488.47
		1 Total		2,488.47
		3	660	3,640.00
		3 Total		3,640.00
		4	660	17,363.17
		4 Total		17,363.17
		5	660	4,864.34
		5 Total		4,864.34
		6	660	2,940.00
		6 Total		2,940.00
		7	660	9,876.31
		7 Total		9,876.31
BUDD-FALEN LAW OFFICES, LLC. Total				41,172.29
TETRA TECH INC.	7297	1	660	0.00
			670	0.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
TETRA TECH INC.	7297	1	680	0.00
		1 Total		0.00
		2	660	13,153.09
		2 Total		13,153.09
		3	670	6,000.00
		3 Total		6,000.00
		4	660	10,555.00
		4 Total		10,555.00
		5	660	33,160.00
		5 Total		33,160.00
		6	660	18,235.00
		6 Total		18,235.00
TETRA TECH INC. Total				81,103.09
THOMPSON COBURN, LLP	6895	1	670	34,294.41
		1 Total		34,294.41
		3	670	8,596.85
		3 Total		8,596.85
		4	670	6,437.39
		4 Total		6,437.39
		5	670	5,339.76
		5 Total		5,339.76
		6	670	6,370.49
		6 Total		6,370.49
		7	670	4,014.17
		7 Total		4,014.17
THOMPSON COBURN, LLP Total				65,053.07
BURKE, WILLIAMS & SORENSON LLP	3991	2	700	6,230.00
		2 Total		6,230.00
		3	700	4,692.50
		3 Total		4,692.50
		5	700	4,935.00
		5 Total		4,935.00
BURKE, WILLIAMS & SORENSON LLP Total				15,857.50
HUERTA LOPEZ, TUNNIA A	8736	1	001	245.00
		1 Total		245.00
		2	001	280.00
		2 Total		280.00
		3	001	490.00
		3 Total		490.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
HUERTA LOPEZ, TUNNIA A	8736	4	001	280.00
		4 Total		280.00
		5	001	385.00
		5 Total		385.00
		6	001	385.00
		6 Total		385.00
		7	001	210.00
		7 Total		210.00
HUERTA LOPEZ, TUNNIA A Total				2,275.00
STOCKMAN, JULIA	8735	1	001	542.50
		1 Total		542.50
STOCKMAN, JULIA Total				542.50
BENAVIDES, SUSIE	8773	4	001	239.71
		4 Total		239.71
		5	001	302.77
		5 Total		302.77
BENAVIDES, SUSIE Total				542.48
CITY OF BANNING UTILITIES OPV	7992	1	810	1,651.14
		1 Total		1,651.14
		2	810	2,255.77
		2 Total		2,255.77
		3	810	2,109.24
		3 Total		2,109.24
		4	810	1,481.16
		4 Total		1,481.16
		6	810	1,080.14
		6 Total		1,080.14
CITY OF BANNING UTILITIES OPV Total				8,577.45
R&R ROOFING & WATERPROOFING INC	8747	1	680	0.00
		1 Total		0.00
		2	680	8,667.00
		2 Total		8,667.00
R&R ROOFING & WATERPROOFING INC Total				8,667.00
CANO, ALONDRA	8800	5	675	195.00
		5 Total		195.00
CANO, ALONDRA Total				195.00
CDW GOVERNMENT, LLC	4253	1	001	(371.74)
		1 Total		(371.74)
		2	001	7,148.66

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
CDW GOVERNMENT, LLC	4253	2	680	206.34
			703	18,179.68
		2 Total		25,534.68
		3	001	115.25
			761	1,309.42
		3 Total		1,424.67
		4	001	153.87
			670	3,777.90
		4 Total		3,931.77
		5	001	468.20
			660	965.17
			680	965.18
			703	0.00
		5 Total		2,398.55
		6	001	952.95
			703	13,376.00
		6 Total		14,328.95
		7	001	759.58
			660	4,445.59
		7 Total		5,205.17
CDW GOVERNMENT, LLC Total				52,452.05
CHARTER COMMUNICATIONS	8150	1	001	659.70
			670	2,078.00
		1 Total		2,737.70
		2	001	463.74
			670	2,078.00
		2 Total		2,541.74
		3	001	463.74
			670	2,078.00
		3 Total		2,541.74
		4	001	463.74
			670	2,085.46
		4 Total		2,549.20
		5	001	463.74
			670	2,085.46
		5 Total		2,549.20
		6	001	463.74
			670	2,085.46
		6 Total		2,549.20

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
CHARTER COMMUNICATIONS	8150	7	001	463.74
			670	2,083.46
		7 Total		2,547.20
CHARTER COMMUNICATIONS Total				18,015.98
CLAYTON, NETA	8798	5	675	195.00
		5 Total		195.00
CLAYTON, NETA Total				195.00
FLORES, IRMA	8803	5	675	195.00
		5 Total		195.00
FLORES, IRMA Total				195.00
HARRIS, ANNE	8796	5	675	65.00
		5 Total		65.00
HARRIS, ANNE Total				65.00
INDEPENDENT REVIEW INVESTIGATIONS	8761	1	001	5,146.92
			700	1,650.00
		1 Total		6,796.92
		2	001	3,750.00
			700	942.80
		2 Total		4,692.80
		3	001	9,415.80
		3 Total		9,415.80
		4	001	9,122.15
		4 Total		9,122.15
		5	001	3,918.25
		5 Total		3,918.25
		6	001	2,895.02
		6 Total		2,895.02
		7	001	3,835.72
		7 Total		3,835.72
INDEPENDENT REVIEW INVESTIGATIONS Total				40,676.66
MERAS, DAVID	8797	5	675	195.00
		5 Total		195.00
MERAS, DAVID Total				195.00
MODEL 1 COMMERCIAL VEHICLES	3412	3	702	2,115.73
		3 Total		2,115.73
		4	702	4,141.40
		4 Total		4,141.40
		7	702	443.50
		7 Total		443.50

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
MODEL 1 COMMERCIAL VEHICLES Total				6,700.63
MORENO, MELBA	8801	5	675	195.00
		5 Total		195.00
MORENO, MELBA Total				195.00
RILEY, ANTHONY	8615	1	001	86.64
		1 Total		86.64
RILEY, ANTHONY Total				86.64
RIOS, MARIA FRANCISCO	8802	5	675	195.00
		5 Total		195.00
RIOS, MARIA FRANCISCO Total				195.00
STOCKTON CONSULTING	6222	1	660	0.00
		1 Total		0.00
		3	660	3,712.50
		3 Total		3,712.50
		4	660	861.75
		4 Total		861.75
STOCKTON CONSULTING Total				4,574.25
VESTIS SERVICES LLC	7743	1	100	0.00
			610	0.00
			704	0.00
			761	369.96
		1 Total		369.96
		2	761	470.47
		2 Total		470.47
		3	761	403.00
		3 Total		403.00
		4	761	403.00
		4 Total		403.00
		5	761	503.75
		5 Total		503.75
		6	761	403.00
		6 Total		403.00
		7	761	552.71
		7 Total		552.71
VESTIS SERVICES LLC Total				3,105.89
WIRZ & COMPANY INC	8779	1	001	3,749.70
			690	0.00
		1 Total		3,749.70
WIRZ & COMPANY INC Total				3,749.70

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
ALLGOOD DRIVING SCHOOL, INC	7979	1	001	109.20
		1 Total		109.20
		4	001	54.60
		4 Total		54.60
		5	001	54.60
		5 Total		54.60
		7	001	81.90
		7 Total		81.90
ALLGOOD DRIVING SCHOOL, INC Total				300.30
ALLIANT INSURANCE SERVICES, INC	6775	1	700	10,371.00
		1 Total		10,371.00
ALLIANT INSURANCE SERVICES, INC Total				10,371.00
ALTAIR ENGINEERING INC	8311	1	001	23,165.00
		1 Total		23,165.00
ALTAIR ENGINEERING INC Total				23,165.00
ARAGON GEOTECHNICAL, INC	6195	1	002	0.00
		1 Total		0.00
		5	002	4,356.25
		5 Total		4,356.25
ARAGON GEOTECHNICAL, INC Total				4,356.25
BEAUMONT BASIN WATERMASTER	4972	1	660	16,427.00
		1 Total		16,427.00
		3	660	3,164.89
		3 Total		3,164.89
		6	660	49,849.60
		6 Total		49,849.60
BEAUMONT BASIN WATERMASTER Total				69,441.49
BLACK & VEATCH CORPORATION	4726	1	660	5,572.50
			680	5,572.50
		1 Total		11,145.00
BLACK & VEATCH CORPORATION Total				11,145.00
CAPITAL REALTY ANALYSTS, INC	7260	1	420	0.00
		1 Total		0.00
		2	001	10,300.00
		2 Total		10,300.00
CAPITAL REALTY ANALYSTS, INC Total				10,300.00
CASTILLO, JORGE IVAN	8078	1	001	287.39
		1 Total		287.39
CASTILLO, JORGE IVAN Total				287.39

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
CM LANDSCAPE	8756	1	001	6,731.25
		1 Total		6,731.25
		2	001	7,515.20
		2 Total		7,515.20
		4	001	14,816.80
		4 Total		14,816.80
CM LANDSCAPE Total				29,063.25
DBT TRANSPORTATION SERVICES, LLC	7950	1	600	7,000.00
		1 Total		7,000.00
DBT TRANSPORTATION SERVICES, LLC Total				7,000.00
E.R. BLOCK PLUMBING	7839	1	660	0.00
		1 Total		0.00
		4	111	0.00
		4 Total		0.00
		5	111	350.00
		5 Total		350.00
		6	660	12,450.00
		6 Total		12,450.00
		7	660	15,075.00
		7 Total		15,075.00
E.R. BLOCK PLUMBING Total				27,875.00
EFS WEST INC	8599	1	610	0.00
		1 Total		0.00
		2	610	70,309.50
		2 Total		70,309.50
		5	610	36,091.26
		5 Total		36,091.26
		6	610	0.00
		6 Total		0.00
		7	610	0.00
		7 Total		0.00
EFS WEST INC Total				106,400.76
ENGINEERING SOLUTIONS SERVICES INC	8746	1	001	0.00
		1 Total		0.00
		4	001	4,848.00
		4 Total		4,848.00
		5	001	27,131.00
		5 Total		27,131.00
		6	001	2,400.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
ENGINEERING SOLUTIONS SERVICES INC	8746	6 Total		2,400.00
ENGINEERING SOLUTIONS SERVICES INC Total				34,379.00
FEDEX	1078	1	702	43.07
		1 Total		43.07
		6	001	84.76
		6 Total		84.76
		7	001	6.78
		7 Total		6.78
FEDEX Total				134.61
FLYNN, SHERI	7486	1	001	74.67
		1 Total		74.67
		4	001	246.58
		4 Total		246.58
		6	001	15.08
		6 Total		15.08
		7	001	781.40
		7 Total		781.40
FLYNN, SHERI Total				1,117.73
FOSTER & FOSTER CONSULTING	8370	1	700	0.00
		1 Total		0.00
		2	700	0.00
		2 Total		0.00
		5	700	16,500.00
		5 Total		16,500.00
FOSTER & FOSTER CONSULTING Total				16,500.00
GAMETIME	8784	1	001	0.00
		1 Total		0.00
		2	001	1,384.38
		2 Total		1,384.38
GAMETIME Total				1,384.38
GARDA CL WEST INC	2589	1	761	1,371.03
		1 Total		1,371.03
		2	761	1,295.83
		2 Total		1,295.83
		3	761	1,310.81
		3 Total		1,310.81
		4	761	1,333.77
		4 Total		1,333.77
		5	761	1,381.79

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
GARDA CL WEST INC	2589	5 Total		1,381.79
		6	761	1,481.53
		6 Total		1,481.53
		7	761	1,271.32
		7 Total		1,271.32
GARDA CL WEST INC Total				9,446.08
GRANICUS LLC	8524	1	222	0.00
			705	0.00
		1 Total		0.00
		3	001	43,605.89
		3 Total		43,605.89
		5	001	0.00
		5 Total		0.00
GRANICUS LLC Total				43,605.89
GRAYBAR ELECTRIC COMPANY, INC.	203	1	670	2,844.60
		1 Total		2,844.60
		2	670	379.61
		2 Total		379.61
		5	670	1,648.83
		5 Total		1,648.83
GRAYBAR ELECTRIC COMPANY, INC. Total				4,873.04
HCN BANK	8662	1	001	0.00
		1 Total		0.00
		6	975	50,000.00
		6 Total		50,000.00
HCN BANK Total				50,000.00
HDL COREN & CONE	2920	1	001	4,568.75
		1 Total		4,568.75
		2	001	0.00
		2 Total		0.00
		4	001	3,873.75
		4 Total		3,873.75
		7	001	4,000.00
		7 Total		4,000.00
HDL COREN & CONE Total				12,442.50
INNER-TITE CORP	3748	1	670	2,918.80
		1 Total		2,918.80
INNER-TITE CORP Total				2,918.80
ITRON, INC.	2483	1	670	41,611.50

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
ITRON, INC.	2483	1	673	0.00
		1 Total		41,611.50
		2	670	0.00
		2 Total		0.00
ITRON, INC. Total				41,611.50
KOSMONT & ASSOCIATES, INC	5781	1	001	0.00
		1 Total		0.00
		4	001	1,728.76
		4 Total		1,728.76
		5	001	1,730.64
		5 Total		1,730.64
KOSMONT & ASSOCIATES, INC Total				3,459.40
MGT OF AMERICA CONSULTING, LLC	7693	1	705	0.00
		1 Total		0.00
		2	705	0.00
		2 Total		0.00
		4	705	3,780.00
		4 Total		3,780.00
		6	705	2,500.00
		6 Total		2,500.00
MGT OF AMERICA CONSULTING, LLC Total				6,280.00
MIXON, FRANKLEN	8493	1	001	17.25
		1 Total		17.25
		3	001	16.50
		3 Total		16.50
		4	001	16.50
		4 Total		16.50
MIXON, FRANKLEN Total				50.25
MOTOROLA SOLUTIONS, INC.	1250	1	001	0.00
		1 Total		0.00
		3	001	9,345.16
		3 Total		9,345.16
MOTOROLA SOLUTIONS, INC. Total				9,345.16
OERTEL, ERICH	5811	1	001	17.25
		1 Total		17.25
		3	001	684.21
		3 Total		684.21
		4	001	505.01
		4 Total		505.01

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
OERTEL, ERICH	5811	5	001	21.00
		5 Total		21.00
		6	001	21.00
		6 Total		21.00
OERTEL, ERICH Total				1,248.47
PRESCOTT, KEVIN	8324	1	001	17.25
		1 Total		17.25
		4	001	631.50
		4 Total		631.50
PRESCOTT, KEVIN Total				648.75
PRESS-ENTERPRISE, THE	1295	1	670	126.17
		1 Total		126.17
		2	001	525.89
			660	136.77
			670	126.17
			680	126.17
		2 Total		915.00
		3	680	136.77
		3 Total		136.77
		4	001	262.95
			100	405.02
			660	136.77
		4 Total		804.74
		6	680	630.87
		6 Total		630.87
PRESS-ENTERPRISE, THE Total				2,613.55
PUBLIC ENTITY RISK MANAGEMENT	978	1	700	3,593,240.00
		1 Total		3,593,240.00
		5	700	71,387.00
		5 Total		71,387.00
		7	700	241.00
		7 Total		241.00
PUBLIC ENTITY RISK MANAGEMENT Total				3,664,868.00
QT POD	8674	1	600	0.00
		1 Total		0.00
		2	600	1,195.00
		2 Total		1,195.00
QT POD Total				1,195.00
QUADIENT LEASING USA, INC	6694	1	001	0.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
QUADIENT LEASING USA, INC	6694	1 Total		0.00
		2	001	521.66
		2 Total		521.66
		4	705	0.00
		4 Total		0.00
		5	705	0.00
		5 Total		0.00
		6	001	(19.43)
			705	959.47
		6 Total		940.04
QUADIENT LEASING USA, INC Total				1,461.70
QUADIENT POSTAGE FUNDING	8211	1	705	5,000.00
		1 Total		5,000.00
		2	705	(5,000.00)
		2 Total		(5,000.00)
		3	705	1,030.00
		3 Total		1,030.00
		4	705	1,000.00
		4 Total		1,000.00
		5	705	1,000.00
		5 Total		1,000.00
QUADIENT POSTAGE FUNDING Total				3,030.00
RIV. CO. SHERIFF'S DEPARTMENT	1642	1	001	31,250.00
		1 Total		31,250.00
RIV. CO. SHERIFF'S DEPARTMENT Total				31,250.00
ROADWAY ASSET SERVICES LLC	8758	1	101	0.00
		1 Total		0.00
		5	101	24,930.07
		5 Total		24,930.07
		6	101	14,015.04
		6 Total		14,015.04
		7	101	36,039.00
		7 Total		36,039.00
ROADWAY ASSET SERVICES LLC Total				74,984.11
SOCAL PROPANE LLC	8625	1	001	0.00
			704	80.00
		1 Total		80.00
SOCAL PROPANE LLC Total				80.00
SOUTHERN CALIF ASSN OF GOVERNMENTS	1346	1	001	4,600.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
SOUTHERN CALIF ASSN OF GOVERNMENTS	1346	1 Total		4,600.00
SOUTHERN CALIF ASSN OF GOVERNMENTS Total				4,600.00
SOUTHERN CALIFORNIA WEST COAST ELEC	1377	1	001	1,211.38
			704	7,006.63
		1 Total		8,218.01
		2	704	4,500.00
			810	1,280.00
		2 Total		5,780.00
		3	704	3,346.05
		3 Total		3,346.05
		4	704	1,043.14
			810	4,917.37
		4 Total		5,960.51
		5	704	787.73
		5 Total		787.73
		6	704	1,436.75
		6 Total		1,436.75
SOUTHERN CALIFORNIA WEST COAST ELEC Total				25,529.05
SOUTHWEST POWER POOL, INC	7488	1	670	312.79
		1 Total		312.79
		2	670	0.00
		2 Total		0.00
SOUTHWEST POWER POOL, INC Total				312.79
STAGECOACH DAYS ASSOCIATION	6989	1	001	30,500.00
		1 Total		30,500.00
		3	001	555.00
		3 Total		555.00
		4	001	15.00
		4 Total		15.00
STAGECOACH DAYS ASSOCIATION Total				31,070.00
STATE WATER RESOURCES CONTROL	6849	1	660	105.00
		1 Total		105.00
		2	660	60.00
		2 Total		60.00
		5	660	140.00
		5 Total		140.00
	2452	4	100	17,270.00
		4 Total		17,270.00
		6	680	94,175.60

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
STATE WATER RESOURCES CONTROL	2452	6 Total		94,175.60
STATE WATER RESOURCES CONTROL Total				111,750.60
STC TRAFFIC INC	8249	1	101	0.00
		1 Total		0.00
		2	100	0.00
		2 Total		0.00
		3	100	815.00
		3 Total		815.00
		4	100	15,480.00
		4 Total		15,480.00
		5	100	8,000.00
		5 Total		8,000.00
		6	100	1,315.00
		6 Total		1,315.00
		7	100	620.00
		7 Total		620.00
STC TRAFFIC INC Total				26,230.00
SYNAGRO-WWT, INC	7152	1	680	4,442.84
		1 Total		4,442.84
		7	680	15,928.95
		7 Total		15,928.95
SYNAGRO-WWT, INC Total				20,371.79
TOLAR MANUFACTURING CO, INC	6409	1	610	4,536.28
		1 Total		4,536.28
		4	610	0.00
		4 Total		0.00
TOLAR MANUFACTURING CO, INC Total				4,536.28
TRANSWEST TRUCK CENTER, LLC	420	1	660	180,783.75
		1 Total		180,783.75
		2	660	0.00
		2 Total		0.00
TRANSWEST TRUCK CENTER, LLC Total				180,783.75
U.S. BANK	3590	1	375	3,757.50
		1 Total		3,757.50
		2	375	145,506.91
			830	1,779,195.76
		2 Total		1,924,702.67
		3	678	2,750.00
			669	2,750.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
U.S. BANK	3590	3 Total		5,500.00
		4	680	2,750.00
			689	380,625.00
			830	2,750.00
			669	1,612,031.26
		4 Total		1,998,156.26
		5	678	476,521.88
		5 Total		476,521.88
U.S. BANK Total				4,408,638.31
WASTE MANAGEMENT OF THE IE	1436	1	001	0.00
		1 Total		0.00
		6	001	224,820.24
		6 Total		224,820.24
		7	001	0.00
		7 Total		0.00
WASTE MANAGEMENT OF THE IE Total				224,820.24
WEST & ASSOCIATES ENGINEERING, INC	8018	1	001	0.00
		1 Total		0.00
		4	001	0.00
		4 Total		0.00
		5	001	4,950.00
			660	0.00
		5 Total		4,950.00
WEST & ASSOCIATES ENGINEERING, INC Total				4,950.00
WEST COAST ARBORISTS, INC	3999	1	100	3,150.00
		1 Total		3,150.00
		2	100	10,500.00
		2 Total		10,500.00
WEST COAST ARBORISTS, INC Total				13,650.00
WHITE CAP LP	2836	1	660	5,874.58
		1 Total		5,874.58
		5	660	0.00
		5 Total		0.00
WHITE CAP LP Total				5,874.58
WOODARD & CURRAN, INC	7220	1	660	0.00
		1 Total		0.00
		2	660	12,576.25
		2 Total		12,576.25
WOODARD & CURRAN, INC Total				12,576.25

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
YARYAN, MARY	8738	1	001	517.86
		1 Total		517.86
		4	001	4,500.00
		4 Total		4,500.00
YARYAN, MARY Total				5,017.86
72 HOUR LLC-NATIONAL AUTO FLT GRP	6900	1	001	0.00
		1 Total		0.00
		4	001	172,063.20
		4 Total		172,063.20
72 HOUR LLC-NATIONAL AUTO FLT GRP Total				172,063.20
ALTA PLANNING + DESIGN INC	8297	2	001	10,353.75
		2 Total		10,353.75
ALTA PLANNING + DESIGN INC Total				10,353.75
AMERICAN LEGAL PUBLISHING LLC	8808	2	705	6,855.00
		2 Total		6,855.00
AMERICAN LEGAL PUBLISHING LLC Total				6,855.00
AUER, WILLIAM	6942	1	001	621.00
		1 Total		621.00
AUER, WILLIAM Total				621.00
AUTOMATED GATE SERVICES, INC.	3933	1	600	793.00
			704	570.00
		1 Total		1,363.00
		2	704	2,099.00
		2 Total		2,099.00
		5	704	394.00
		5 Total		394.00
		6	704	1,419.00
		6 Total		1,419.00
		7	704	436.00
		7 Total		436.00
AUTOMATED GATE SERVICES, INC. Total				5,711.00
BANNING VETERINARY HOSPITAL	5297	1	001	1,065.75
		1 Total		1,065.75
		2	001	643.25
		2 Total		643.25
		3	001	1,124.77
		3 Total		1,124.77
		4	001	278.50
		4 Total		278.50

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
BANNING VETERINARY HOSPITAL	5297	5	001	904.85
		5 Total		904.85
		6	001	1,266.50
		6 Total		1,266.50
		7	001	1,410.00
		7 Total		1,410.00
BANNING VETERINARY HOSPITAL Total				6,693.62
CA. ST. BOARD OF EQUAL. - FUEL	2257	1	702	487.00
		1 Total		487.00
		4	702	626.00
		4 Total		626.00
		7	702	1,566.00
		7 Total		1,566.00
CA. ST. BOARD OF EQUAL. - FUEL Total				2,679.00
CA. ST. BOARD OF EQUALIZATION	3012	2	001	8,666.00
		2 Total		8,666.00
		4	001	285.00
		4 Total		285.00
		7	001	340.00
		7 Total		340.00
CA. ST. BOARD OF EQUALIZATION Total				9,291.00
CABALLERO, DANIEL	7051	2	001	645.55
			670	224.00
		2 Total		869.55
CABALLERO, DANIEL Total				869.55
CALIFORNIA, STATE OF	992	2	700	10,632.00
		2 Total		10,632.00
		5	700	9,730.00
		5 Total		9,730.00
CALIFORNIA, STATE OF Total				20,362.00
CENTRAL TAX-EXEMPT INVESTMENTS	8814	1	451	95,671.41
		1 Total		95,671.41
CENTRAL TAX-EXEMPT INVESTMENTS Total				95,671.41
CI SOLUTIONS	5838	2	001	995.00
		2 Total		995.00
		6	705	1,627.71
		6 Total		1,627.71
		7	705	119.61
		7 Total		119.61

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
CI SOLUTIONS Total				2,742.32
COASTAL BOILER WORKS INC	8606	1	680	3,636.86
		1 Total		3,636.86
		5	680	4,205.52
		5 Total		4,205.52
		6	680	0.00
		6 Total		0.00
COASTAL BOILER WORKS INC Total				7,842.38
CODE 3 TECHNOLOGY	8812	2	001	0.00
		2 Total		0.00
		3	001	11,118.87
		3 Total		11,118.87
		4	001	0.00
		4 Total		0.00
		5	001	33,805.67
		5 Total		33,805.67
CODE 3 TECHNOLOGY Total				44,924.54
COMDIRECT, INC	6464	1	001	6,880.00
		1 Total		6,880.00
		2	001	0.00
		2 Total		0.00
COMDIRECT, INC Total				6,880.00
CRAFCO INC	3061	2	100	1,008.13
		2 Total		1,008.13
		6	100	1,008.13
		6 Total		1,008.13
CRAFCO INC Total				2,016.26
CUSTOM TROPHIES & UNEEK AWARDS	7774	1	001	78.65
		1 Total		78.65
		3	001	1,115.21
		3 Total		1,115.21
		4	001	875.46
		4 Total		875.46
		5	001	0.00
		5 Total		0.00
		6	001	2,325.77
		6 Total		2,325.77
		7	001	14.54
		7 Total		14.54

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
CUSTOM TROPHIES & UNEEK AWARDS Total				4,409.63
DJ TONY	8597	2	001	450.00
		2 Total		450.00
		4	001	200.00
			201	0.00
		4 Total		200.00
		5	201	250.00
		5 Total		250.00
		6	001	300.00
		6 Total		300.00
DJ TONY Total				1,200.00
ECS IMAGING , INC	4275	1	703	26,450.00
		1 Total		26,450.00
		2	703	0.00
		2 Total		0.00
ECS IMAGING , INC Total				26,450.00
FIRST AMERICAN TITLE COMPANY	8468	2	420	40,563.23
		2 Total		40,563.23
FIRST AMERICAN TITLE COMPANY Total				40,563.23
FIRST TWO INC	8759	2	001	3,600.00
		2 Total		3,600.00
FIRST TWO INC Total				3,600.00
GOVINVEST,INC	7927	1	705	38,349.00
		1 Total		38,349.00
		2	705	0.00
		2 Total		0.00
GOVINVEST,INC Total				38,349.00
HAAS & WILKERSON, INC	7759	1	001	6,404.00
		1 Total		6,404.00
HAAS & WILKERSON, INC Total				6,404.00
HAHN, MICHAEL	7263	2	660	229.50
		2 Total		229.50
HAHN, MICHAEL Total				229.50
HALVERSON, ALEC	8793	2	001	99.00
		2 Total		99.00
HALVERSON, ALEC Total				99.00
HASKELL REAL ESTATE INC	8712	2	810	2,200.00
		2 Total		2,200.00
HASKELL REAL ESTATE INC Total				2,200.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
HEIDT, ANGELO	8706	2	001	101.10
		2 Total		101.10
HEIDT, ANGELO Total				101.10
HERRERA, ANDRES	8809	2	675	1,800.00
		2 Total		1,800.00
HERRERA, ANDRES Total				1,800.00
INTEGRITY ARBORIST & ECOSCAPE INC	8754	1	001	25,564.50
		1 Total		25,564.50
		2	001	35,656.50
		2 Total		35,656.50
		5	001	64,258.00
		5 Total		64,258.00
INTEGRITY ARBORIST & ECOSCAPE INC Total				125,479.00
LEVEL II, INC	1670	1	001	27,812.00
		1 Total		27,812.00
		2	001	0.00
		2 Total		0.00
LEVEL II, INC Total				27,812.00
LEXIPOL LLC	7046	1	001	7,999.20
		1 Total		7,999.20
		2	001	0.00
		2 Total		0.00
LEXIPOL LLC Total				7,999.20
LOPEZ, ALFONSO	7939	2	100	250.00
		2 Total		250.00
LOPEZ, ALFONSO Total				250.00
MARIACHI COACHELLA LLC	8816	2	001	3,900.00
		2 Total		3,900.00
MARIACHI COACHELLA LLC Total				3,900.00
MORGAN, MIKECOE	8806	2	001	94.50
		2 Total		94.50
MORGAN, MIKECOE Total				94.50
MSW CONSULTANTS	8750	2	690	0.00
		2 Total		0.00
		3	001	3,650.00
		3 Total		3,650.00
MSW CONSULTANTS Total				3,650.00
MUNOZ, MARIBEL	6370	2	001	88.67
		2 Total		88.67

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
MUNOZ, MARIBEL	6370	3	001	192.39
		3 Total		192.39
		4	001	14.34
		4 Total		14.34
		7	001	264.99
		7 Total		264.99
MUNOZ, MARIBEL Total				560.39
NAPA AUTO PARTS	7805	1	702	6.99
		1 Total		6.99
		2	702	277.30
		2 Total		277.30
		4	702	161.50
		4 Total		161.50
		7	702	159.94
		7 Total		159.94
NAPA AUTO PARTS Total				605.73
NEARMAP US INC	8748	2	001	0.00
			660	0.00
			670	0.00
			680	0.00
			705	12,000.00
		2 Total		12,000.00
		4	705	0.00
		4 Total		0.00
NEARMAP US INC Total				12,000.00
NORTHWEST INDUSTRIAL ENGINE	8618	2	702	0.00
		2 Total		0.00
		5	702	18,809.67
		5 Total		18,809.67
NORTHWEST INDUSTRIAL ENGINE Total				18,809.67
O'REILLY AUTO PARTS	4076	1	702	451.44
		1 Total		451.44
		2	702	24.85
		2 Total		24.85
		3	702	701.02
		3 Total		701.02
		6	702	251.96
		6 Total		251.96
		7	702	153.01

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
O'REILLY AUTO PARTS	4076	7 Total		153.01
O'REILLY AUTO PARTS Total				1,582.28
ONLINE INFORMATION SERVICES	7435	1	761	822.71
		1 Total		822.71
		2	761	529.92
		2 Total		529.92
		4	761	912.88
		4 Total		912.88
		5	761	428.68
		5 Total		428.68
		6	761	641.90
		6 Total		641.90
		7	761	476.13
		7 Total		476.13
ONLINE INFORMATION SERVICES Total				3,812.22
PINNACLE PETROMLEUM INC	8787	2	702	26,954.93
		2 Total		26,954.93
		3	702	29,416.89
		3 Total		29,416.89
		4	702	56,367.83
		4 Total		56,367.83
		5	702	24,277.86
		5 Total		24,277.86
		6	702	23,517.41
		6 Total		23,517.41
		7	702	20,678.56
		7 Total		20,678.56
PINNACLE PETROMLEUM INC Total				181,213.48
PIONEER AMERICAS LLC	8386	1	660	0.00
		1 Total		0.00
		2	660	6,678.25
		2 Total		6,678.25
		3	660	6,783.92
		3 Total		6,783.92
		5	660	6,424.38
		5 Total		6,424.38
		7	660	5,799.41
		7 Total		5,799.41
PIONEER AMERICAS LLC Total				25,685.96

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
RICHARD HEATH & ASSOCIATES INC	8763	1	675	0.00
		1 Total		0.00
		4	675	460.65
		4 Total		460.65
RICHARD HEATH & ASSOCIATES INC Total				460.65
RODRIGUEZ, MONIQUE	8762	2	001	99.00
		2 Total		99.00
		6	001	33.00
		6 Total		33.00
RODRIGUEZ, MONIQUE Total				132.00
ROEBUCK, ALYSSA	8086	2	001	193.50
		2 Total		193.50
		3	001	33.00
		3 Total		33.00
		4	001	16.50
		4 Total		16.50
		5	001	15.75
		5 Total		15.75
		7	001	792.50
		7 Total		792.50
ROEBUCK, ALYSSA Total				1,051.25
RON TURLEY ASSOCIATES INC	1341	1	702	7,200.00
		1 Total		7,200.00
		2	702	0.00
		2 Total		0.00
RON TURLEY ASSOCIATES INC Total				7,200.00
SIRLS, STEPHANIE	8601	1	610	380.60
		1 Total		380.60
		5	610	158.10
		5 Total		158.10
SIRLS, STEPHANIE Total				538.70
SPS VAR, LLC	4796	1	703	9,030.00
		1 Total		9,030.00
		2	703	0.00
		2 Total		0.00
SPS VAR, LLC Total				9,030.00
STURM, ADAM	8452	1	001	250.00
		1 Total		250.00
STURM, ADAM Total				250.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
SUPERION, LLC	7961	1	705	26,807.18
		1 Total		26,807.18
		2	705	26,807.18
		2 Total		26,807.18
		5	705	26,807.18
		5 Total		26,807.18
SUPERION, LLC Total				80,421.54
TEAMCALIFORNIA ECONOMIC DEV CORP	8670	2	001	2,500.00
		2 Total		2,500.00
TEAMCALIFORNIA ECONOMIC DEV CORP Total				2,500.00
TEC EQUIPMENT, INC	7997	1	702	2,549.43
		1 Total		2,549.43
		2	702	636.41
		2 Total		636.41
		3	702	15.65
		3 Total		15.65
		4	702	772.74
		4 Total		772.74
		6	702	338.55
		6 Total		338.55
		7	702	848.49
		7 Total		848.49
TEC EQUIPMENT, INC Total				5,161.27
THORNTON, CHRIS	5804	2	001	20.00
			680	229.50
		2 Total		249.50
THORNTON, CHRIS Total				249.50
ULTIMATE ROOF	8760	1	704	1,758.35
		1 Total		1,758.35
ULTIMATE ROOF Total				1,758.35
WINDSTREAM SERVICES, LLC	8344	1	001	980.88
			705	5,598.20
		1 Total		6,579.08
		2	001	991.02
			705	5,593.37
		2 Total		6,584.39
		3	001	975.12
			705	5,583.57
		3 Total		6,558.69

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
WINDSTREAM SERVICES, LLC	8344	4	001	973.21
			705	5,580.37
		4 Total		6,553.58
		5	001	979.48
			705	5,591.45
		5 Total		6,570.93
		6	001	1,098.47
			705	6,365.27
		6 Total		7,463.74
WINDSTREAM SERVICES, LLC Total				40,310.41
A.C. PROPANE	8333	1	810	472.15
		1 Total		472.15
		6	810	393.82
		6 Total		393.82
A.C. PROPANE Total				865.97
AFFORDABLE BEE SERVICES	8766	1	704	650.00
		1 Total		650.00
AFFORDABLE BEE SERVICES Total				650.00
ALLDATA, LLC	5787	1	702	1,500.00
		1 Total		1,500.00
		3	702	0.00
		3 Total		0.00
ALLDATA, LLC Total				1,500.00
ASBURY ENVIRONMENTAL SERVICES DBA	6899	3	702	486.44
		3 Total		486.44
		4	001	743.48
		4 Total		743.48
		5	001	150.00
		5 Total		150.00
		6	001	1,841.82
		6 Total		1,841.82
		7	001	953.48
		7 Total		953.48
ASBURY ENVIRONMENTAL SERVICES DBA Total				4,175.22
AUTO GLASS NOW	8602	3	702	769.66
		3 Total		769.66
AUTO GLASS NOW Total				769.66
BANNING CHAMBER OF COMMERCE	7632	3	001	5,040.00
			100	180.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
BANNING CHAMBER OF COMMERCE	7632	3	610	270.00
			660	360.00
			670	630.00
			703	180.00
			761	720.00
		3 Total		7,380.00
BANNING CHAMBER OF COMMERCE Total				7,380.00
BENTLEY SYSTEMS, INC	8613	3	670	4,580.00
		3 Total		4,580.00
BENTLEY SYSTEMS, INC Total				4,580.00
BRAX COMPANY, INC	7901	3	680	0.00
		3 Total		0.00
		5	680	18,116.25
		5 Total		18,116.25
BRAX COMPANY, INC Total				18,116.25
CA. ST. DEPT. OF CONSERVATION	994	1	001	4,208.38
		1 Total		4,208.38
CA. ST. DEPT. OF CONSERVATION Total				4,208.38
CASTRO, DAVID	8488	2	610	250.00
		2 Total		250.00
CASTRO, DAVID Total				250.00
CONSOLIDATED ELECTRICAL	120	2	704	679.12
		2 Total		679.12
		3	704	210.65
		3 Total		210.65
		4	704	421.30
		4 Total		421.30
		5	704	63.03
		5 Total		63.03
CONSOLIDATED ELECTRICAL Total				1,374.10
CORTEZ-JASSO, VICTOR	7036	2	670	250.00
		2 Total		250.00
CORTEZ-JASSO, VICTOR Total				250.00
ELITE FIRE PROTECTION, INC	7775	2	001	505.00
		2 Total		505.00
		4	704	2,914.38
		4 Total		2,914.38
ELITE FIRE PROTECTION, INC Total				3,419.38
FERGUSON ENTERPRISES LLC #1089	8822	1	660	35.89

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
FERGUSON ENTERPRISES LLC #1089	8822	1 Total		35.89
		3	660	0.00
		3 Total		0.00
FERGUSON ENTERPRISES LLC #1089 Total				35.89
FERRELLGAS LP	1081	1	660	705.45
		1 Total		705.45
		4	660	65.00
		4 Total		65.00
		5	660	568.69
		5 Total		568.69
		6	660	1,050.97
		6 Total		1,050.97
FERRELLGAS LP Total				2,390.11
GERBER COLLISION & GLASS	8666	3	702	11,131.55
		3 Total		11,131.55
		6	702	0.00
		6 Total		0.00
GERBER COLLISION & GLASS Total				11,131.55
JAUREGUI, ROBERTO	7122	3	001	16.50
		3 Total		16.50
		4	001	16.50
		4 Total		16.50
JAUREGUI, ROBERTO Total				33.00
JEREMY D WEINSTEIN	8819	2	670	1,995.00
		2 Total		1,995.00
		4	670	332.50
		4 Total		332.50
JEREMY D WEINSTEIN Total				2,327.50
JON'S FLAGS & POLES, INC	7776	1	704	348.00
		1 Total		348.00
JON'S FLAGS & POLES, INC Total				348.00
LEWIN, DEBORAH	8827	3	675	2,400.00
		3 Total		2,400.00
LEWIN, DEBORAH Total				2,400.00
LOPEZ, MARISOL	8279	3	001	140.06
		3 Total		140.06
		4	001	587.24
		4 Total		587.24
		6	001	80.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
LOPEZ, MARISOL	8279	6 Total		80.00
LOPEZ, MARISOL Total				807.30
MC CALL'S METER SALES	1757	2	660	1,403.79
		2 Total		1,403.79
		3	660	743.28
		3 Total		743.28
		4	660	50.00
		4 Total		50.00
		5	660	300.00
		5 Total		300.00
		6	660	300.00
		6 Total		300.00
MC CALL'S METER SALES Total				2,797.07
MCCLEAN, DOROTHY	8825	3	675	1,500.00
		3 Total		1,500.00
MCCLEAN, DOROTHY Total				1,500.00
MUNOZ, RENE	7564	3	001	16.50
		3 Total		16.50
MUNOZ, RENE Total				16.50
OPENGOV, INC	7618	3	001	999.00
		3 Total		999.00
		6	705	96,369.00
		6 Total		96,369.00
		7	705	0.00
		7 Total		0.00
OPENGOV, INC Total				97,368.00
RIV. CO. FIRE DEPARTMENT	1643	3	001	907,198.19
		3 Total		907,198.19
		7	001	939,499.35
		7 Total		939,499.35
RIV. CO. FIRE DEPARTMENT Total				1,846,697.54
RIV. CO. TLMA ADMINISTRATION	1329	2	100	10,000.00
		2 Total		10,000.00
RIV. CO. TLMA ADMINISTRATION Total				10,000.00
RODRIGUEZ, MANUEL	8794	3	001	55.00
		3 Total		55.00
		7	001	3,678.93
		7 Total		3,678.93
RODRIGUEZ, MANUEL Total				3,733.93

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
RUELAS, ELIAS	7006	3	675	150.00
		3 Total		150.00
RUELAS, ELIAS Total				150.00
SANTA ANA WATERSHED PROJ AUTHORITY	6965	1	660	28,484.21
		1 Total		28,484.21
SANTA ANA WATERSHED PROJ AUTHORITY Total				28,484.21
SMITH, BRANDON	6127	3	001	274.50
		3 Total		274.50
		4	001	288.75
		4 Total		288.75
SMITH, BRANDON Total				563.25
SOUTHERN CALIFORNIA GAS CO	1376	2	702	6,297.92
		2 Total		6,297.92
		3	702	8,662.95
		3 Total		8,662.95
		4	702	8,135.05
		4 Total		8,135.05
		5	702	17,659.61
		5 Total		17,659.61
		6	702	7,512.13
		6 Total		7,512.13
SOUTHERN CALIFORNIA GAS CO Total				48,267.66
STATEWIDE TOWING & RECOVERY, INC	3952	3	702	990.00
		3 Total		990.00
STATEWIDE TOWING & RECOVERY, INC Total				990.00
TOM BELL CHEVROLET	416	3	702	314.97
		3 Total		314.97
TOM BELL CHEVROLET Total				314.97
TRI-GLOBAL TECHNOLOGIES, LLC	7874	3	670	4,185.00
		3 Total		4,185.00
TRI-GLOBAL TECHNOLOGIES, LLC Total				4,185.00
ULINE	3623	3	670	860.06
		3 Total		860.06
ULINE Total				860.06
WALKER, BRIAN	4984	3	001	274.50
		3 Total		274.50
		4	001	16.50
		4 Total		16.50
WALKER, BRIAN Total				291.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
ACOM SOLUTIONS, INC	6497	1	705	5,371.00
		1 Total		5,371.00
		4	705	0.00
		4 Total		0.00
ACOM SOLUTIONS, INC Total				5,371.00
AVILA, CHRISTINA	6593	4	001	189.00
		4 Total		189.00
AVILA, CHRISTINA Total				189.00
BANNING GLASS MIRROR & SCREEN	7101	4	704	233.78
		4 Total		233.78
		6	704	519.62
		6 Total		519.62
BANNING GLASS MIRROR & SCREEN Total				753.40
BENHAR, CHANDA	8722	4	001	99.00
		4 Total		99.00
BENHAR, CHANDA Total				99.00
BOESS, RICHARD	8842	4	675	1,800.00
		4 Total		1,800.00
BOESS, RICHARD Total				1,800.00
BONICH, HECTOR	8846	4	675	513.36
		4 Total		513.36
BONICH, HECTOR Total				513.36
CALIFORNIA MUNICIPAL STATISTICS	6811	4	001	550.00
		4 Total		550.00
CALIFORNIA MUNICIPAL STATISTICS Total				550.00
CALIFORNIA PARK & REC SOCIETY	989	3	001	855.00
		3 Total		855.00
CALIFORNIA PARK & REC SOCIETY Total				855.00
CALIFORNIA PEACE OFFICERS' ASSN	1585	4	001	700.00
		4 Total		700.00
CALIFORNIA PEACE OFFICERS' ASSN Total				700.00
CAMPBELL, SANDRA	8833	4	675	1,800.00
		4 Total		1,800.00
CAMPBELL, SANDRA Total				1,800.00
DEGRAVE COMMUNICATIONS INC	8789	4	670	2,145.00
		4 Total		2,145.00
		5	100	3,062.98
			670	585.00
		5 Total		3,647.98

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
DEGRAVE COMMUNICATIONS INC Total				5,792.98
DEWITT, STEVE	8857	4	675	1,600.00
		4 Total		1,600.00
DEWITT, STEVE Total				1,600.00
EICHEL, GEORGE	8848	4	675	1,500.00
		4 Total		1,500.00
EICHEL, GEORGE Total				1,500.00
FINLEY ENGINEERING CO INC	8823	4	673	8,044.78
		4 Total		8,044.78
		5	673	22,772.70
		5 Total		22,772.70
		6	673	14,706.40
		6 Total		14,706.40
FINLEY ENGINEERING CO INC Total				45,523.88
FISHER, ROBERT	2544	4	001	102.55
		4 Total		102.55
FISHER, ROBERT Total				102.55
FLAGSTAR PUBLIC FUNDING CORP	8820	3	680	95,274.81
		3 Total		95,274.81
FLAGSTAR PUBLIC FUNDING CORP Total				95,274.81
FLINT, AUSTIN	8451	3	001	250.00
		3 Total		250.00
FLINT, AUSTIN Total				250.00
FOSTER, SCOTT	6062	4	001	65.19
		4 Total		65.19
FOSTER, SCOTT Total				65.19
FRANCO AVILA, JUAN	8791	4	670	250.00
		4 Total		250.00
FRANCO AVILA, JUAN Total				250.00
FUENTES, RAMON	8224	4	001	634.17
		4 Total		634.17
FUENTES, RAMON Total				634.17
GASSMAN, VICTOR	8844	4	675	1,200.00
		4 Total		1,200.00
GASSMAN, VICTOR Total				1,200.00
GOLDEN STAR TECHNOLOGY, INC	7912	4	001	0.00
		4 Total		0.00
		5	001	4,400.20
		5 Total		4,400.20

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
GOLDEN STAR TECHNOLOGY, INC Total				4,400.20
GORBETT, LINDA	8838	4	675	1,600.00
		4 Total		1,600.00
GORBETT, LINDA Total				1,600.00
GREAT WESTERN RECREATION LLC	8185	4	001	51.43
		4 Total		51.43
		7	001	678.37
		7 Total		678.37
GREAT WESTERN RECREATION LLC Total				729.80
HERNANDEZ, LATHISHA LOPEZ	8850	4	001	231.00
		4 Total		231.00
HERNANDEZ, LATHISHA LOPEZ Total				231.00
HYDROTEX PARTNERS, LTD	6448	3	660	1,451.07
		3 Total		1,451.07
HYDROTEX PARTNERS, LTD Total				1,451.07
JACKSON, NYLIA	8851	4	001	294.00
		4 Total		294.00
JACKSON, NYLIA Total				294.00
JACOBS, GAVIN	8852	4	001	357.00
		4 Total		357.00
JACOBS, GAVIN Total				357.00
LEIGHTRONIX INC	8614	4	001	5,376.00
		4 Total		5,376.00
LEIGHTRONIX INC Total				5,376.00
LOPEZ, JOSEPH	8849	4	001	336.00
		4 Total		336.00
LOPEZ, JOSEPH Total				336.00
LOZANO SMITH LLP	7550	3	700	5,425.00
		3 Total		5,425.00
		4	700	350.00
		4 Total		350.00
		5	700	1,570.50
		5 Total		1,570.50
		6	700	875.00
		6 Total		875.00
LOZANO SMITH LLP Total				8,220.50
MACIAS, RUBEN	6813	4	100	250.00
		4 Total		250.00
MACIAS, RUBEN Total				250.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
MAINSTREAM UNLIMITED	8845	4	001	1,233.05
		4 Total		1,233.05
		5	001	0.00
		5 Total		0.00
MAINSTREAM UNLIMITED Total				1,233.05
MARTINEZ, ROBERT	8723	4	001	307.50
		4 Total		307.50
		5	001	258.71
		5 Total		258.71
MARTINEZ, ROBERT Total				566.21
MESSERER, ELIZABETH & RAY	8832	4	675	1,800.00
		4 Total		1,800.00
MESSERER, ELIZABETH & RAY Total				1,800.00
MORGAN, DEIDRA J	7406	3	001	31.50
		3 Total		31.50
		4	001	157.50
		4 Total		157.50
		5	001	189.00
		5 Total		189.00
		6	001	157.50
		6 Total		157.50
		7	001	126.00
		7 Total		126.00
MORGAN, DEIDRA J Total				661.50
MUNICIPAL CODE CORPORATION	6013	4	001	0.00
		4 Total		0.00
		6	001	7,696.75
		6 Total		7,696.75
MUNICIPAL CODE CORPORATION Total				7,696.75
NADING, JOHN	8835	4	675	3,000.00
		4 Total		3,000.00
NADING, JOHN Total				3,000.00
NOTTINGHAM, MICHAEL	7032	4	001	288.75
		4 Total		288.75
NOTTINGHAM, MICHAEL Total				288.75
NUNEZ, FIDEL	8837	4	675	2,400.00
		4 Total		2,400.00
NUNEZ, FIDEL Total				2,400.00
PASS EDA	1591	4	001	125.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
PASS EDA	1591	4	670	25.00
		4 Total		150.00
		5	001	75.00
		5 Total		75.00
PASS EDA Total				225.00
PLATT, JEFFREY	8481	4	810	198.32
		4 Total		198.32
		5	810	(110.01)
		5 Total		(110.01)
		7	001	(88.00)
			810	0.00
		7 Total		(88.00)
PLATT, JEFFREY Total				0.31
PRITCHARD, RESHAY	8834	4	675	1,800.00
		4 Total		1,800.00
PRITCHARD, RESHAY Total				1,800.00
RIV. CO. DEPT OF ENVIRONMENTAL	3097	3	100	1,922.23
		3 Total		1,922.23
RIV. CO. DEPT OF ENVIRONMENTAL Total				1,922.23
ROCKWELL, AMBER	6071	4	670	71.25
		4 Total		71.25
ROCKWELL, AMBER Total				71.25
SAN BERNARDINO CO TAX COLLECTOR	3762	4	660	1,620.86
		4 Total		1,620.86
SAN BERNARDINO CO TAX COLLECTOR Total				1,620.86
SANCHEZ, ALBERTO	8024	4	001	232.08
		4 Total		232.08
SANCHEZ, ALBERTO Total				232.08
SORIANO, NATLLELY	7671	4	001	0.00
		4 Total		0.00
		7	001	42.00
		7 Total		42.00
SORIANO, NATLLELY Total				42.00
STONE, BRADLEY	8855	4	001	273.00
		4 Total		273.00
STONE, BRADLEY Total				273.00
SUN RIDGE SYSTEMS INC	4772	3	001	26,175.00
		3 Total		26,175.00
		5	001	0.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
SUN RIDGE SYSTEMS INC	4772	5 Total		0.00
SUN RIDGE SYSTEMS INC Total				26,175.00
THE HOUSE OF PORTRAITS INC	8818	4	001	880.78
		4 Total		880.78
THE HOUSE OF PORTRAITS INC Total				880.78
THESIER, DEREK	4985	4	001	404.30
		4 Total		404.30
THESIER, DEREK Total				404.30
WALLACE, A'JA	8189	4	001	300.00
		4 Total		300.00
WALLACE, A'JA Total				300.00
WASHINGTON, MARK	6962	4	761	86.09
		4 Total		86.09
WASHINGTON, MARK Total				86.09
WRCOG	2690	4	001	10,251.11
			702	7,920.00
		4 Total		18,171.11
		5	001	(175.64)
			702	0.00
		5 Total		(175.64)
WRCOG Total				17,995.47
YOUNG, CARLA	5375	4	670	71.25
		4 Total		71.25
YOUNG, CARLA Total				71.25
ZOLLAR, WILLIAM	8843	4	675	2,000.00
		4 Total		2,000.00
ZOLLAR, WILLIAM Total				2,000.00
ALBRIGHT, RANDI	8876	6	001	399.99
		6 Total		399.99
ALBRIGHT, RANDI Total				399.99
ALIDIO, ROSANNE	8623	5	001	4,211.71
		5 Total		4,211.71
ALIDIO, ROSANNE Total				4,211.71
ALL AMERICAN SEWER TOOLS	8673	6	660	1,804.08
		6 Total		1,804.08
ALL AMERICAN SEWER TOOLS Total				1,804.08
AMPLIFUND	8636	5	705	17,500.00
		5 Total		17,500.00
		6	705	0.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
AMPLIFUND	8636	6 Total		0.00
AMPLIFUND Total				17,500.00
ARCH, SHANE	8879	6	810	1,600.00
		6 Total		1,600.00
ARCH, SHANE Total				1,600.00
ASSOCIATED BAG COMPANY	921	5	670	0.00
		5 Total		0.00
		6	670	1,812.41
		6 Total		1,812.41
ASSOCIATED BAG COMPANY Total				1,812.41
AUDELO, REBECCA	8515	5	675	390.00
		5 Total		390.00
AUDELO, REBECCA Total				390.00
AVILA, SOL	7121	5	001	579.00
		5 Total		579.00
		7	001	5,131.37
		7 Total		5,131.37
AVILA, SOL Total				5,710.37
AVILA, VINCENT	5872	4	001	1,256.06
		4 Total		1,256.06
AVILA, VINCENT Total				1,256.06
BOIES, SANDRA DIANE	6748	5	675	195.00
		5 Total		195.00
BOIES, SANDRA DIANE Total				195.00
BOLIN, DIANA	7817	5	675	195.00
		5 Total		195.00
BOLIN, DIANA Total				195.00
CA. ST. DEPT. OF FISH AND WILDLIFE	4385	5	100	19,741.50
		5 Total		19,741.50
CA. ST. DEPT. OF FISH AND WILDLIFE Total				19,741.50
CAMPBELL, DUSTIN	8894	6	001	76.50
		6 Total		76.50
CAMPBELL, DUSTIN Total				76.50
CAMPBELL, GABRIELLE	8895	6	001	321.10
		6 Total		321.10
CAMPBELL, GABRIELLE Total				321.10
CAPPO	8112	6	001	435.00
		6 Total		435.00
CAPPO Total				435.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
COOPERATIVE PERSONNEL SVCS.	1022	4	001	1,595.00
		4 Total		1,595.00
COOPERATIVE PERSONNEL SVCS. Total				1,595.00
DAVIS, LORRAINE	8856	5	675	2,000.00
		5 Total		2,000.00
DAVIS, LORRAINE Total				2,000.00
DAVIS, RANDOLYN	6983	5	675	195.00
		5 Total		195.00
DAVIS, RANDOLYN Total				195.00
DUKE'S ROOT CONTROL INC	5820	5	680	25,000.00
		5 Total		25,000.00
DUKE'S ROOT CONTROL INC Total				25,000.00
ELECTROMARK COMPANY	1479	4	670	2,820.96
		4 Total		2,820.96
ELECTROMARK COMPANY Total				2,820.96
ESPITIA, ARTURO	8520	5	660	125.00
			680	125.00
		5 Total		250.00
ESPITIA, ARTURO Total				250.00
FALCON, ESTHER	7130	5	675	32.50
		5 Total		32.50
FALCON, ESTHER Total				32.50
FRANKLIN, DEBBIE	1096	5	700	500.00
		5 Total		500.00
FRANKLIN, DEBBIE Total				500.00
GRANAT, CARMELLA R	8870	5	675	2,400.00
		5 Total		2,400.00
GRANAT, CARMELLA R Total				2,400.00
H&L CHARTER CO, INC	6308	1	001	0.00
		1 Total		0.00
		2	001	3,770.00
		2 Total		3,770.00
		3	001	1,346.75
		3 Total		1,346.75
		4	001	1,570.00
		4 Total		1,570.00
		7	001	1,570.00
		7 Total		1,570.00
H&L CHARTER CO, INC Total				8,256.75

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
HALDIMAN, RENEE	8889	6	675	3,000.00
		6 Total		3,000.00
HALDIMAN, RENEE Total				3,000.00
HAMPTON, PATRICIA	5391	5	675	390.00
		5 Total		390.00
HAMPTON, PATRICIA Total				390.00
HERNANDEZ, JOSUE	8821	5	001	99.00
		5 Total		99.00
HERNANDEZ, JOSUE Total				99.00
IGM TECHNOLOGY CORP	8692	5	705	0.00
		5 Total		0.00
		6	705	45,150.00
		6 Total		45,150.00
IGM TECHNOLOGY CORP Total				45,150.00
IML NORTH AMERICA	7530	5	670	421.58
		5 Total		421.58
IML NORTH AMERICA Total				421.58
KEITH KILMER	7884	4	700	9,547.64
		4 Total		9,547.64
KEITH KILMER Total				9,547.64
LASKO, ROBERT	7259	4	610	250.00
		4 Total		250.00
LASKO, ROBERT Total				250.00
LIEVANOS, MANUEL	8652	5	675	390.00
		5 Total		390.00
LIEVANOS, MANUEL Total				390.00
LINN-FURY, CAROL	8878	5	675	162.50
		5 Total		162.50
LINN-FURY, CAROL Total				162.50
MACDONALD, DOUGLAS	7119	5	675	195.00
		5 Total		195.00
MACDONALD, DOUGLAS Total				195.00
MEGATRONICS INTERNATIONAL CORP	4043	4	702	2,995.00
		4 Total		2,995.00
		5	702	0.00
		5 Total		0.00
MEGATRONICS INTERNATIONAL CORP Total				2,995.00
MENDOZA, SAMUEL	8340	6	001	21.00
		6 Total		21.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
MENDOZA, SAMUEL	8340	7	001	0.00
		7 Total		0.00
MENDOZA, SAMUEL Total				21.00
NEW GEN STRATEGIES AND SOLUTIONS	8854	5	673	0.00
		5 Total		0.00
		7	673	16,542.18
		7 Total		16,542.18
NEW GEN STRATEGIES AND SOLUTIONS Total				16,542.18
PARR, GERALDINE	8872	6	675	2,400.00
		6 Total		2,400.00
PARR, GERALDINE Total				2,400.00
PATINO, JORGE	8094	5	675	195.00
		5 Total		195.00
PATINO, JORGE Total				195.00
PRATT, DEREK	8901	5	675	32.50
		5 Total		32.50
PRATT, DEREK Total				32.50
R.F. MACDONALD CO	6655	6	660	1,597.49
		6 Total		1,597.49
R.F. MACDONALD CO Total				1,597.49
RIV. CO. DIV. OF WEIGHTS & MEASURES	1612	5	600	148.20
		5 Total		148.20
RIV. CO. DIV. OF WEIGHTS & MEASURES Total				148.20
ROBINSON, CHRISTINE	8877	5	675	260.00
		5 Total		260.00
ROBINSON, CHRISTINE Total				260.00
ROSSETTI, ANTHONY	8874	5	660	224.00
		5 Total		224.00
ROSSETTI, ANTHONY Total				224.00
RUBIO, SERGIO	7983	3	702	296.00
		3 Total		296.00
RUBIO, SERGIO Total				296.00
RWC GROUP	8456	5	702	170.02
		5 Total		170.02
		6	702	301.57
		6 Total		301.57
		7	702	323.77
		7 Total		323.77
RWC GROUP Total				795.36

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
SCCI, INC DBA	5336	1	660	500.00
		1 Total		500.00
		2	660	500.00
		2 Total		500.00
		3	660	250.00
		3 Total		250.00
		4	660	250.00
		4 Total		250.00
		5	660	500.00
		5 Total		500.00
		6	660	500.00
		6 Total		500.00
		7	660	250.00
		7 Total		250.00
SCCI, INC DBA Total				2,750.00
SCOTT, CHASTITY	8828	4	001	94.15
		4 Total		94.15
SCOTT, CHASTITY Total				94.15
SFPP, LLC	8871	5	420	0.00
		5 Total		0.00
		6	420	128,938.00
		6 Total		128,938.00
SFPP, LLC Total				128,938.00
SUPERC AI INC	8640	5	001	15,175.00
			705	0.00
		5 Total		15,175.00
SUPERC AI INC Total				15,175.00
TRAN, LOAN	8900	5	675	32.50
		5 Total		32.50
TRAN, LOAN Total				32.50
UNITED STATES POSTAL SERVICE	1422	6	001	400.00
			705	400.00
			761	256.00
		6 Total		1,056.00
UNITED STATES POSTAL SERVICE Total				1,056.00
URIAS, JOSE ROSARIO	8804	5	675	292.50
		5 Total		292.50
URIAS, JOSE ROSARIO Total				292.50
VACA, YVETTE	7933	5	001	21.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
VACA, YVETTE	7933	5 Total		21.00
		7	001	770.50
		7 Total		770.50
VACA, YVETTE Total				791.50
WATER ENVIRONMENT FEDERATION	6165	6	660	383.00
		6 Total		383.00
WATER ENVIRONMENT FEDERATION Total				383.00
WEST COAST SAND & GRAVEL, INC.	7381	4	660	1,159.94
		4 Total		1,159.94
		5	660	2,399.25
		5 Total		2,399.25
		6	660	591.68
		6 Total		591.68
		7	660	1,808.92
		7 Total		1,808.92
WEST COAST SAND & GRAVEL, INC. Total				5,959.79
WESTPHALL, LARRY	8875	6	675	2,400.00
		6 Total		2,400.00
WESTPHALL, LARRY Total				2,400.00
WHITAKER, RENEE & DAVID	8869	5	675	618.10
		5 Total		618.10
WHITAKER, RENEE & DAVID Total				618.10
YARDISTRY US LLC	8836	5	810	9,753.53
		5 Total		9,753.53
YARDISTRY US LLC Total				9,753.53
ZENCITY TECHNOLOGIES US, INC	8190	5	001	42,000.00
		5 Total		42,000.00
		6	001	0.00
		6 Total		0.00
ZENCITY TECHNOLOGIES US, INC Total				42,000.00
ALL PHASE ELECTRIC SUPPLY	8635	5	673	30,499.39
		5 Total		30,499.39
ALL PHASE ELECTRIC SUPPLY Total				30,499.39
GONZALEZ, MARIA	8664	5	675	390.00
		5 Total		390.00
GONZALEZ, MARIA Total				390.00
HOVIVIAN, AUSTIN	8908	6	660	4,445.00
		6 Total		4,445.00
HOVIVIAN, AUSTIN Total				4,445.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
RAILROAD MANAGEMENT CO, LLC	4536	1	660	1,409.34
		1 Total		1,409.34
RAILROAD MANAGEMENT CO, LLC Total				1,409.34
SMITH, HAROLD A	8799	5	670	150.00
		5 Total		150.00
SMITH, HAROLD A Total				150.00
SWIFTLY INC	8526	5	610	2,585.00
		5 Total		2,585.00
		7	610	0.00
		7 Total		0.00
SWIFTLY INC Total				2,585.00
AHRENS, JOYCE	6435	7	670	333.94
		7 Total		333.94
AHRENS, JOYCE Total				333.94
ALBRIGHT, DILLON	8505	6	680	312.00
		6 Total		312.00
ALBRIGHT, DILLON Total				312.00
ALGIERS, LYNETTE	7977	7	001	282.37
		7 Total		282.37
ALGIERS, LYNETTE Total				282.37
AMERICAN WATER WORKS ASSN	910	5	660	336.00
		5 Total		336.00
AMERICAN WATER WORKS ASSN Total				336.00
ANDERSON, DENNIS & LUCILLE	7161	7	670	181.37
		7 Total		181.37
ANDERSON, DENNIS & LUCILLE Total				181.37
ANDREWS, LORRAINE	7603	7	670	283.59
		7 Total		283.59
ANDREWS, LORRAINE Total				283.59
BARRINGTON, CINDY	8892	7	001	131.25
		7 Total		131.25
BARRINGTON, CINDY Total				131.25
BESS, WILLIAM & SANDRA	8912	7	670	17.94
		7 Total		17.94
BESS, WILLIAM & SANDRA Total				17.94
BLUMENFELD, PHILLIP & JOAN	7162	7	670	140.89
		7 Total		140.89
BLUMENFELD, PHILLIP & JOAN Total				140.89
BOWEN, WAYNE	7875	7	670	205.81

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
BOWEN, WAYNE	7875	7 Total		205.81
BOWEN, WAYNE Total				205.81
BRAY, ROBERT & RUTH	8913	7	670	669.40
		7 Total		669.40
BRAY, ROBERT & RUTH Total				669.40
BRIANT, HARRIET	7382	7	670	228.46
		7 Total		228.46
BRIANT, HARRIET Total				228.46
BUNCH, JAMES & BRENDA	6251	7	670	201.99
		7 Total		201.99
BUNCH, JAMES & BRENDA Total				201.99
BURRIS, JEFFREY & VIRGINIA	8914	7	670	35.79
		7 Total		35.79
BURRIS, JEFFREY & VIRGINIA Total				35.79
CALACT	3726	7	610	840.00
		7 Total		840.00
CALACT Total				840.00
CALIFORNIA WATER EFFICIENCY PARTNER	8749	7	660	3,581.50
		7 Total		3,581.50
CALIFORNIA WATER EFFICIENCY PARTNER Total				3,581.50
CARRANZA, CORY	7163	7	670	172.44
		7 Total		172.44
CARRANZA, CORY Total				172.44
CASTILLO, ASHLEY	8477	7	001	154.25
		7 Total		154.25
CASTILLO, ASHLEY Total				154.25
CHAPAROSA, ANDREW	8915	7	670	192.46
		7 Total		192.46
CHAPAROSA, ANDREW Total				192.46
COLLATZ, ED	7748	7	670	79.56
		7 Total		79.56
COLLATZ, ED Total				79.56
COMMISSO, DOMINICK	7827	7	670	326.10
		7 Total		326.10
COMMISSO, DOMINICK Total				326.10
CORNETT, DARRELL & DEBORAH	8916	7	670	311.78
		7 Total		311.78
CORNETT, DARRELL & DEBORAH Total				311.78
DANIEL R HOUSER INC	8220	6	660	750.00

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
DANIEL R HOUSER INC	8220	6 Total		750.00
DANIEL R HOUSER INC Total				750.00
DEWETT, TOM & LORAY	6255	7	670	167.06
		7 Total		167.06
DEWETT, TOM & LORAY Total				167.06
DJORDJEVIC, BARBARA $ SVETOLIK	8917	7	670	654.24
		7 Total		654.24
DJORDJEVIC, BARBARA $ SVETOLIK Total				654.24
ECCLESTON, CHARLES	7359	7	670	219.08
		7 Total		219.08
ECCLESTON, CHARLES Total				219.08
EKBERG, STEVEN	8905	7	675	1,800.00
		7 Total		1,800.00
EKBERG, STEVEN Total				1,800.00
ELLIS, LINDA & CHRISTOPHER	6953	7	670	223.31
		7 Total		223.31
ELLIS, LINDA & CHRISTOPHER Total				223.31
ESRI, INC.	3683	7	001	1,400.00
		7 Total		1,400.00
ESRI, INC. Total				1,400.00
FIKSE, LEON & HARRIET	7599	7	670	20.49
		7 Total		20.49
FIKSE, LEON & HARRIET Total				20.49
FISHER, SHARON	7361	7	670	174.65
		7 Total		174.65
FISHER, SHARON Total				174.65
FLOYD SR, ERNEST	6978	7	660	1,801.00
		7 Total		1,801.00
FLOYD SR, ERNEST Total				1,801.00
FRUGIUELE, EDWARD & LESLIE	7861	7	670	241.03
		7 Total		241.03
FRUGIUELE, EDWARD & LESLIE Total				241.03
GALVAN, MANUEL & NANCY	8918	7	670	184.52
		7 Total		184.52
GALVAN, MANUEL & NANCY Total				184.52
GAMBILL, JOHN	8402	7	670	32.61
		7 Total		32.61
GAMBILL, JOHN Total				32.61
GEELAN, CHRIS	7363	7	670	191.66

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
GEELAN, CHRIS	7363	7 Total		191.66
GEELAN, CHRIS Total				191.66
GERDES, PERRY	5309	6	660	300.00
		6 Total		300.00
GERDES, PERRY Total				300.00
GLICKMAN, SANDRA	7168	7	670	91.20
		7 Total		91.20
GLICKMAN, SANDRA Total				91.20
GONZALEZ, OSCAR & MARIA	7598	7	670	178.79
		7 Total		178.79
GONZALEZ, OSCAR & MARIA Total				178.79
HAGEN, JOHN	7883	7	670	162.05
		7 Total		162.05
HAGEN, JOHN Total				162.05
HASENPFLUG, RICK	6259	7	670	214.67
		7 Total		214.67
HASENPFLUG, RICK Total				214.67
HAWLEY, CAMERON	5553	7	675	732.61
		7 Total		732.61
HAWLEY, CAMERON Total				732.61
INLAND EMPIRE MAGAZINE	8898	7	001	895.00
		7 Total		895.00
INLAND EMPIRE MAGAZINE Total				895.00
JAVOR, GEORG & SHIRLEY	7597	7	670	40.17
		7 Total		40.17
JAVOR, GEORG & SHIRLEY Total				40.17
KOBES, JOHN & ROSEMARIE	7595	7	670	175.18
		7 Total		175.18
KOBES, JOHN & ROSEMARIE Total				175.18
LEAGUE OF CA CITIES-RIVERSIDE DIV	2426	7	001	14,898.00
		7 Total		14,898.00
LEAGUE OF CA CITIES-RIVERSIDE DIV Total				14,898.00
LOY, JOYCE	8919	7	670	1,104.87
		7 Total		1,104.87
LOY, JOYCE Total				1,104.87
MAHAN, JOHN & APRIL	8920	7	670	984.98
		7 Total		984.98
MAHAN, JOHN & APRIL Total				984.98
MATA, ELISIA	8921	7	670	382.72

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
MATA, ELISIA	8921	7 Total		382.72
MATA, ELISIA Total				382.72
MEINICKE, ALAN	6697	7	670	6.46
		7 Total		6.46
MEINICKE, ALAN Total				6.46
MELLEBY, MARY ANN	8922	7	670	47.63
		7 Total		47.63
MELLEBY, MARY ANN Total				47.63
MENDEZ, JUAN & VARGAS, VICTORIA	8923	7	670	265.68
		7 Total		265.68
MENDEZ, JUAN & VARGAS, VICTORIA Total				265.68
MENDOZA, ROSALIA & DAVID	8924	7	670	25.71
		7 Total		25.71
MENDOZA, ROSALIA & DAVID Total				25.71
MILLER, LARRY & BARBARA	6262	7	670	165.50
		7 Total		165.50
MILLER, LARRY & BARBARA Total				165.50
MILLER, LEROY	8891	7	001	131.25
		7 Total		131.25
MILLER, LEROY Total				131.25
MOODY, TERRY & SANDRA	6440	7	670	15.54
		7 Total		15.54
MOODY, TERRY & SANDRA Total				15.54
NIELSON, KATHLEEN & CLYDE	8925	7	670	243.63
		7 Total		243.63
NIELSON, KATHLEEN & CLYDE Total				243.63
NIELSON, SVEND & MARIA	8926	7	670	295.51
		7 Total		295.51
NIELSON, SVEND & MARIA Total				295.51
NIGP	8460	7	001	395.00
		7 Total		395.00
NIGP Total				395.00
ORANGE COUNTY WINWATER WORKS	4434	6	660	1,373.37
		6 Total		1,373.37
		7	660	401.20
		7 Total		401.20
ORANGE COUNTY WINWATER WORKS Total				1,774.57
ORAVECZ-SMALL, PATTY	8933	7	670	177.61
		7 Total		177.61

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
ORAVECZ-SMALL, PATTY Total				177.61
PAREDES, GUADALUPE	8927	7	670	357.28
		7 Total		357.28
PAREDES, GUADALUPE Total				357.28
PARLET'S JEWELRY & LOAN	7377	7	670	154.56
		7 Total		154.56
PARLET'S JEWELRY & LOAN Total				154.56
PERRY, SONJA	8929	7	670	168.46
		7 Total		168.46
PERRY, SONJA Total				168.46
PIPPENGER HOLDINGS INC	8911	7	810	1,800.00
		7 Total		1,800.00
PIPPENGER HOLDINGS INC Total				1,800.00
PITSIKOS, DINO & AYDEE	8931	7	670	413.86
		7 Total		413.86
PITSIKOS, DINO & AYDEE Total				413.86
PRATT, FRANCIS & JUDITH	6266	7	670	197.60
		7 Total		197.60
PRATT, FRANCIS & JUDITH Total				197.60
RIV CO OFFICE OF ECONOMIC DEV	8695	7	001	4,000.00
		7 Total		4,000.00
RIV CO OFFICE OF ECONOMIC DEV Total				4,000.00
ROCHA, JUAN JOSE	8930	7	670	203.88
		7 Total		203.88
ROCHA, JUAN JOSE Total				203.88
ROSSOVICH, EDMUND & DIANE	7028	7	670	211.61
		7 Total		211.61
ROSSOVICH, EDMUND & DIANE Total				211.61
ROWLEY, KATHLEEN	7590	7	670	109.18
		7 Total		109.18
ROWLEY, KATHLEEN Total				109.18
ROYCE, RICHARD	8893	7	001	131.25
		7 Total		131.25
ROYCE, RICHARD Total				131.25
RUFFIN, STEPHEN	6268	7	670	247.55
		7 Total		247.55
RUFFIN, STEPHEN Total				247.55
SIBOLE, KOLEEN	7876	7	670	142.31
		7 Total		142.31

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
SIBOLE, KOLEEN Total				142.31
SLOVAK BARON EMPEY MURPHY & PINKNEY	8904	7	700	5,080.00
		7 Total		5,080.00
SLOVAK BARON EMPEY MURPHY & PINKNEY Total				5,080.00
SMELKER, CHARLES & SALLIE	8928	7	670	215.37
		7 Total		215.37
SMELKER, CHARLES & SALLIE Total				215.37
STONE, DIANE	6270	7	670	216.00
		7 Total		216.00
STONE, DIANE Total				216.00
STONE, PAMELA	5524	7	001	42.00
		7 Total		42.00
STONE, PAMELA Total				42.00
T-MOBILE	6743	6	001	115.00
		6 Total		115.00
T-MOBILE Total				115.00
THOMSON REUTERS - WEST	1447	7	001	274.44
		7 Total		274.44
THOMSON REUTERS - WEST Total				274.44
THORNTON, MEL	6766	5	670	120.00
			675	195.00
		5 Total		315.00
THORNTON, MEL Total				315.00
TIMECLOCK PLUS, LLC	8387	7	001	1,861.20
		7 Total		1,861.20
TIMECLOCK PLUS, LLC Total				1,861.20
TROUP, ERNEST	6980	7	670	263.56
		7 Total		263.56
TROUP, ERNEST Total				263.56
VAN WINKLE, THOMAS & LINDA	7541	7	670	212.57
		7 Total		212.57
VAN WINKLE, THOMAS & LINDA Total				212.57
VORISEK, ADAM	7375	7	670	223.49
		7 Total		223.49
VORISEK, ADAM Total				223.49
VREF INC	8883	7	001	6,000.00
		7 Total		6,000.00
VREF INC Total				6,000.00
WAGES, ROBERT & ANN	7182	7	670	104.87

Vendor By Fund FY 2024-25

Sum of Tran Amt				FY
Vendor Name	Vendor No	Period	Fund	25
WAGES, ROBERT & ANN	7182	7 Total		104.87
WAGES, ROBERT & ANN Total				104.87
WEINBERG, MARK & JUDY	7183	7	670	179.11
		7 Total		179.11
WEINBERG, MARK & JUDY Total				179.11
WILLIAMS, JOHN	7867	7	670	265.50
		7 Total		265.50
WILLIAMS, JOHN Total				265.50
WILLIAMS, JOHN	7585	7	670	132.24
		7 Total		132.24
WILLIAMS, JOHN Total				132.24
WOOD, RONALD & JUDY	7868	7	670	145.46
		7 Total		145.46
WOOD, RONALD & JUDY Total				145.46
Grand Total				61,088,605.86

Fund Balance By Period

	Ending FY 2022-23	Preliminary FY 2023-24	Period 1 FY 2024-25	Period 2 FY 2024-25	Period 3 FY 2024-25	Period 4 FY 2024-25	Period 5 FY 2024-25	Period 6 FY 2024-25	Period 7 FY 2024-25
GOVERNMENTAL FUNDS	**12,502,390**	**11,723,862**	**11,461,062**	**9,966,938**	**7,405,185**	**7,831,907**	**10,261,381**	**12,228,250**	**15,971,642**
GENERAL FUND	***4,615,902***	***4,131,104***	***4,086,489***	***2,674,410***	***1,206,826***	***1,285,031***	***3,598,910***	***5,427,270***	***8,364,697***
(001) GENERAL FUND	3,145,119	2,426,154	2,381,539	969,460	(498,124)	(419,919)	1,895,670	3,724,030	6,661,457
(002) DEVELOPER DEPOSIT FUND	(299,363)	(312,682)	(312,682)	(312,682)	(312,682)	(312,682)	(314,392)	(314,392)	(314,392)
(005) ADMIN ALLOWANCE FUND	1,764,037	2,011,523	2,011,523	2,011,523	2,011,523	2,011,523	2,011,523	2,011,523	2,011,523
(300) CITY ADMINISTRATION DEBT SVC FUND	6,110	6,110	6,110	6,110	6,110	6,110	6,110	6,110	6,110
SPECIAL REVENUE FUNDS	***2,397,368***	***1,796,521***	***1,674,007***	***1,632,861***	***538,492***	***887,009***	***1,002,604***	***1,270,051***	***1,509,150***
(100) GAS TAX STREET FUND	(145,388)	(799,888)	(839,540)	(844,255)	(839,053)	(838,838)	(824,254)	(774,165)	(716,277)
(101) MEASURE A STREET FUND	1,332,739	974,945	935,694	920,934	466,045	411,328	438,549	569,483	600,678
(102) RMRA (SB1) GAS TAX FUND	523,603	626,312	626,312	626,312	4,118	65,555	146,288	208,227	282,057
(110) CDBG FUND	(49,533)	(43,383)	(43,383)	(43,383)	(43,383)	(43,383)	(43,383)	(43,383)	(43,383)
(111) LANDSCAPE MAINTENANCE FUND	76,854	79,991	66,558	53,286	37,683	21,090	13,785	6,451	81,786
(132) AIR QUALITY IMPROVEMENT FUND	284,303	318,220	328,734	328,734	328,734	328,734	329,859	340,472	340,472
(140) ASSET FORFEIT-POLICE FUND	1,871	1,928	1,928	1,928	1,928	1,928	1,928	1,928	1,928
(148) SUPPLEMENTAL LAW ENFORCEMENT FUND	13,110	(1,003)	(1,003)	(1,003)	(1,003)	(1,003)	(1,003)	(1,003)	(1,003)
(150) STATE PARK BOND ACT FUND	(88)	(116)	(116)	(116)	(116)	(116)	(116)	(116)	(116)
(200) SPECIAL DONATION FUND	36,526	39,426	39,426	41,971	41,971	41,971	41,971	41,971	42,021
(201) SENIOR CENTER ACTIVITIES FUND	53,297	64,041	64,312	66,636	66,981	66,462	65,699	68,099	68,900
(202) ANIMAL CONTROL RESERVE FUND	(88)	(116)	(116)	(116)	(116)	(116)	(116)	(116)	(116)
(203) POLICE VOLUNTEER FUND	5,265	6,742	6,742	6,742	6,742	6,742	6,742	6,742	6,742
(221) CSCDA-CFD 2020-02 ATWELL	264,898	590,693	590,693	590,693	590,693	949,464	949,464	949,464	949,464
(222) ARPA-AMERICA RESCUE PLAN	0	(77,739)	(118,702)	(131,970)	(139,200)	(139,277)	(139,277)	(120,471)	(120,471)
CAPITAL IMPROVEMENT FUNDS	***5,489,119***	***5,796,236***	***5,700,565***	***5,659,666***	***5,659,866***	***5,659,866***	***5,659,866***	***5,530,928***	***6,097,794***
(400) POLICE FACILITIES DVLP FUND	264,639	306,013	306,013	306,013	306,013	306,013	306,013	306,013	573,613
(410) FIRE FACILITIES DEVELOPMENT FUND	1,325,157	1,444,736	1,444,736	1,444,736	1,444,736	1,444,736	1,444,736	1,444,736	1,611,094
(420) TRAFFIC CONTROL FUND	1,998,165	2,142,658	2,142,658	2,101,759	2,101,959	2,101,959	2,101,959	1,973,021	1,973,021
(430) GENERAL FACILITIES FUND	543,219	500,498	500,498	500,498	500,498	500,498	500,498	500,498	633,406
(444) WILSON MEDIAN FUND	401,056	413,220	413,220	413,220	413,220	413,220	413,220	413,220	413,220
(451) PARK DEVELOPMENT FUND	303,284	300,723	205,052	205,052	205,052	205,052	205,052	205,052	205,052
(470) CAPITAL IMPROVEMENT FUND	653,601	688,390	688,390	688,390	688,390	688,390	688,390	688,390	688,390
PROPRIETARY FUNDS	**149,218,701**	**180,671,588**	**181,420,870**	**182,780,909**	**185,847,544**	**183,065,043**	**182,819,530**	**181,082,301**	**181,230,358**
ENTERPRISE FUNDS	***58,639,572***	***59,615,541***	***61,530,102***	***61,847,003***	***63,940,576***	***62,707,146***	***61,424,054***	***60,719,475***	***61,079,460***
(600) AIRPORT FUND	2,334,590	2,255,790	2,239,858	2,228,196	2,218,320	2,212,372	2,179,235	2,179,066	2,179,166
(610) TRANSIT FUND	(1,121,809)	600,423	921,950	931,271	1,004,770	1,136,477	1,277,434	1,458,764	1,644,148
(670) ELECTRIC FUND	79,223,699	80,870,402	81,938,127	82,246,747	84,130,891	82,840,899	82,068,511	81,223,014	80,022,562
(672) RATE STABILITY FUND	6,614,955	6,817,834	6,817,834	6,817,834	6,817,834	6,817,834	6,817,834	6,817,834	6,817,834
(673) ELECTRIC IMPROVEMENT FUND	(12,490,895)	(15,625,146)	(15,074,876)	(15,103,242)	(14,867,119)	(14,920,748)	(14,988,013)	(15,003,519)	(13,621,917)
(674) ELECTRIC REVENUE BOND PROJECT FUND	646,486	698,604	698,604	698,604	698,604	698,604	698,604	698,604	698,604

Fund Balance By Period

	Ending FY 2022-23	Preliminary FY 2023-24	Period 1 FY 2024-25	Period 2 FY 2024-25	Period 3 FY 2024-25	Period 4 FY 2024-25	Period 5 FY 2024-25	Period 6 FY 2024-25	Period 7 FY 2024-25
(675) PUBLIC BENEFIT FUND	1,027,223	1,198,799	1,232,798	1,271,786	1,184,219	1,169,157	1,094,670	1,069,933	1,063,284
(678) ELECTRIC REVENUE BOND DEBT SERVICE FUND	(22,853,229)	(21,417,199)	(21,417,199)	(21,417,199)	(21,419,949)	(21,419,949)	(21,896,721)	(21,896,721)	(21,896,721)
(690) REFUSE FUND	5,258,551	4,216,033	4,173,005	4,173,005	4,173,005	4,172,499	4,172,499	4,172,499	4,172,499
ENTERPRISE - BANNING UTILITY AUTHORITY FUNDS	***98,719,748***	***130,974,655***	***133,184,293***	***134,832,862***	***136,225,344***	***135,110,574***	***136,619,713***	***136,022,570***	***135,988,662***
(660) WATER FUND	77,585,924	95,434,019	96,523,168	97,637,250	98,620,910	99,074,624	100,777,753	100,412,899	100,485,850
(661) WATER CAPITAL FACILITIES FUND	4,556,272	3,471,958	3,699,606	3,699,606	3,711,142	3,708,849	3,708,363	3,706,256	3,706,256
(662) IRRIGATION WATER FUND	1,356,780	1,400,939	1,400,939	1,400,939	1,400,939	1,400,939	1,400,939	1,400,939	1,400,939
(663) BUA WATER CAPITAL PROJECT FUND	1,586,239	2,730,862	2,730,862	2,730,862	2,730,862	2,730,862	2,730,862	2,730,862	2,730,862
(669) BUA WATER DEBT SERVICE FUND	(19,381,148)	(18,108,681)	(18,108,681)	(18,108,681)	(18,111,431)	(19,723,462)	(19,723,462)	(19,723,462)	(19,723,462)
(680) WASTEWATER FUND	15,367,783	27,119,988	27,905,573	28,446,206	28,834,592	29,153,157	28,968,326	28,767,033	28,660,174
(681) WASTEWATER CAPITAL FACILITY FUND	10,595,161	11,032,817	11,098,610	11,060,627	11,042,654	11,033,054	11,024,381	10,995,492	10,995,492
(682) WASTEWATER TERTIARY FUND	7,565,991	8,152,021	8,193,484	8,225,321	8,254,944	8,254,944	8,254,944	8,254,944	8,254,944
(683) BUA WASTEWATER CAPITAL PROJECT FUND	2,182,283	2,180,219	2,180,219	2,180,219	2,180,219	2,180,219	2,180,219	2,180,219	2,180,219
(685) STATE REVOLVING LOAN FUND	524,120	540,194	540,194	540,194	540,194	540,194	540,194	540,194	540,194
(689) BUA WASTEWATER DEBT SERVICE FUND	(3,219,657)	(2,979,681)	(2,979,681)	(2,979,681)	(2,979,681)	(3,242,806)	(3,242,806)	(3,242,806)	(3,242,806)
INTERNAL SERVICE FUNDS	***(8,140,620)***	***(9,918,609)***	***(13,293,526)***	***(13,898,957)***	***(14,318,377)***	***(14,752,678)***	***(15,224,238)***	***(15,659,745)***	***(15,837,765)***
(700) RISK MANAGEMENT FUND	(5,330,487)	(8,148,571)	(11,058,090)	(11,096,481)	(11,131,979)	(11,232,717)	(11,407,164)	(11,517,067)	(11,589,593)
(702) FLEET MAINTENANCE FUND	155,972	742,311	673,349	591,102	480,055	342,727	246,622	186,746	139,228
(703) INFORMATION SYSTEMS SERVICE FUND	(1,162,593)	(1,353,065)	(1,435,006)	(1,601,791)	(1,653,030)	(1,688,670)	(1,705,855)	(1,732,940)	(1,747,779)
(704) BUILDING MAINTENANCE	-	764,502	706,165	642,502	564,744	486,694	450,498	414,417	398,062
(705) SUPPORT SERVICES	-	(608,012)	(739,643)	(850,225)	(885,445)	(912,209)	(1,017,931)	(1,202,225)	(1,213,749)
(761) UTILITY BILLING ADMINISTRATION FUND	(1,803,511)	(1,315,773)	(1,440,300)	(1,584,063)	(1,692,721)	(1,748,502)	(1,790,407)	(1,808,675)	(1,823,933)
SUCCESSOR AGENCY FUNDS	**(7,073,808)**	**(6,560,689)**	**(6,577,272)**	**(8,364,450)**	**(8,380,289)**	**(8,433,533)**	**(8,457,362)**	**(8,468,437)**	**(7,951,331)**
(805) REDEVELOPMENT OBLIGATION RETIREMENT FUND	1,869,623	1,903,027	1,903,027	1,903,027	1,903,027	1,903,027	1,903,027	1,903,027	2,438,553
(810) SUCCESSOR AGENCY LOW/MOD FUND (HOUSING AGENCY)	1,683,301	993,414	976,831	968,849	953,010	902,516	878,687	867,612	849,192
(830) SUCCESSOR AGENCY DEBT SERVICE FUND	(23,536,446)	(22,309,503)	(22,309,503)	(24,088,699)	(24,088,699)	(24,091,449)	(24,091,449)	(24,091,449)	(24,091,449)
(840) BEA CAPITAL PROJECTS FUND	3,496,756	3,425,091	3,425,091	3,425,091	3,425,091	3,425,091	3,425,091	3,425,091	3,425,091
(841) BEA LOW/MOD CAPITAL PROJECTS FUND	545,707	545,663	545,663	545,663	545,663	545,663	545,663	545,663	545,663
(850) SUCCESSOR AGENCY ADMIN FUND	8,867,252	8,881,620	8,881,620	8,881,620	8,881,620	8,881,620	8,881,620	8,881,620	8,881,620
Grand Total	**154,647,283**	**185,834,761**	**186,304,660**	**184,383,397**	**184,872,440**	**182,463,417**	**184,623,549**	**184,842,114**	**189,250,669**

CITY OF BANNING
STAFF REPORT

TO:	**CITY COUNCIL**
FROM:	**Robert Fisher, Acting City Manager**
PREPARED BY:	**Laurie Sampson,** **Vincent Avila, Chief of Police**
MEETING DATE:	**February 25, 2025**
SUBJECT:	**Receive and File Police Department Statistics for the Month of January 2025**

RECOMMENDATION:

Receive and file.

BACKGROUND:

The Banning Police Department provides statistics to the public and City Council upon request.

JUSTIFICATION:

Statistics tell a city how many police officers need to be on the street, what crimes are being committed, and reveal increases and decreases in specific crimes. Also, cities get funding in part on their crime rates. If a federal crime bill passed, the Government needs to know which cities could benefit the most from those funds, and some cities have been rewarded financially for drastically lowering rates of crime.

FISCAL IMPACT:

None

ALTERNATIVES:

Providing statistics keeps the Council, staff, and residents apprised of current police activities. If the statistics are not presented to the Council on a regular basis, then they should be provided on another platform.

BUDGETED?:

No

CONTRACT/AGREEMENT:

No

ATTACHMENTS:

1. JANUARY 2025 STATS.pdf

Group A Offense Report

Beginning Date: 01/01/2025 **Ending Date: 01/31/2025**

Agency: BANNING PD

Offense	Reported in 2025	Reported in 2024	Percent Change	Offenses Cleared	Percent Cleared	Percent Of Category	Rate Per 100,000*
Murder	0	0	NA	0	0.00%	0.00%	0.00
Negligent Manslaughter	0	0	NA	0	0.00%	0.00%	0.00
Justifiable Homicide	0	0	NA	0	0.00%	0.00%	0.00
Non-consensual Sex Offenses:							
Rape	0	0	NA	0	0.00%	0.00%	0.00
Sodomy	0	0	NA	0	0.00%	0.00%	0.00
Sexual Assault with Object	0	0	NA	0	0.00%	0.00%	0.00
Fondling	1	0	NA	0	0.00%	5.26%	3.13
Aggravated Assault	5	14	-64.29%	2	40.00%	26.32%	15.63
Simple Assault	13	8	62.50%	9	69.23%	68.42%	40.63
Intimidation	0	0	NA	0	0.00%	0.00%	0.00
Kidnapping/Abduction	0	2	-100.00%	0	0.00%	0.00%	0.00
Consensual Sex Offenses:							
Incest	0	0	NA	0	0.00%	0.00%	0.00
Statutory Rape	0	0	NA	0	0.00%	0.00%	0.00
Human Trafficking, Commercial Sex Acts	0	0	NA	0	0.00%	0.00%	0.00
Human Trafficking, Involuntary Servitude	0	0	NA	0	0.00%	0.00%	0.00
Crimes Against Persons Total	**19**	**24**	**-20.83%**	**11**	**57.89%**	**30.65%**	**59.38**
Robbery	1	0	NA	1	100.00%	3.23%	3.13
Burglary/Breaking & Entering	2	7	-71.43%	0	0.00%	6.45%	6.25
Larceny/Theft Offenses	10	15	-33.33%	3	30.00%	32.26%	31.25
Motor Vehicle Theft	8	3	166.67%	1	12.50%	25.81%	25.00
Arson	0	1	-100.00%	0	0.00%	0.00%	0.00
Destruction Of Property	5	10	-50.00%	1	20.00%	16.13%	15.63
Counterfeiting/Forgery	0	1	-100.00%	0	0.00%	0.00%	0.00
Fraud Offense	1	1	0.00%	0	0.00%	3.23%	3.13
Embezzlement	0	0	NA	0	0.00%	0.00%	0.00
Extortion/Blackmail	0	0	NA	0	0.00%	0.00%	0.00
Bribery	0	0	NA	0	0.00%	0.00%	0.00
Stolen Property Offenses	4	0	NA	3	75.00%	12.90%	12.50
Crimes Against Property Total	**31**	**38**	**-18.42%**	**9**	**29.03%**	**50%**	**96.88**
Drug/Narcotic Violations	2	2	0.00%	2	100.00%	16.67%	6.25
Drug Equipment Violations	3	5	-40.00%	2	66.67%	25.00%	9.38
Gambling Offenses	0	0	NA	0	0.00%	0.00%	0.00
Pornography/Obscene Material	0	0	NA	0	0.00%	0.00%	0.00
Prostitution	0	0	NA	0	0.00%	0.00%	0.00
Weapons Law Violation	7	2	250.00%	6	85.71%	58.33%	21.88
Animal Cruelty	0	1	-100.00%	0	0.00%	0.00%	0.00
Crimes Against Society Total	**12**	**10**	**20%**	**10**	**83.33%**	**19.35%**	**37.5**
Total Group "A" Offenses	**62**	**72**	**-13.89%**	**30**	**48.39%**	**100%**	**193.75**

Note: *The Rate per 100,000 will be 'NA' when the Adjusted Population Base is Zero.*

CITY OF BANNING
STAFF REPORT

TO:	**CITY COUNCIL**
FROM:	**Robert Fisher, Acting City Manager**
PREPARED BY:	**Laurie Sampson,** **Todd Hopkins, CALFIRE Division Chief**
MEETING DATE:	**February 25, 2025**
SUBJECT:	**Receive and File Fire Protection Services Statistics for the Month of January 2025**

RECOMMENDATION:

Receive and file.

BACKGROUND:

City Council has requested CalFire's Riverside County Division, which provides fire protection services in the City of Banning, provide specific reports to the public and City Council on a monthly basis.

JUSTIFICATION:

Many fire and EMS departments store and analyze statistical data, which can provide a detailed analysis of the types of responses their organization is called to assist. This information is critical to elevating the level of service provided by the fire department.

FISCAL IMPACT:

None

ALTERNATIVES:

Providing statistics keeps the Council, staff, and residents apprised of current fire and paramedic activities. If the statistics are not presented to the Council on a regular basis, then they should be provided on another platform.

BUDGETED?:

No

CONTRACT/AGREEMENT:

No

ATTACHMENTS:

1. Fire Statistics January 2025.pdf

Riverside County Fire Department/ CAL FIRE

Jurisdiction Summary for City of Banning

Bill Weiser

Fire Chief

1/1/2025 to 1/31/2025

Incident Response Activity

***At least 1 Resource Dispatched**

Incident Type	#
False Alarm	27
Medical	401
Other Fire	12
Public Service Assist	24
Ringing Alarm	3
Standby	9
Traffic Collision	20
Vehicle Fire	2
Wildland Fire	5
Incident Total	**503**

Average Enroute to On-Scene Time

***Units Responding Charlie, Delta, Bravo, Echo, Code 3**

<5 Minutes: 262

+5 Minutes: 89

+10 Minutes: 7

+20 Minutes: 1

Average Min: 4.26

% 0 to 5 Min: 72.98

Enroute Time: Unit has been acknowledged as responding.
On-Scene Time: Unit has been acknowledged as being On-Scene.

Transport

***Based on Units with a Transport time**

	0
Total:	**0**

Mutual Aid

***Unit responses**

Jurisdiction Units Responses

Engine	310
Total:	**310**

Mutual Aid Given

Engine	130
Total:	**130**

Mutual Aid Received

	24
Brush	9
Chief	18
Engine	239
Patrol	11
PIO	2
Squad	71
Truck/Quint	15
Water Tender	3
Total:	**392**

Truck Report

MRFT1 recorded 15 responses in City of Banning from 1/1/2025 1:40:10 PM to 1/31/2025 1:40:10 PM

Significant Incidents

25CARRU007864

1/10/2025 8:30:00AM

CAL FIRE/Riverside County Fire Department resources were dispatched to the above location for a reported multi-vehicle traffic collision with patients trapped. The first arriving Company Officer Reported a two-car traffic collision with one patient trapped inside a vehicle. Fire Department personnel, utilizing the Jaws of Life, extricated the single patient within 5 minutes of arriving on scene. All 3 individuals involved in the accident were accessed at scene, however, all individuals denied need for further medical attention and declined transport to a medical facility. The scene has been handed over to Banning City Police for further investigation.

CITY OF BANNING
STAFF REPORT

TO:	**CITY COUNCIL**
FROM:	**Robert Fisher, Acting City Manager**
PREPARED BY:	**Art Vela, Public Works Director**
MEETING DATE:	**February 25, 2025**
SUBJECT:	**Public Works Capital Improvement Project Tracking List**

RECOMMENDATION:

Receive and file.

BACKGROUND:

There are several planning, environmental, design and construction contracts that have been approved by City Council and/or the City Manager's office that are being managed by the Public Works Department. In an effort to keep the City Council and the public informed of the progress made and current status of each project, staff has prepared and will continue to update the attached Public Works CIP Tracking List. The list will be presented to City Council on a monthly basis.

JUSTIFICATION:

This recurring item is provided to keep City Council and the public apprised of progress on certain projects.

FISCAL IMPACT:

Not applicable.

ALTERNATIVES:

Not applicable.

BUDGETED?:

No

CONTRACT/AGREEMENT:

No

ATTACHMENTS:

1. CIP Tracking February 2025.pdf

PUBLIC WORKS CAPITAL IMPROVEMENT PROJECTS (CIP) TRACKING SHEET

Category	Project #	Project Name	Phase	% Completed	Tasks Completed	Current Tasks	Future Tasks	Tentative Completion Date	Project Budget
Streets	2023-17	Hargrave Grade Separation	PA&ED	0%	FAR Grant Agreement; Evaluated RFPs proposals.	Recommendation of Award of Contract	Contract execution; project kickoff, grant reporting.	12/30/27	$ 8,300,000
Streets	-	Highland Springs Avenue Interchange	PA&ED	35%	Highway Safety Manaul segmentation existing condition; aerial topo mapping; traffic volume report; Environmental Purpose/Need Statement; Air/Noise memos; VMT Methodology Memo; DDI Exclusion Memo; ROW Data Sheets;	Geometric development; utility agency data collection; Traffic Operations Analysis Report; Enviro. Technical Reports; HSM Analysis Memo; Geotech Reports; Prelim Drainage Reports;	Design Standard Risk Assessment; Value Analysis Report; Geometric Approval Document; R/W Data Sheets; Transp. Management Plan	8/1/25	$ 2,900,000
Streets	2020-04	Sun Lakes Blvd Extension	CEQA, PS&E	90%	Council has approved a redesign in order to comply with Kinder Morgan's requirements.	Webb to submit signed 100% Plans. Finalize Easement Documents and Environmental Permitting	Prepare Bid Documents	12/1/26	$ 1,248,026
Streets	-	Traffic Signalization of 8th Street/I-10 Interchange	Design/Permits	90%	Design well underway. Submittal of encroachment permit application to Caltrans. Caltrans approval on TOAR and concepts.	Design drawings have been resubmitted to Caltrans and awaiting a response. Negotiations with private owners for ROW acquisition.	Resubmitted to Caltrans if needed. Caltrans encroachment permit issuance. Property acquisition (private party task)	12/1/25	$ 1,081,000
Streets	2022-05	HSIP Cycle 10 Omar/Ramsey Intersection Improvements	Construction	0%	Project Approved for Funding by the State. Proposal solicitation. Contract award.	Caltrans Construction Allocation Funds Released. Preparing Bid Documents	Advertize Bid to Public	7/30/25	$ 59,698
Streets	2023-04	HSIP Cycle 10 Ramsey Street Pedestrian Safety Improvements	Construction	0%	Project Approved for Funding by the State. Project Awarded.	Caltrans Construction Allocation Funds Released. Preparing Bid Documents	Advertize Bid to Public	7/30/25	$ 64,780
Streets	2023-09	HSIP Upgrade 17 Traffic Signals Hardware	PS&E	5%	Project approved for funding by Caltrans	30% Plans approved by City. STC Traffic Working on 60% Plans and Caltrans Approval	60% Plans Submittal	12/1/25	$ 433,900
Streets	2023-10	HSIP Pedestrian Crossings Upgrades at 19 Intersection	PS&E	2%	Project approved for funding by Caltrans	Preparing RFP Documents for Design Services	Send to purchasing for advertizing	12/1/25	$ 585,000
Streets	2023-11	HSIP Wilson St & 12 St Intersection Upgrade	PS&E	2%	Project approved for funding by Caltrans	Preparing RFP Documents for Design Services	Send to purchasing for advertizing	12/1/25	$ 277,000
Streets	2023-05	San Gorgonio/UPRR Pedestrian Crossing	Design	60%	Amendment 2 CC Approval. 65% Plans complete	90% Plans Sent to UPRR, Caltrans and CUPC for Review and Comments	Submittal of 100% Plans	12/1/25	$ 230,000
Facility	2021-06	CNG Station	Design-Build	40%	Reviewed/approved 100% drawings; Ordered/received major equipment; Pre-Consruction meeting held.	Construction started; underground utility work.	Complete underground utility work, demolition, grading, installation of equipment, paving, concrete and new wall.	10/1/25	$ 4,888,261
Facility		City Hall Roof Repairs - Phase 1	Construction	100%	Inspection and repair of tiled roof area	Completed	Retention Release	1/31/25	$ 90,000
Facility		City Hall Roof Repairs - Phase 2	Design/Bid	10%	Scope identification - Roof/leak repairs on flat roof section over remainder of City Hall	Preparation of RFP	Award, Construction	6/30/25	$ 275,000
Facility	2024-02	City Hall West Side Workspace Reconfiguration	Construction	5%	Reconfiguration of open area cubicles and closed lobby area with additional workstations, new cubicles, carpet, paint	Removal of cubicles, removal of floowing, close off existing hallway door	Demo work, painting, new flooring new cubicles	2/28/25	$ 300,000
Water	2018-02W-2	New Domestic Water Well C8 (Phase 2: Well Equipping and Site Development)	Bidding/Award	100%	Completed final bid documents, advertised and closed on bids.	Award of construction contract approved by CC on 2/11/2025.	Finalize construction agreement between all parties and set-up a pre-con meeting and issue NTP.	2/28/25	$ 3,774,100
Wastewater	2022-01WW	Wastewater Treatment Plant and Recycled Water Improvments	Phase 1 (Design)	0%	DBIA Agreement (545) and General Conditions (535) and RFP's Scope of Work Finalized.	PDB Phase 1 (Design) Agreement to be awarded by CC on 2/25/2025.	Subsequent to 2/25/2025 CC meeting; get all parties signature to fully execute the agreement and issue NTP.	3/25/25	$ 4,398,490
Wastewater	2020-08WW	WWTP Equalization Basin	Design/CEQA	90%	Completed 60% drawings, 90% drawings are in reviewed.	Development of 100% drawings; working with EPA on grant funding.	Submitall of 100% drawings; grant funding to be announced by end of Feb. 2025.	3/31/25	$ 362,866
Water	2023-15	Ramsey Street Water Line	Construction	80%	Notice to proceed issued; pre-construction meeting held	16" DIP for the actual mainline alignment has been completed.	Service line trenching, Bac-Ts, flushing, final trecnh pave remains work-in-progress.	10/1/25	$ 1,199,106
Water	2022-07W	Well M12A (Phase 2: Well Equipping an Site Development)	Bidding/Award	100%	Completed final bid documents, advertised and closed on bids.	Award of construction contract approved by CC on 2/25/2025.	Award Construction Contract at the 2/25/2025 CC Meeting and fully execute the construction agreement. Issue NTP.	3/25/25	$ 2,684,990
Recycled Water	2024-1RW	Charles Street and Lincoln Street Booster Station and Reservoirs	Construction	0%	Project has been advertised for bids	Pre-Construction Scheduled for 1/27/25	Begin Construction Activities	2/1/26	$ 10,160,200
Facility	2023-16	Opportunity Village Sound Wall	Design	60%	Project kicked off.	100% Plans Approved by City. Waiting on Caltrans Approval and Encroachment Permit	Final Plans	3/31/25	$ 103,486
Facility	2023-06	Lions Park Non-Potable Water Conversion	Design	100%	Project Awarded. Kick Off Meeting. Surveying and utility research	100% Plans Approved by City.	Prepare Bid Package to go out in July after Completion of Little League Season	12/1/25	$ 98,500
Electric		Sun Lakes Blvd Extension	Design	60%	Full underground conversion design and const estimate completed. Further direction given to reduce cost of project	Completing redesign of project to reduce the amount of overhead to underground conversion	Prepare bid package to include with larger Public Works project	12/1/26	$ 55,400
Electric		Robertson's Ready Mix Pole Relocation	Construction	0%	Line Extension Agreement approved by City Council. Additional comments provided by Robertson's Ready Mix	Update and execute ageemtment, and collect deposits from Robertson's to begin ordering materials for construction	Order materials for contruction and schedule installation	6/30/25	$ 425,000
Electric		12kV Reconductor on Barbour St at Hathaway	Design	90%	Design has been completed for the project	Plan in review with amangement	Include project in budget cycel for 2025/26; Order materials for contruction and schedule installation	12/30/25	$ 100,000

CITY OF BANNING
STAFF REPORT

TO: **CITY COUNCIL**

FROM: **Robert Fisher, Acting City Manager**

PREPARED BY: **Kristine Gutierrez, Community Development Operations Manager**
David Newell, Community Development Director

MEETING DATE: **February 25, 2025**

SUBJECT: **Receive and File Code Enforcement Statistics for the Month of January 2025**

RECOMMENDATION:

Receive and file.

BACKGROUND:

The City's Code Enforcement Division ("Code") is responsible for enforcement of the Banning Municipal Code and state and federal laws, as applicable. Typical code enforcement duties and responsibilities include pursuing the abatement of unsafe buildings, unpermitted land use, business without a license, construction without permit, and unregistered food vendors. Additionally, Code is responsible for compliance with weed abatement, which involves patrol, investigation, noticing, enforcement, and remediation of vacant lots.

Code is currently overseeing 412 open cases, including 17 cases opened during the month of January 2025. Below is a summary of cases during the month of January 2025.

	Month	YTD
New Cases Opened	17	17
Total Cases Open (includes previous years)	412	N/A
Notice of Violations issued	13	13
Violations Resolved	133	133
Citations Issued	21	21
Field Inspections completed	81	81
Fee's Collected (Citations)	$ 762.83	$ 762.83
Red Tagged Properties	2	2
Abandoned Vehicles Abated (AVA Program)	0	0
Weed Abatement Cost Recovery Received	$ 18,512.70	$ 18,512.70

JUSTIFICATION:

Monthly activity reports are provided for informational purposes.

FISCAL IMPACT:

Not applicable.

ALTERNATIVES:

Direct staff to provide additional information on the case data.

BUDGETED?:

Yes

CONTRACT/AGREEMENT:

No

CITY OF BANNING
STAFF REPORT

TO:	**CITY COUNCIL**
FROM:	**Robert Fisher, Acting City Manager**
PREPARED BY:	**Laurie Sampson,**
MEETING DATE:	**February 25, 2025**
SUBJECT:	**Receive and File Contracts Approved Under the City Manager's Signature Authority and Inventory Reports for January 2025**

RECOMMENDATION:

Receive and file.

BACKGROUND:

Per Purchasing Policy B-30, 3-105(5), written notification by the Purchasing Officer of all City Manager approved contracts will be provided quarterly to the City Council for review, and 16-107(3), The City Manager, or his designated representative, shall make a monthly written report to the City Council as to all Change Orders approved by the City Manager during the month, and of all possible future Change Orders that may appear probable prior to the next monthly report. At a minimum, the City Manager shall provide the Council with the name and nature of the contract, all Change Orders approved during that month, the reason for the Change Orders, the cumulative amount of the Change Orders for that contract, and any additional information the Council requests.

JUSTIFICATION:

While the policy requires contracts signed under the City Manager's signature authority be submitted to City Council on a quarterly basis, it is staff's intent to submit these reports on a monthly basis to provide continuity with other monthly reports submitted to Council.

FISCAL IMPACT:

None

ALTERNATIVES:

Failure to provide this report to the City Council would result in the City being out of compliance with Purchasing Policy B-30,3-105(5).

BUDGETED?:

No

CONTRACT/AGREEMENT:

No

ATTACHMENTS:

1. 2025-01 Jan 2025 Data CC Meeting (Dec 2024).pdf

Contracts Approved Within City Manager Signature Authority

FOR MONTH OF JANUARY 2025					
City Manager Approval Date	**Vendor Name**	**Description of Item/Service**	**Contact Award Total**	**Department/ Division**	**Comments**
1/2/2025	Mike Roquet Construction Inc.	Asphalt Street Patches Various Locations	116,315.00	PW - Water	CUPCCAA
1/2/2025	VREF Inc.	Appraisal Review - Airport	6,000.00	CH - City Manager	
1/6/2025	Symbium Master Licensing Agr	SAAS compliance checks for solar permits	-	Community Development	
1/6/2025	HDL Coren & Cone	Property Tax Services	16,000.00	AS - Finance	
1/7/2025	H & L Charter Co., Inc	OEP Trip to Living Desert Acceptance	1,570.00	Parks & Rec	
1/7/2025	AB Fence Company Inc.	Lion's Park and Repplier Ballfield	5,000.00	Parks & Rec	CUPCCAA
1/11/2025	Go-Pher The Kill Inc.	Pest Eradication Services in Banning Parks	3,950.00	Parks & Rec	
1/29/2025	SoCal West Coast Electric- Ele	Electric Wiring for City Hall West Side	12,187.00	PW - Facilities	CUPCCAA
1/29/2025	SoCal West Coast Electric	Front Counter Computer Station Wiring	1,293.00	PW - Facilities	CUPCCAA
1/29/2025	West Coast Arborists	Park Tree Trimming - Repplier Park	4,560.00	Parks & Rec	
1/31/2025	West Coast Arborists	Downed Tree - Sylvan Park	2,480.00	Parks & Rec	
1/31/2025	Vision Security	Data Drops City Hall East Side	17,200.00	PW - Facilities	CUPCCAA

Change Orders Approved Within City Manager Signature Authority					
FOR MONTH OF JANUARY 2025					
Date	Vendor Name	Description of Item/Service	Contact Award Total	Change Order	Comments
1/2/2025	ABS Facility Services	City Hall West Side Cubicles Reconfiguration	27,019.00	1,949.55	CUPCCAA
1/6/2025	Albert A. Webb Associates.	Design Services for Sun Lakes Blvd Extension	1,248,026.66	-	Time Extension Only
1/29/2025	Eide Bailley	FYE Closeout Processes	75,000.00	-	Time Extension Only

INVENTORY PURCHASES OVER $25K					
FOR MONTH OF JANUARY 2025 - NO ITEMS					
Date	Vendor Name	Description of Item/Service	Amount	Department	Comments

CITY OF BANNING
STAFF REPORT

TO:	**CITY COUNCIL**
FROM:	**Robert Fisher, Acting City Manager**
PREPARED BY:	**Laurie Sampson,**
MEETING DATE:	**February 25, 2025**
SUBJECT:	**City Council Travel and Conference Expense Report Year to Date Through January 2025**

RECOMMENDATION:

Receive and file.

BACKGROUND:

The City Council attends many events, conferences, and training sessions while serving the City of Banning. The rules for these events and expenses are enforced by the Reimbursement Policy for Elected and Appointed Officials as well as by Policy E-3 Travel and Meeting Policy.

JUSTIFICATION:

As part of the Reimbursements Policy for Elected and Appointed Officials each official must briefly report on outside meetings, and all City reimbursement expenditures are subject to disclosure under the Public Records Act and other applicable laws. This monthly report will enable the City to comply with this requirement.

FISCAL IMPACT:

All expenditures under this category are from account 001-1000-411.23-05. As of December 31, 2024, the total charge to this account is $ 9,770.64.

ALTERNATIVES:

Providing statistics keeps the Council, staff, and residents apprised of current council activities. If the statistics are not presented to the Council on a regular basis, then they should be provided on another platform.

BUDGETED?:

Yes

CONTRACT/AGREEMENT:

No

ATTACHMENTS:

1. City Council Travel through January 31, 2025.pdf

CITY COUNCIL TRAVEL AND CONFERENCE BUDGET FY2024-2025

ACCOUNT 001-1000-411.23-05

AS OF JANUARY 31, 2025

BUDGET		$	31,500.00
WALLACE		$	4,235.05
SANCHEZ		$	1,012.49
FLYNN		$	2,470.39
BARRINGTON		$	440.21
MILLER		$	806.25
ROYCE		$	806.25
	TOTAL	$	9,770.64
BALANCE AVAILABLE		$	21,729.36

TRAVEL AND CONFERENCE FY 2024-2025

WALLACE C00013

Date	Event	Amount
7/12/2024	Banning Sunrise Breakfast	$ 25.00
7/23/2024	Chad Bianco Luncheon	$ 85.00
7/31/2024	July 2024 Mileage	$ 54.61
8/1/2024	Riverside County Women's Leadership Conference	$ 100.00
8/22/2024	Calimesa State of the City	$ 75.00
8/31/2024	August 2024 Mileage	$ 102.51
9/19/2024	Beaumont Stateof the City	$ 75.00
9/24/2024	San Jacinto State of the City	$ 71.21
9/30/2024	September 2024 Mileage	$ 41.47
10/8/2024	Regional City Managers Presentation	$ 25.00
10/16/2024	League of California Cities Annual Meeting/Meals	$ 115.25
10/16/2024	League of California Cities Annual Meeting/Mileage	$ 116.83
10/18/2024	League of California Cities Annual Meeting Hotel/Westin	$ 605.41
10/22/2024	League of California Cities Annual Meeting Hotel/Westin	$ 26.01
10/24/2024	League of California Cities Annual Meeting Hotel/Riv Division	$ 60.00
10/25/2024	Hemet State of the City	$ 75.00
10/31/2024	October 2024 Mileage	$ 93.47
11/8/2024	Pass Eda Presentation	$ 25.00
11/11/2024	League of California Cities Academy/ Registration	$ 675.00
11/5/2024	League of California Cities Academy/Hotel	$ 631.86
11/30/2024	November Mileage	$ 126.16
12/4/2024	League of California Cities Leadership Meeting/Meals	$ 135.25
12/4/2024	League of California Cities Leadership Meeting/Travel	$ 120.31
12/4/2025	League of California Cities Policy Meeting/ Fuel	$ 109.01
12/30/2024	December Mileage	$ 55.81
12/31/2024	League of California Cities Leadership Meeting/Vehicle Rental	$ 261.83
1/23/2025	League of California Cities Policy Meeting/Meals	$ 85.50
1/29/2025	League of California Cities Academy/Meals	$ 131.25
1/31/2025	League of California Cities Policy Meeting/Travel	$ 131.30
	Total Expenses	$ 4,235.05

TRAVEL AND CONFERENCE FY 2024-2025

SANCHEZ C00016

Date	Event	Amount
8/6/2024	State of the 5th District	$ 100.00
9/19/2024	Beaumont State of the City	$ 75.00
10/16/2024	League of California Cities Annual Meeting/Meals	$ 115.25
10/16/2024	League of California Cities Annual Meeting/Mileage	$ 116.83
10/18/2024	League of California Cities/Hotel Westin	$ 605.41
	Total Expenses	$ 1,012.49

TRAVEL AND CONFERENCE FY 2024-2025

FLYNN C00020

Date	Event	Amount
7/8/2024	Cal Cities Riverside Division Meeting	$ 60.00
7/23/2024	Chad Bianco Luncheon	$ 85.00
7/23/2024	State of the 5th District	$ 100.00
7/31/2024	Cal Cities Riverside Division Meeting/Mileage	$ 14.67
8/22/2024	Calimesa State of the City	$ 75.00
9/24/2024	San Jacinto State of the City	$ 71.21
10/16/2024	League of California Cities Annual Meeting/ Meals	$ 115.25
10/16/2024	League of California Cities Annual Meeting/Travel	$ 131.33
10/18/2024	League of California Cities Annual Meeting/Westin	$ 555.41
10/18/2024	League of California Cities Annual Meeting/Westin	$ 50.00
11/8/2024	Pass EDA Regional City Manager Presentation	$ 25.00
11/8/2024	League of California Cities/Webinar	$ 25.00
11/11/2024	League of California Cities Academy/Registration	$ 675.00
12/31/2024	December Mileage	$ 15.08
1/29/2025	League of California Cities Academy/Meals	$ 131.25
1/29/2025	League of California Cities Academy/Airfare	$ 308.96
1/31/2025	January Mileage	$ 32.23
	Total Expenses	$ 2,470.39

TRAVEL AND CONFERENCE FY 2024-2025

BARRINGTON C00021

Date	Event	Amount
1/29/2025	League of California Cities Academy/Meals	$ 131.25
1/29/2025	League of California Cities Academy/Airfare	$ 308.96
	Total Expenses	$ 440.21

TRAVEL AND CONFERENCE FY 2024-2025

MILLER C00022

Date	Event	Amount
11/11/2024	League of California Cities Academy/Registration	$ 675.00
1/29/2025	League of California Cities Academy/Meals	$ 131.25
	Total Expenses	$ 806.25

TRAVEL AND CONFERENCE FY 2024-2025

ROYCE C00023

Date	Event	Amount
11/11/2024	League of California Cities Academy/ Registration	$ 675.00
1/29/2025	League of California Cities Academy/ Meals	$ 131.25
	Total Expenses	$ 806.25

CITY OF BANNING
STAFF REPORT

TO:	**CITY COUNCIL**
FROM:	**Robert Fisher, Acting City Manager**
PREPARED BY:	**Holly Stuart, Public Works Program Manager** **Art Vela, Director of Public Works**
MEETING DATE:	**February 25, 2025**
SUBJECT:	**Community Cleanup and Compost Giveaway Event Update**

RECOMMENDATION:

This is informational only; receive and file report.

BACKGROUND:

The City of Banning has partnered with Waste Management as part of the solid waste franchise agreement to provide three free bulky item collection events for residential accounts per calendar year. The first of three bulky item collection events for this year was held on January 18, 2025, at Dysart Park offering residents the opportunity to dispose of unwanted items including, but not limited to, appliances, mattresses, green waste, e-waste and so forth. This event also offers residents paper shredding and the collection of household batteries.

This latest event welcomed a breaking record of 560 vehicles. An accumulation of 39.38 tons of municipal solid waste, 9.38 tons of green waste, 11.55 tons of white goods/metal, 3.53 tons of paper shredding, 3.49 tons of E-waste, and 4.43 tons of mattresses were collected over the duration of 5 hours. Waste Management collected a grand total of 71.76 tons of waste of which 32.38 tons were successfully diverted from the landfill. Furthermore, five barrels of household batteries were collected during the event.

According to Waste Management's calculations, these recycling efforts resulted in the following benefits:

- Saved 155,813 kWh of electricity. Enough electricity to power 12 households for one year.
- Reduced GHG emissions by 5 metric tons. Equivalent to taking 4 passenger cars off the road for one year.
- Kept 6,984 lbs of solid Waste out of the landfill. The amount of trash generated by 4 households in one year.
- Kept 1,712 lbs of hazardous materials out of the environment.

In addition to the collection of bulky waste at Dysart Park, the city included a compost station, giving away free compost to the community. Forty-eight (48) residents obtained compost on the day of the event. Any unused compost that was not given away will be disbursed and utilized on City properties throughout the community. Incorporating the free compost giveaway supports the City's compliance goals in achieving targets identified by the State and SB 1383 requirements to purchase and utilize organic waste materials. In all, Waste Management provided 18 tons of compost for the giveaway.

JUSTIFICATION:

The City's Bulky Item Collection and Compost Giveaway events continue to be a success and provide a

great service to our community. The events aid in keeping the community clean through reducing the amount of waste that may otherwise be illegally dumped throughout the City and its rights-of-ways. In celebration of Earth Day, our next event is scheduled for Saturday, April 19, 2025, followed by October 18, 2025.

FISCAL IMPACT:

Event staff and material costs were funded by the Refuse fund.

ALTERNATIVES:

None.

BUDGETED?:

Yes

CONTRACT/AGREEMENT:

No

ATTACHMENTS:

1. ATTACHMENT 1 Event Pictures 1.18.25.pdf

Staff Report: Community Cleanup & Compost Giveaway (Earth Day Celebration)
January 18, 2025
560 Vehicle Trips

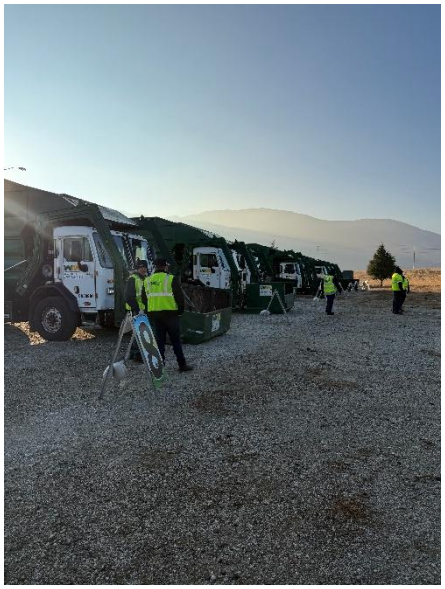
BULKY ITEM COLLECTION & COMPOST GIVEAWAY EVENT PICTURES







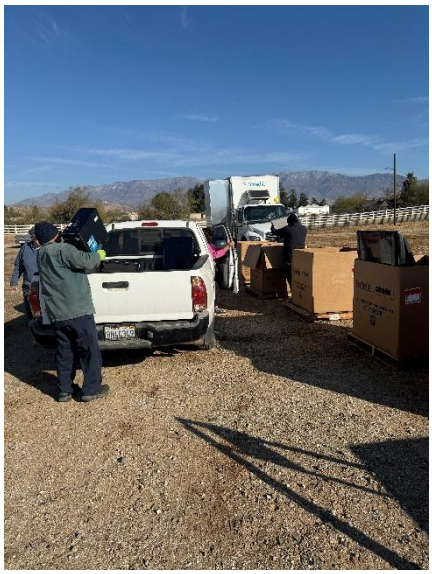


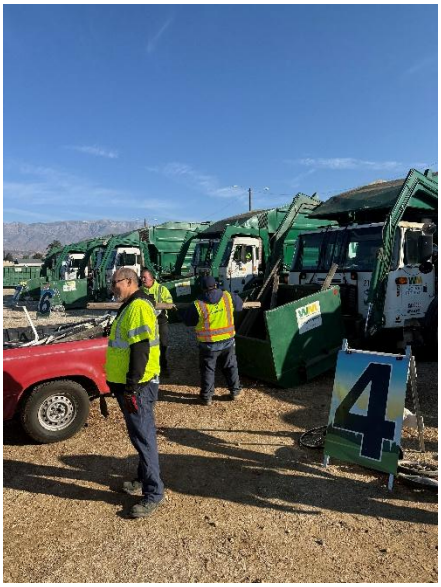




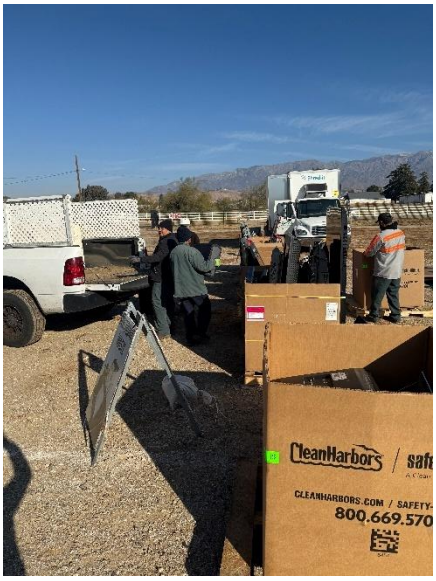


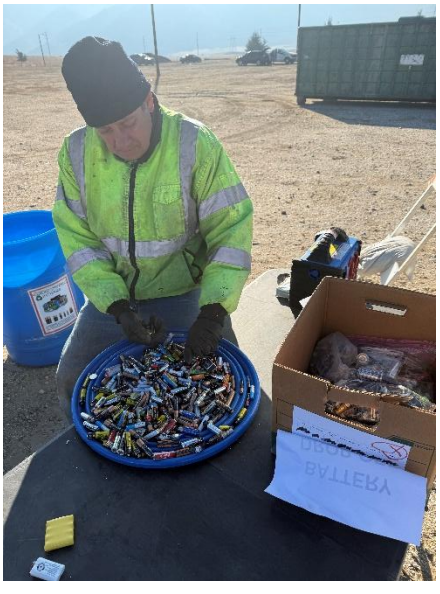
Staff Report: Community Cleanup & Compost Giveaway (Earth Day Celebration)
January 18, 2025
560 Vehicle Trips





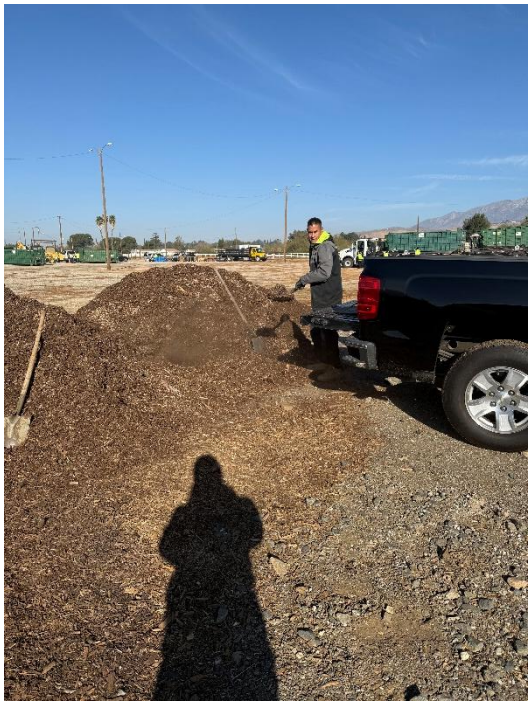




Staff Report: Community Cleanup & Compost Giveaway (Earth Day Celebration)
January 18, 2025
560 Vehicle Trips







CITY OF BANNING
STAFF REPORT

TO:	**CITY COUNCIL**
FROM:	**Robert Fisher, Acting City Manager**
PREPARED BY:	**Yvette Vaca, Administrative Sergeant** **Vincent Avila, Chief of Police**
MEETING DATE:	**February 25, 2025**
SUBJECT:	**Consideration of Resolution 2025-24, Approving the Acceptance of the Distribution of the FY23 State Homeland Security Program (SHSP) Grant Award of $161,383**

RECOMMENDATION:

Adopt Resolution 2025-24.

BACKGROUND:

The County of Riverside Emergency Management Department (EMD) receives vital funding from federal and state agencies, including the State Homeland Security Grant Program (SHSP), to strengthen the county's preparedness and response capabilities for terrorism and large-scale disasters. This grant supports essential activities such as training and exercises for first responders, as well as the purchase of equipment to enhance operational effectiveness across emergency services, including fire, law enforcement, emergency medical services, and public health.

The City of Banning has been awarded SHSP funding in the amount of $161,383 to further enhance its own emergency response capabilities. This grant will allow Banning to implement critical training programs, conduct essential exercises, and acquire the necessary equipment to improve the city's readiness to respond to terrorism-related incidents and other major emergencies, ensuring the safety and well-being of its residents and surrounding communities.

JUSTIFICATION:

The City of Banning will be using the $161,383 in SHSP funding to purchase various equipment designed to enhance public safety and preparedness, particularly in the investigation of potential terrorist activities and other security threats. This investment will significantly improve the city's ability to monitor critical areas and respond to incidents in real-time. By acquiring advanced equipment, Banning will strengthen its capacity to detect, track, and investigate potential security threats, enabling law enforcement to react swiftly and efficiently in emergency situations. The additional resources will bolster the city's ability to identify suspicious activities and protect its residents from emerging risks, further enhancing the city's overall preparedness for a range of threats, including terrorism-related emergencies.

These new tools will be vital for the Banning Police Department, providing them with the resources necessary to solve and prevent crime in the city. By improving situational awareness and allowing for more effective surveillance of key locations, these additions will enable officers to respond to incidents more quickly and accurately. Additionally, the presence of advanced equipment will serve as a deterrent to criminal activity, as individuals will be aware that the city is equipped to monitor and address potential security threats. This comprehensive upgrade to Banning's public safety infrastructure will not only

improve the effectiveness of law enforcement but also contribute to a safer, more secure environment for all residents. Through this initiative, Banning will be better positioned to address and prevent emergencies, fulfilling its ongoing commitment to protecting the community.

FISCAL IMPACT:

The purchase and installation of advanced surveillance equipment and any equipment items necessary to assist in the investigation of potential terrorist activity, along with any necessary training, will be fully funded through the $161,383 allocated to the City of Banning from the FY23 State Homeland Security Program (SHSP) grant. The performance period for this grant is from April 9, 2024, to May 31, 2025. The Banning Police Department will obtain multiple quotes from vendors to ensure the costs do not exceed the awarded grant amount, ensuring that there will be no additional initial fiscal impact to the City of Banning. This project will be entirely funded by the SHSP grant, and no city funds will be required for its initial implementation.

ALTERNATIVES:

The City Council may choose to reject staff's recommendation and provide alternative direction.

BUDGETED?:

Yes

CONTRACT/AGREEMENT:

Yes

ATTACHMENTS:

1. Resolution 2025-24, PD EMD Grant.docx
2. Exhibit A - Banning PD_FY23 SHSP Initial Application_Approved LL 4.4.24 Mod 1.pdf
3. Exhibit B - FY23_Grants_Management_Assessment.pdf
4. Exhibit C- FY23_Standard_Assurances.pdf
5. Banning_FY23 SHSP Award Letter.pdf

RESOLUTION 2025-24

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BANNING, CALIFORNIA, APPROVING THE ACCEPTANCE OF THE DISTRIBUTION OF THE FY23 STATE HOMELAND SECURITY PROGRAM (SHSP) GRANT AWARD OF $161,383

WHEREAS, the City of Banning has been awarded SHSP funding in the amount of $161,383 to further enhance its own emergency response capabilities and purchase equipment to enhance operational effectiveness across emergency services, including fire, law enforcement, emergency medical services, and public health; and,

WHEREAS, the City of Banning will be using the $161,383 in SHSP funding to purchase and install License Plate Reader (LPR) cameras and Pan Tilt Zoom (PTZ) safety cameras as part of its ongoing efforts to enhance public safety and preparedness; and,

WHEREAS, pursuant to the adoption of the resolution, The Banning Police Department will obtain multiple quotes from vendors to ensure the costs do not exceed the awarded grant amount, ensuring that there will be no additional fiscal impact to the City of Banning.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Banning as follows:

SECTION 1. The City Council approves the distribution with the Riverside County Emergency Management Department for the FY23 SHSP Grant in the amount of $161,383, to be used during the performance period of this grant, which is from April 9, 2024, to May 31, 2025.

SECTION 2. The City Council authorizes the City Manager to make non-substantive changes to the FY23 Emergency Management Department SHSP Grant and to execute the FY23 Emergency Management Department SHSP Grant with the Riverside County Emergency Management Department on behalf of the City Council.

SECTION 3. The City Council authorizes the City Manager, or designee, to make necessary budget adjustments, appropriations, and transfers related to this resolution.

SECTION 4. The City Clerk shall certify to the adoption of this resolution and shall cause a certified resolution to be filed in the book of original resolutions.

PASSED, APPROVED AND ADOPTED this 25th day of February, 2025.

Sheri Flynn, Mayor
City of Banning

ATTEST:

Caroline Patton, Administrative City Clerk
City of Banning

APPROVED AS TO FORM:

John Pinkney, City Attorney
Slovak, Baron, Empey, Murphy, & Pinkney LLP

CERTIFICATION:

I, Caroline Patton, Administrative City Clerk of the City of Banning, California, do hereby certify that the foregoing Resolution 2025-24, was duly adopted by the City Council of the City of Banning, California, at a regular meeting thereof held on the 25th day of February, 2025 by the following vote, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

Caroline Patton, Administrative City Clerk
City of Banning, California

Exhibit A
Initial Application Approval

Exhibit B
Grants Management Assessment

Exhibit C
Standard Assurances Document

(Cal OES Use Only)

Cal OES #		FIPS #		VS#		Subaward #	**2023-0042**

CALIFORNIA GOVERNOR'S OFFICE OF EMERGENCY SERVICES
GRANT SUBAWARD FACE SHEET

The California Governor's Office of Emergency Services (Cal OES) hereby makes a Grant Subaward of funds to the following:

1. Subrecipient: City of Banning **1a. UEI:** F996EVLCRCG3

2. Implementing Agency: City of Banning, Police Department **2a. UEI:** T9ZPMCBNFZC8

3. Implementing Agency Address: 125 E. Ramsey Street (Street) Banning (City) 92220-4840 (Zip+4)

4. Location of Project: 125 E. Ramsey Street (City) Riverside (County) 92220-4840 (Zip+4)

5. Disaster/Program Title: Homeland Security Grant Program **6. Performance / Budget Period:** April 9, 2024 (Start Date) **to** May 31, 2025 (End Date)

7. Indirect Cost Rate: N/A **Federally Approved ICR** (if applicable): _____ %

Item Number	Grant Year	Fund Source	A. State	B. Federal	C. Total	D. Cash Match	E. In-Kind Match	F. Total Match	G. Total Cost
8.	2023	SHSP		$161,383	$161,383				$161,383
9.									
10.									
11.									
12.									
Total	**Project**	**Cost**		$161,383	$161,383				$161,383

13. Certification - This Grant Subaward consists of this title page, the application for the grant, which is attached and made a part hereof, the Assurances/Certifications, and any attached Special Conditions. I hereby certify I am vested with the authority to enter into this Grant Subaward, and have the approval of the City/County Financial Officer, City Manager, County Administrator, Governing Board Chair, or other Approving Body. The Subrecipient certifies that all funds received pursuant to this agreement will be spent exclusively on the purposes specified in the Grant Subaward. The Subrecipient accepts this Grant Subaward and agrees to administer the grant project in accordance with the Grant Subaward as well as all applicable state and federal laws, audit requirements, federal program guidelines, and Cal OES policy and program guidance. The Subrecipient further agrees that the allocation of funds may be contingent on the enactment of the State Budget.

14. CA Public Records Act - Grant applications are subject to the California Public Records Act, Government Code section 7920 et seq. Do not put any personally identifiable information or private information on this application. If you believe that any of the information you are putting on this application is exempt from the Public Records Act, please attach a statement that indicates what portions of the application and the basis for the exemption. Your statement that the information is not subject to the Public Records Act will not guarantee that the information will not be disclosed.

15. Official Authorized to Sign for Subrecipient:

Name: _____ Title: _____

Payment Mailing Address: 99 E. Ramsey Street City: Banning Zip Code+4: 92220-4840

Signature: _____ Date: _____

16. Federal Employer ID Number: 95-6000674

(FOR Cal OES USE ONLY)

I hereby certify upon my personal knowledge that budgeted funds are available for the period and purposes of this expenditure stated above.

(Cal OES Fiscal Officer) **(Date)** **(Cal OES Director or Designee)** **(Date)**

County of Riverside Emergency Management Department

FY 2023 Subrecipient Grants Management Assessment

Subrecipient: City of Banning Police Department			UEI #: T9ZPMCBNFZC8
Grant Program Title: COB PD SHSP			
Performance Period: 4/9/24	to	5/31/25	Subaward Amount Requested: 161,383

Per Title 2 CFR § 200.332, it is required to evaluate the risk of noncompliance with federal statutes, regulations and grant terms and conditions posed by each subrecipient of pass- through funding. This assessment is made to determine and provide an appropriate level of technical assistance, training, and grant oversight to subrecipients for the award referenced above. For the purposes of completing this questionnaire, "grant manager" is the individual who has primary responsibility for day-to-day administration of the grant, "bookkeeper/accounting staff" means the individual who has responsibility for reviewing and determining expenditures to be charged to the grant award, and "organization" refers to the subrecipient applying for the award, and/or the governmental implementing agency, as applicable.

The following are questions related to your organization's experience in the management of federal grant awards. This questionnaire must be completed and returned with your grant application materials.

1. How many years of experience does your current grant manager have managing grants?	>5 years
2. How many years of experience does your current bookkeeper/accounting staff have managing grants?	>5 years
3. Are individual staff members assigned to work on multiple grants?	Yes
4. Do you use timesheets to track the time staff spend working on specific activities/projects?	Yes
5. Does your organization utilize cost tracking methods that distinguishes grant expenditures separately from general fund expenditures?	Yes
6. How often does your organization have a financial audit?	Annually
7. Has your organization received any audit findings in the last three years?	NO
8. Do you have written procurement policies?	Yes
9. Do you get multiple quotes or bids when buying items or services?	Sometimes
10. How many years do you maintain receipts, deposits, cancelled checks, invoices?	>5 years
11. Has your organization received grant funding for this program in prior years? If yes, provide the following data for the most recent 3 funding years	Yes

Grant Year:		Amount Awarded:		Amount Expended:	
Grant Year:		Amount Awarded:		Amount Expended:	
Grant Year:		Amount Awarded:		Amount Expended:	

Certification: This is to certify that, to the best of our knowledge and belief, the data furnished above is accurate, complete, and current.	
Authorized Agent Signature:	Date:
Print Name:	Title:
Grant Manager Signature:	Date:
Print Name: Brandon Smith	Title: Acting Captain

FY23 Standard Assurances
Federal Grant Programs

As the duly authorized representative of the Applicant, I hereby certify that the Applicant has the legal authority to apply for federal assistance and the institutional, managerial, and financial capability (including funds sufficient to pay any non-federal share of project cost) to ensure proper planning, management, and completion of the project described in this application, within prescribed timelines.

I further acknowledge that the Applicant is responsible for reviewing and adhering to all requirements within the:

(a) Applicable Federal Regulations (see below);
(b) Federal Program Notice of Funding Opportunity (NOFO);
(c) Federal Preparedness Grants Manual;
(d) California Supplement to the NOFO;
(e) Federal and State Grant Program Guidelines; and
(f) Riverside County Supplement to the NOFO.

Federal Regulations
Government cost principles, uniform administrative requirements, and audit requirements for federal grant programs are set forth in Title 2, Part 200 of the Code of Federal Regulations (C.F.R.). Updates are issued by the Office of Management and Budget (OMB) and can be found at http://www.whitehouse.gov/omb/.

Significant state and federal grant award requirements (some of which appear in the documents listed above) are set forth below. The Applicant hereby agrees to comply with the following:

1. **Proof of Authority**
   The Applicant will obtain written authorization from the city council, governing board, or authorized body in support of this project. This written authorization must specify that the Applicant and the city council, governing board, or authorized body agree:
   (a) To provide all matching funds required for the grant project and that any cash match will be appropriated as required;
   (b) Any liability arising out of the performance of this agreement shall be the responsibility of the Applicant and the city council, governing board, or authorized body;
   (c) Grant funds shall not be used to supplant expenditures controlled by the city council, governing board, or authorized body; and
   (d) The official executing this agreement is, in fact, authorized to do so.

This Proof of Authority must be maintained on file and readily available upon request.

2. **Period of Performance**
The Applicant will initiate work after approval of the award and complete all work within the period of performance specified in the grant.

3. **Lobbying and Political Activities**
As required by Section 1352, Title 31 of the United States Code (U.S.C.), for persons entering into a contract, grant, loan, or cooperative agreement from an agency or requests or receives from an agency a commitment providing for the United States to insure or guarantee a loan, the Applicant certifies that:

(a) No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.

(b) If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions.

(c) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

The Applicant will also comply with provisions of the Hatch Act (5 U.S.C. §§ 1501-1508 and §§ 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with federal funds.

Finally, the Applicant agrees that federal funds will not be used, directly or indirectly, to support the enactment, repeal, modification or adoption of any law, regulation, or policy without the express written approval from the awarding agency.

4. **Debarment and Suspension**
As required by Executive Orders 12549 and 12689, and 2 C.F.R. § 200.213 and codified in 2 C.F.R. Part 180, Debarment and Suspension, the Applicant will provide protection against waste, fraud, and abuse by debarring or suspending those persons deemed irresponsible in their dealings with the federal government. The Applicant certifies that it:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;
(b) Have not within a three-year period preceding this application been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
(c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (2)(b) of this certification; and
(d) Have not within a three-year period preceding this application had one or more public transaction (federal, state, or local) terminated for cause or default.

Where the Applicant is unable to certify to any of the statements in this certification, he or she shall attach an explanation to this application.

5. **Non-Discrimination and Equal Employment Opportunity**
The Applicant will comply with all state and federal statutes relating to non-discrimination, including:

(a) Title VI of the Civil Rights Act of 1964 (Public Law (P.L.) 88-352 and 42 U.S.C. § 2000d et. seq.) which prohibits discrimination on the basis of race, color, or national origin and requires that recipients of federal financial assistance take reasonable steps to provide meaningful access to persons with limited English proficiency (LEP) to their programs and services;
(b) Title IX of the Education Amendments of 1972, (20 U.S.C. §§ 1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex in any federally funded educational program or activity;
(c) Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794), which prohibits discrimination against those with disabilities or access and functional needs;
(d) Americans with Disabilities Act (ADA) of 1990 (42 U.S.C. § 12101et seq.), which prohibits discrimination on the basis of disability and requires buildings and structures be accessible to those with disabilities and access and functional needs;
(e) Age Discrimination Act of 1975, (42 U.S.C. §§ 6101-6107), which prohibits discrimination on the basis of age;
(f) Public Health Service Act of 1912 (42 U.S.C. §§ 290 dd—2), relating to confidentiality of patient records regarding substance abuse treatment;
(g) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. § 3601 et seq.), relating to nondiscrimination in the sale, rental or financing of housing as implemented by the Department of Housing and Urban Development at 24 C.F.R. Part 100. The prohibition on disability discrimination includes the requirement that new multifamily housing with four or more dwelling units—i.e., the public and common use areas and individual apartment units (all units in buildings with elevators and ground-floor units in buildings without elevators)— be designed and constructed with certain accessible features (See 24 C.F.R. § 100.201);
(h) Executive Order 11246, which prohibits federal contractors and federally assisted construction contractors and subcontractors, who do over $10,000 in Government business in one year from discriminating in employment decisions on the basis of race, color, religion, sex, sexual orientation, gender identification or national origin;
(i) Executive Order 11375, which bans discrimination on the basis of race, color, religion, sex, sexual orientation, gender identification, or national origin in hiring and employment in both the United States federal workforce and on the part of government contractors;
(j) California Public Contract Code § 10295.3, which prohibits discrimination based on domestic partnerships and those in same sex marriages;

(k) DHS policy to ensure the equal treatment of faith-based organizations, under which all applicants and recipients must comply with equal treatment policies and requirements contained in 6 C.F.R. Part 19;

(l) The Applicant will comply with California's Fair Employment and Housing Act (FEHA) (California Government Code §§12940-12957), as applicable. FEHA prohibits harassment and discrimination in employment because of ancestry, familial status, race, color, religious creed (including religious dress and grooming practices), sex (which includes pregnancy, childbirth, breastfeeding and medical conditions related to pregnancy, childbirth or breastfeeding), gender, gender identity, gender expression, sexual orientation, marital status, national origin, ancestry, mental and physical disability, genetic information, medical condition, age, pregnancy, denial of medical and family care leave, or pregnancy disability leave, military and veteran status, and/or retaliation for protesting illegal discrimination related to one of these categories, or for reporting patient abuse in tax supported institutions;

(m) Any other nondiscrimination provisions in the specific statute(s) under which application for federal assistance is being made; and

(n) The requirements of any other nondiscrimination statute(s) that may apply to this application.

6. Drug-Free Workplace

As required by the Drug-Free Workplace Act of 1988 (41 U.S.C. § 701 et seq.), the Applicant certifies that it will maintain a drug-free workplace and a drug-free awareness program as outlined in the Act.

7. Environmental Standards

The Applicant will comply with state and federal environmental standards, including:

(a) California Environmental Quality Act (CEQA) (California Public Resources Code §§ 21000- 21177), to include coordination with the city or county planning agency;

(b) CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, §§ 15000- 15387);

(c) Federal Clean Water Act (CWA) (33 U.S.C. § 1251 et seq.), which establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters;

(d) Federal Clean Air Act of 1955 (42 U.S.C. § 7401) which regulates air emissions from stationary and mobile sources;
(e) Institution of environmental quality control measures under the National Environmental Policy Act (NEPA) of 1969 (P.L. 91-190); the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA; and Executive Order 12898 which focuses on the environmental and human health effects of federal actions on minority and low-income populations with the goal of achieving environmental protection for all communities;
(f) Evaluation of flood hazards in floodplains in accordance with Executive Order 11988;
(g) Executive Order 11514 which sets forth national environmental standards;
(h) Executive Order 11738 instituted to assure that each federal agency empowered to enter into contracts for the procurement of goods, materials, or services and each federal agency empowered to extend federal assistance by way of grant, loan, or contract shall undertake such procurement and assistance activities in a manner that will result in effective enforcement of the Clean Air Act and the Federal Water Pollution Control Act Executive Order 11990 which requires preservation of wetlands;
(i) The Safe Drinking Water Act of 1974, (P.L. 93-523);
(j) The Endangered Species Act of 1973, (P.L. 93-205);
(k) Assurance of project consistency with the approved state management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.);
(l) Conformity of Federal Actions to State (Clear Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); and
(m) Wild and Scenic Rivers Act of 1968 (16 U.S.C. § 1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.

The Applicant shall not be: 1) in violation of any order or resolution promulgated by the State Air Resources Board or an air pollution district; 2) subject to a cease-and-desist order pursuant to § 13301 of the California Water Code for violation of waste discharge requirements or discharge prohibitions; or 3) determined to be in violation of federal law relating to air or water pollution.

8. **Audits**
   For subrecipients expending $750,000 or more in federal grant funds annually, the Applicant will perform the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and 2 C.F.R., Part 200, Subpart F Audit Requirements.

9. **Access to Records**
   The Applicant must cooperate with any compliance reviews or investigations conducted by DHS. In accordance with 2 C.F.R. § 200.337, the Applicant will give the awarding agency, the Comptroller General of the United States and, if appropriate, the state, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award. The Applicant will require any subrecipients, contractors, successors, transferees, and assignees to acknowledge and agree to comply with this provision.

10. **Conflict of Interest**
    The Applicant will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.

11. **Financial Management**
    False Claims for Payment - The Applicant will comply with 31 U.S.C §§ 3729-3733 which provides that Applicant shall not submit a false claim for payment, reimbursement, or advance.

12. **Reporting - Accountability**
    The Applicant agrees to comply with applicable provisions of the Federal Funding Accountability and Transparency Act (FFATA) (P.L. 109-282), including but not limited to (a) the reporting of subawards obligating $30,000 or more in federal funds, and (b) executive compensation data for first-tier subawards as set forth in 2 C.F.R. Part 170, Appendix A. The Applicant also agrees to comply with the requirements set forth in the government-wide financial assistance award term regarding the System for Award Management and Universal Identifier Requirements located at 2 C.F.R. Part 25, Appendix A. The Applicant is required to report to Riverside County Operational Area (Riverside County OA) the progress of their funded programs on a quarterly basis (January 1, April 1, July 1, October 1).

13. **Whistleblower Protections**
    The Applicant also must comply with statutory requirements for whistleblower protections at 10 U.S.C. § 2409, 41 U.S.C. § 4712, and 10 U.S.C. § 2324, 41 U.S.C. §

4304 and § 4310.

14. Human Trafficking

The Applicant will comply with the requirements of Section 106(g) of the Trafficking Victims Protection Act of 2000, as amended (22 U.S.C. § 7104) which prohibits grant award recipients or a subrecipient from: (1) engaging in trafficking in persons during the period of time that the award is in effect; (2) procuring a commercial sex act during the period of time that the award is in effect; or (3) using forced labor in the performance of the award or subawards under the award.

15. Labor Standards

The Applicant will comply with the following federal labor standards:

(a) The Davis-Bacon Act (40 U.S.C. §§ 276a to 276a-7), as applicable, and the Copeland Act (40 U.S.C. § 3145 and 18 U.S.C. § 874) and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§ 327-333), regarding labor standards for federally assisted construction contracts or subcontracts, and

(b) The Federal Fair Labor Standards Act (29 U.S.C. § 201 et al.) as they apply to employees of institutes of higher learning (IHE), hospitals and other non-profit organizations.

16. Worker's Compensation

The Applicant must comply with provisions which require every employer to be insured to protect workers who may be injured on the job at all times during the performance of the work of this Agreement, as per the workers compensation laws set forth in California Labor Code §§ 3700 et seq.

17. Property-Related

If applicable to the type of project funded by this federal award, the Applicant will:

(a) Comply with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of federal or federally assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of federal participation in purchase;

(b) Comply with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires subrecipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction

and acquisition is $10,000 or more;

(c) Assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. § 470), Executive Order 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §469a-1 et seq.); and
(d) Comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. § 4831 and 24 CFR Part 35) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.

18. Certifications Applicable Only to Federally Funded Construction Projects

For all construction projects, the Applicant will:

(a) Not dispose of, modify the use of, or change the terms of the real property title or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the federal awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with federal assistance funds to assure nondiscrimination during the useful life of the project;
(b) Comply with the requirements of the awarding agency with regard to the drafting, review and approval of construction plans and specifications; and
(c) Provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progressive reports and such other information as may be required by the assistance awarding agency or State.

19. Use of Cellular Device While Driving is Prohibited

Applicants are required to comply with California Vehicle Code sections 23123 and 23123.5. These laws prohibit driving motor vehicle while using an electronic wireless communications device to write, send, or read a text-based communication. Drivers are also prohibited from the use of a wireless telephone without hands-free listening and talking, unless to make an emergency call to 911, law enforcement, or similar services.

20. California Public Records Act and Freedom of Information Act

The Applicant acknowledges that all information submitted in the course of applying for funding under this program, or provided in the course of an entity's grant management activities that are under Federal control, is subject to the Freedom of Information Act (FOIA), 5 U.S.C. § 552, and the California Public Records Act, California Government Code section 6250 et seq. The Applicant should consider these laws and consult its own State and local laws and regulations regarding the release of information when reporting sensitive matters in the grant application, needs assessment, and strategic planning process.

HOMELAND SECURITY GRANT PROGRAM (HSGP) – PROGRAM SPECIFIC ASSURANCES / CERTIFICATIONS

21. Acknowledgment of Federal Funding from DHS

All recipients must acknowledge their use of federal funding when issuing statements, press releases, requests for proposals, bid invitations, and other documents describing projects or programs funded in whole or in part with federal funds.

22. Activities Conducted Abroad

All recipients must ensure that project activities carried on outside the United States are coordinated as necessary with appropriate government authorities and that appropriate licenses, permits, or approvals are obtained.

23. Best Practices for Collection and Use of Personally Identifiable Information (PII)

DHS defines personally identifiable information (PII) as any information that permits the identity of an individual to be directly or indirectly inferred, including any information that is linked or linkable to that individual. All recipients who collect PII are required to have a publicly available privacy policy that describes standards on the usage and maintenance of PII they collect. Recipients may also find the DHS Privacy Impact Assessments: Privacy Guidance and Privacy template a useful resource respectively.

24. Copyright

All recipients must affix the applicable copyright notices of 17 U.S.C. §§ 401 or 402 and an acknowledgement of U.S. Government sponsorship (including the award number) to any work first produced under federal financial assistance awards.

25. Duplication of Benefits

Any cost allocable to a particular federal financial assistance award provided for in 2 C.F.R. Part 200, Subpart E may not be charged to other federal financial assistance

awards to overcome fund deficiencies, to avoid restrictions imposed by federal statutes, regulations, or federal financial assistance award terms and conditions, or for other reasons. However, these prohibitions would not preclude recipients from shifting costs that are allowable under two or more awards in accordance with existing federal statutes, regulations, or the federal financial assistance award terms and conditions.

26. Energy Policy and Conservation Act

All recipients must comply with the requirements of 42 U.S.C. § 6201 which contain policies relating to energy efficiency that are defined in the state energy conservation plan issued in compliance with this Act.

27. Federal Debt Status

All recipients are required to be non-delinquent in their repayment of any federal debt. Examples of relevant debt include delinquent payroll and other taxes, audit disallowances, and benefit overpayments. See OMB Circular A-129.

28. Fly America Act of 1974

All recipients must comply with Preference for U.S. Flag Air Carriers: (air carriers holding certificates under 49 U.S.C. § 41102) for international air transportation of people and property to the extent that such service is available, in accordance with the International Air Transportation Fair Competitive Practices Act of 1974 (49 U.S.C. § 40118) and the interpretative guidelines issued by the Comptroller General of the United States in the March 31, 1981, amendment to Comptroller General Decision B-138942.

29. Hotel and Motel Fire Safety Act of 1990

In accordance with Section 6 of the Hotel and Motel Fire Safety Act of 1990, all Applicants must ensure that all conference, meeting, convention, or training space funded in whole or in part with federal funds complies with the fire prevention and control guidelines of the Federal Fire Prevention and Control Act of 1974, as amended, 15 U.S.C. § 2225a.

30. Non-supplanting Requirement

All recipients who receive federal financial assistance awards made under programs that prohibit supplanting by law must ensure that federal funds do not replace (supplant) funds that have been budgeted for the same purpose through non-federal sources.

31. Patents and Intellectual Property Rights

Unless otherwise provided by law, recipients are subject to the Bayh-Dole Act, Pub. L. No. 96-517, as amended, and codified in 35 U.S.C. § 200 et seq. All recipients are subject to the specific requirements governing the development, reporting, and disposition of rights to inventions and patents resulting from financial assistance awards located at 37 C.F.R. Part 401 and the standard patent rights clause located at 37 C.F.R. § 401.14.

32. SAFECOM

All recipients who receive federal financial assistance awards made under programs that provide emergency communication equipment and its related activities must comply with the SAFECOM Guidance for Emergency Communication Grants, including provisions on technical standards that ensure and enhance interoperable communications.

33. Terrorist Financing

All recipients must comply with Executive Order 13224 and U.S. law that prohibit transactions with, and the provisions of resources and support to, individuals and organizations associated with terrorism. Recipients are legally responsible to ensure compliance with the Order and laws.

34. Reporting of Matters Related to Recipient Integrity and Performance

If the total value of the recipient's currently active grants, cooperative agreements, and procurement contracts from all federal assistance offices exceeds $10,000,000 for any period of time during the period of performance of this federal financial assistance award, you must comply with the requirements set forth in the government-wide Award Term and Condition for Recipient Integrity and Performance Matters located at 2 C.F.R. Part 200, Appendix XII, the full text of which is incorporated here by reference in the award terms and conditions.

35. USA Patriot Act of 2001

All recipients must comply with requirements of the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act (USA PATRIOT Act), which amends 18 U.S.C. §§ 175–175c.

36. Use of DHS Seal, Logo, and Flags

All recipients must obtain permission from their DHS Financial Assistance Office, prior to using the DHS seal(s), logos, crests or reproductions of flags or likenesses of DHS agency officials, including use of the United States Coast Guard seal, logo, crests or reproductions of flags or likenesses of Coast Guard officials.

37. Required Use of American Iron, Steel, Manufactured Products, and Construction Materials

The Applicant must comply with the "Build America, Buy America" Act (BABAA), enacted as part of the Infrastructure Investment and Jobs Act and Executive Order 14005. Applicants receiving a federal award subject to BABAA requirements may not use federal financial assistance funds for infrastructure projects unless:

a) All iron and steel used in the project are produced in the United States – this means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States;
b) All manufactured products used in the project are produced in the United States – this means the manufactured product was manufactured in the United States; and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation; and
c) All construction materials are manufactured in the United States – this means that all manufacturing processes for the construction material occurred in the United States.

The "Buy America" preference only applies to articles, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project. It does not apply to tools, equipment, and supplies, such as temporary scaffolding, brought to the construction site and removed at or before the completion of the infrastructure project. Nor does a "Buy America" preference apply to equipment and furnishings, such as movable chairs, desks, and portable computer equipment, that are used at or within the finished infrastructure project but are not an integral part of the structure or permanently affixed to the infrastructure project.

Per section 70914(c) of BABAA, FEMA may waive the application of a "Buy America" preference under an infrastructure program in certain cases.

On July 1, 2022, OMB approved FEMA's General Applicability Public Interest Waiver of the BABAA requirements to be effective for a period of six months, through January 1, 2023. Applicants will not be required to follow the BABAA requirements for FEMA awards made, and any other funding FEMA obligates, during this waiver period. For any new awards FEMA makes after January 1, 2023, as well as new funding FEMA obligates to existing awards or

through renewal awards where the new funding is obligated after January 1, 2023, Applicants will be required to follow the BABAA requirements unless another waiver is requested and approved.

38. Loss of funding

Failure to comply with these requirements may result in suspension of payments under the grant or termination of the grant or both and the subrecipient may be ineligible for award of any future grants if Riverside County OA or the Cal OES determines that any of the following has occurred: (1) the recipient has made false certification, or (2) violates the certification by failing to carry out the requirements as noted above.

Riverside County OA may reduce, suspend, or terminate current and/or future grant funding, in whole or in part, or other measures may be imposed for any of the following reasons:

a) Failure to submit required reports.
b) Failure to expend funding.
c) Failure to expend at least 90% or $5,000 (whichever is greater) of the award could affect future funding.
d) Failure to expend funds in a timely manner consistent with the grant milestones, guidance, and assurances.
e) Failure to comply with the requirements or statutory progress toward the goals or objectives of federal or state law.
f) Failure to comply with the required Nationwide Cybersecurity Review (NCSR) process
g) Failure to make satisfactory progress toward the goals or objectives set forth in the Subrecipient application.
h) Failure to follow grant agreement requirements or special conditions.
i) False certification in the application or document.
j) Failure to adequately manage, monitor or direct the grant funding activities of their City/Agency.

IMPORTANT

The purpose of the assurance is to obtain federal and state financial assistance, including any and all federal and state grants, loans, reimbursement, contracts, etc. The Applicant recognizes and agrees that financial assistance will be extended based on the representations made in this assurance. This assurance is binding on the Applicant, its successors, transferees, assignees, etc. Failure to comply with any of the above assurances may result in suspension, termination, or reduction of grant funds.

FY23 Standard Assurances
Federal Grant Programs

All appropriate documentation, as outlined above, must be maintained on file by the Applicant and available for Riverside County OA, Cal OES, or public scrutiny upon request.

All of the language contained within this document must be included in the award documents for all subawards at all tiers. All recipients are bound by the Department of Homeland Security Standard Terms and Conditions 2018, Version 8 .1, hereby incorporated by reference, which can be found at: https://www.dhs.gov/publication/fy15-dhs-standard-terms-and-conditions.

The undersigned represents that he/she is authorized to enter into this agreement for and on behalf of the Applicant.

Subrecipient: City of Banning Police Department

Signature of Authorized Agent: _____

Printed Name of Authorized Agent: _____

Title: _____ Date: _____

Bruce Barton, Director
Emergency Management Department

April 9, 2024

City of Banning
Jeff Horn, Captain

RE: FY23 State Homeland Security Program Grant (SHSP) Award - $161,383
Grant #2023-0042 CFDA#: 97.067

The California Office of Emergency Services (CalOES) has approved Riverside County's FY23 State Homeland Security Program Grant (SHSP) application and has authorized the commencement of reimbursement requests. The performance period of this grant is **April 9, 2024 – May 31, 2025**. **Final reimbursement requests** are **due** within **twenty (20) calendar days** after the end of the grant period of performance**.**

This subaward is subject to requirements in 2 CFR, Part 200, including the Notice of Funding Opportunity (NOFO), Preparedness Grants Manual, California Supplement to the NOFO, Riverside County Supplement to the NOFO, Grant Assurances, and all applicable federal, state, and local requirements. All activities funded with this subaward must be completed within the period of performance.

The Riverside County Operational Area (OA) may reduce, suspend, or terminate grant funding, in whole or in part, or other measures may be imposed for any of the following reasons:

- Failure to submit required performance reports.
- Failure to expend a minimum of 90% of awarded funding.
- Failure to expend funds in a timely manner consistent with the grant milestones, guidance, and assurances.
- Failure to comply with the requirements or statutory progress toward the goals or objectives of federal or state law.
- Failure to make satisfactory progress toward the goals or objectives set forth in the Subrecipient application.
- Failure to follow Grant Subaward requirements or special conditions.
- Proposing or implementing substantial plan changes to the extent that, if originally submitted, the application would not have been selected for funding.
- False certification in the application or document.
- Failure to adequately manage, monitor, or direct the grant funding activities of the organization.

Subrecipients must obtain additional written approval prior to incurring costs for activities such as aviation, watercraft, noncompetitive procurement, and projects requiring Environmental Planning and Historic Preservation review. Any changes to the Financial Management Forms Workbook requires approval from the OA prior to conducting activities and incurring costs.

Your organization's Financial Management Forms Workbook is being provided to you via email along with a copy of this letter. The **Facesheet, Governing Body Resolution**, **Grants Management Assessments form**, **Standard Assurances**, **EHP Screening Form (if applicable)** must be read, **signed**, and **dated** by your **authorized agent** in **blue ink** and returned to **EMD_OAGrants@rivco.org** by **July 9, 2024. Requests will not be processed without the acceptance documents on file.**

This subaward is subject to all provisions of 2 CFR Part 200, Subpart F – Audit Requirements. Any funds received in excess of current needs, approved amounts, or those found owed as a result of a final review or audit, must be refunded to the OA within 30 days upon receipt of an invoice from the County of Riverside Emergency

Management Department.

For further assistance, please contact EMD_OAGrants@rivco.org. We look forward to working with you and appreciate your cooperation and support.

Sincerely,
Louis Le
Senior Administrative Services Analyst
County of Riverside Emergency Management Department

CITY OF BANNING
STAFF REPORT

TO:	**CITY COUNCIL**
FROM:	**Robert Fisher, Acting City Manager**
PREPARED BY:	**Ralph Wright, Parks and Recreation Director**
MEETING DATE:	**February 25, 2025**
SUBJECT:	**Consideration of Resolution 2025-25, Approving an Agreement with Pyro Spectaculars, Inc. for Production of the Fourth of July Aerial Fireworks Display**

RECOMMENDATION:

Adopt Resolution 2025-25.

BACKGROUND:

For over a dozen years, other than the COVID restriction year of 2020, the City of Banning has offered an annual July 4th Celebration including vendors, music, kids and family activities as well as stunning aerial fireworks display and it has become a well-known, and community supported event.

Last year's event had an estimated 2,000 people in attendance at Nicolet Middle School and thousands of other community members watching the fireworks show from their home, local parks, and adjacent neighborhoods. The feedback from the community was that the event was a beneficial and well-liked event that brought the community together.

Pyro Spectaculars, Inc. is the single source providing most of the aerial fireworks shows on July 4th in California and throughout the United States. Staff has inquired and with Pyro Spectaculars, Inc. as to the secure the best pricing for aerial fireworks show and received a quote of $34,000. This fee includes a $2,000 increase over last year's show price. This higher price has come about due to many increases that can be seen throughout the supply chain including insurance costs, shipping and labor costs. As a returning customer, Pyro Spectacular offers a significant discount to the City of Banning. Pyro Spectaculars, Inc., has a waiting list of new customers that will pay a minimum of $50,000 for a show. Customers that cancel annual shows and choose to return in subsequent years will have to be added to a waiting list and no longer be offered the retuning customer discount.

If the production agreement is approved and executed, the City of Banning will pay 50% or $17,000 on April 1st and the remaining 50%, or $17,000 after the show takes place on July 4th.

JUSTIFICATION:

Staff feels providing a July 4th event and including the aerial fireworks display provides a tremendous community benefit. Pyro Spectaculars, Inc. has performed over a dozen July 4th shows in Banning and proven themselves to deliver an exciting and safe show for the community. Funding is currently allocated in the FY 2024-25 budget (Account 001-5400-446-41.58) to support the annual July 4th event including the Aerial Fireworks Display. Additionally, Pyro Spectaculars, Inc. will provide liability insurance naming the City of banning as additional insured and works closely with our fire marshal each year to mitigate the risk associated with fireworks show.

FISCAL IMPACT:

Sufficient funds are available and were budgeted in the July 4th Celebration account 001-5400-446-41.58. A 50% payment for the aerial fireworks display will take place on April 1st and the balance will be paid after the show takes place on July 4th.

ALTERNATIVES:

Do not adopt the resolution and provide staff alternate direction.

BUDGETED?:

Yes

CONTRACT/AGREEMENT:

Yes

ATTACHMENTS:

1. Resolution_2025-25__PR_Pyrospectaculars.docx
2. Banning, City of_Proposal & Agreement_Pyro Spectaculars, inc._7-4-25_.pdf

RESOLUTION 2025-25

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BANNING, CALIFORNIA, APPROVING AGREEMENT WITH PYRO SPECTACULARS, INC. FOR PRODUCTION OF THE FOURTH OF JULY AERIAL FIREWORKS DISPLAY

WHEREAS, The City desires to hold a community event with an aerial fireworks display on July 4, 2025; and

WHEREAS, The July 4th Celebration was held in July of 2024 and it was a successful and well attended event with 2,000 people estimated in attendance inside the fence at Nicolet Middle School Field and thousands more watching the show from throughout Banning; and

WHEREAS, Pyro Spectaculars is a single source provider of fireworks shows on July 4th providing over 200 shows each year in California and throughout the United States; and

WHEREAS, Pyro Spectacular has performed the annual show in Banning for over a dozen years and proven themselves to deliver an exciting and safe show for the community; and

WHEREAS, Pyro Spectaculars, Inc., of Rialto, CA has provided these services for the City in the past and has proved able to perform to set expectations; and

WHEREAS, Pyro Spectaculars, Inc., of Rialto, CA submitted pricing of $34,000 through an informal request; and

WHEREAS, Sufficient funding for the Aerial Fireworks show and Fourth of July Celebration is budgeted and is available in account 001-5400-446.41.58 for FY 2024-25.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Banning as follows:

SECTION 1. The City Council approves the Production Agreement with Pyro Spectaculars, Inc. for an annual aerials fireworks show in the amount of $34,000.

SECTION 2. Authorizes the City Manager or his designee to make non-substantive changes to the Production Agreement and to execute the Production Agreement with Pyro Spectaculars, Inc, on behalf of the City Council, sign all necessary documents, and make all necessary budget adjustments to facilitate the Production Agreement.

SECTION 3. The City Clerk shall certify to the adoption of this resolution and shall cause a certified resolution to be filed in the book of original resolutions.

PASSED, APPROVED AND ADOPTED this 25th day of February, 2025.

Sheri Flynn, Mayor
City of Banning

ATTEST:

Caroline Patton, Administrative City Clerk
City of Banning

APPROVED AS TO FORM AND LEGAL CONTENT:

John Pinkney
Slovak, Baron, Empey, Murphy & Pinkney, LLP

CERTIFICATION:

I, Caroline Patton, Administrative City Clerk of the City of Banning, California, do hereby certify that the foregoing Resolution 2025-25, was duly adopted by the City Council of the City of Banning, California, at a regular meeting thereof held on the 25th day of February, 2025 by the following vote, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

Caroline Patton, Administrative City Clerk
City of Banning, California

2025 Fireworks Proposal

PYRO SPECTACULARS

by Souza®



City of Banning

July 4, 2025



December 18, 2023

City of Banning
Ralph Wright
P.O. Box 998
Banning, CA 92220-0665

Subject: Proposal for your event on **July 4, 2025**, **PROGRAM A** for **$34,000.00**. The fireworks elements provided are prepared to shoot from Nicolet Middle School baseball field.

Pyrotechnics:	☐Close Proximity	☑Display Fireworks	☐Firecrackers
Theatrical Effects:	☐Spark Machines	☐Flames	☐CO2 Cryo Jets
	☐Confetti/Streamers	☐Lights	☐Foggers
Drones:	☐ Light Animations	☐ Accents	

Dear Ralph Wright,

Pyro Spectaculars, Inc. is delighted to present our proposal for the full-service custom-designed **PROGRAM A** for the production of your upcoming event. We are confident that our production capabilities and crew experience will result in the display of an unforgettable experience for your audience.

Enclosed you will find three important documents that outline our **PROGRAM A** proposal in detail:

1. **Product Synopsis - Proposal**: Provides the specifications of the devices and products to be used in your event.
2. **Production Agreement:** Presents the terms and conditions for the production of your event, including engagements, duties, and payment dates and amounts.
3. **Scope of Work**: Outlines the responsibilities and services to be provided by both Pyro Spectaculars, Inc. and City of Banning that will be necessary for the execution of the production of your event, along with insurance limits and requirements.

To secure your program, return the fully executed Production Agreement, and initial payment, to our office by the PRICE FIRM date, March 11, 2025. Please note that program availability, pricing, and show date may be subject to change if these are not timely received.

If you have any questions, or wish to discuss your program in detail, please do not hesitate to contact either myself or your dedicated Customer Service Representative, Maria Barajas, at (909) 355-8120, extension 228

Sincerely,

Pyro Spectaculars, Inc.

Jeff Martin

Jeff Martin, Show Producer
mb

Pyro Spectaculars, Inc.
P.O. Box 2329, Rialto, CA 92377 • Phone: (909) 355- 8120 • Fax: (909) 355-9813

Fireworks Proposal
City of Banning
PROGRAM A – July 4, 2025
$34,000.00

Main Body - Aerial Shells

Description	Quantity
♦ 3" Souza Designer Selections	300
Total of Main Body - Aerial Shells	**300**

Pyrotechnic Devices

Description	Quantity
♦ Sousa Platinum Line Custom Multishot Device	100 Shots
♦ Sousa Diamond Line Custom Multishot Device	400 Shots
♦ Sousa Silver Line Custom Multishot Device	150 Shots
♦ Sousa Emerald Line Custom Multishot Device	300 Shots
♦ Sousa Silver Line Custom Multishot Device	144 Shots
♦ Sousa Pro-formance Mulitshot Device	456 Shots
Total of Pyrotechnic Devices	**1,550**

Grand Finale

Description	Quantity
♦ 2.5" Souza Designer Bombardment Shells	36
♦ 3" Souza Designer Bombardment Shells	180
Total of Grand Finale	**216**
Grand Total	**2,066**

Display duration approximately 18-20 minutes

Product descriptions are for specification of product quality, classification, and value. Final product selections will be based on availability, suitability, and overall artistic style.

Pyro Spectaculars, Inc.
P.O. Box 2329
Rialto, CA 92377
Tel: 909-355-8120 :::: Fax: 909-355-9813

PRODUCTION AGREEMENT

This agreement ("Agreement") is made this _____day of _____,**2025** by and between **Pyro Spectaculars, Inc.**, a California corporation, hereinafter referred to as ("PYRO"), and **City of Banning**, hereinafter referred to as ("CLIENT"). PYRO and CLIENT are sometimes referred to as "Party" or collectively as "Parties" herein.

1. **Engagement** - CLIENT hereby engages PYRO to provide to CLIENT one fireworks production ("Production"), and PYRO accepts such engagement upon all of the promises, terms and conditions hereinafter set forth. The Production shall be substantially as outlined in Program "**A**", attached hereto and incorporated herein by this reference.

1.1 **PYRO Duties** – PYRO shall provide all pyrotechnic equipment, trained pyrotechnicians, shipping, pyrotechnic products, application for specific pyrotechnic permits (the cost of which, including standby fees, shall be paid by CLIENT) relating to the Production, insurance covering the Production and the other things on its part to be performed, including preproduction services, all as more specifically set forth below in this Agreement and in the Scope of Work ("Scope of Work"), attached hereto, incorporated herein by this reference, and made a part of this Agreement as though set forth fully herein.

1.2 **CLIENT Duties** – CLIENT shall provide to PYRO a suitable site ("Site") for the Production, security for the Site as set forth in Paragraph 6 hereof, access to the Site, any permission necessary to utilize the Site for the Production, and the other things on its part to be performed as more specifically set forth below in this Agreement and in the Scope of Work. All Site arrangements are subject to PYRO's reasonable approval as to pyrotechnic safety, suitability, and security. All other conditions of the Site shall be the responsibility of CLIENT, including, but not limited to, access, use, control, parking and general safety with respect to the public, CLIENT personnel and other contractors.

2. **Time and Place** - The Production shall take place on **July 4, 2025**, at approximately **9:00 p.m.**, at **Nicolet Middle School baseball field, 101 E Nicolet St., Banning, CA**, Site.

3. **Fees, Interest, and Expenses** -

3.1 **Fee** - CLIENT agrees to pay PYRO a fee of $**34,000.00**USD (**THIRTY FOUR THOUSAND DOLLARS**) ("Fee") for the Production. CLIENT shall pay to PYRO an initial payment ("Initial Payment") equal to 50 % of the Production Fee $**17,000.00**USD (**SEVENTEEN THOUSAND DOLLARS**) plus estimated permit and standby fees, and other regulatory costs approximated at **$00.00 OR an amount to be determined,** for a total of **$17,000.00**, upon the execution of this Agreement by both parties but no later than **March 11, 2025**. The Initial Payment is a partial payment toward the preproduction services and costs set forth in the Scope of Work ("Preproduction Services and Costs".) The balance of the Fee shall be paid no later than **May 29, 2025**. CLIENT authorizes PYRO to receive and verify credit and financial information concerning CLIENT from any agency, person or entity including but not limited to credit reporting agencies. The "PRICE FIRM" date, the date by which the executed Agreement must be delivered to Pyro, is set forth in paragraph 20.

3.2 **Interest** - In the event that the Fee is not paid in a timely manner, CLIENT will be responsible for the payment of 1.5% interest per month or 18% annually on the unpaid balance. If litigation arises out of this Agreement, the prevailing party shall be entitled to reasonable costs incurred in connection with the litigation, including, but not limited to attorneys' fees.

3.3 **Expenses** – PYRO shall pay all normal expenses directly related to the Production including freight, insurance as outlined, pyrotechnic products, pyrotechnic equipment, experienced pyrotechnic personnel to set up and discharge the pyrotechnics and those additional items as outlined as PYRO's responsibility in the Scope of Work. CLIENT shall pay all costs related to the Production not supplied by PYRO including, but not limited to, those items outlined as CLIENT's responsibility in this Agreement and Scope of Work.

4. **Proprietary Rights** - PYRO represents and warrants that it owns all copyrights, including performance rights, to this Production, except that PYRO does not own CLIENT-owned material or third-party-owned material that has been included in the Production, and as to such CLIENT-owned and third-party-owned material, CLIENT assumes full responsibility therefore. CLIENT agrees that PYRO shall retain ownership of, and all copyrights and other rights to, the Production, except that PYRO shall not acquire or retain any ownership or other rights in or to CLIENT-owned material and third-party-owned material and shall not be responsible in any way for such material. If applicable, CLIENT consents to the use of CLIENT-owned material and represents that it has or will obtain any permission from appropriate third parties sufficient to authorize public exhibition of any such material in connection with this Production. PYRO reserves the ownership rights in its trade names that are used in or are a product of the Production. Any reproduction by sound, video or other duplication or recording process without the express written permission of PYRO is prohibited.

5. **Safety** - PYRO and CLIENT shall each comply with applicable federal, state and local laws and regulations and employ safety programs and measures consistent with recognized applicable industry standards and practices. At all times before and during the Production, it shall be within PYRO's sole discretion to determine whether or not the Production may be safely discharged or continued. It shall not constitute a breach of this Agreement by PYRO for fireworks to fail or malfunction, or for PYRO to determine that the Production cannot be discharged or continued as a result of any conditions or circumstances affecting safety beyond the reasonable control of PYRO.

6. **Security** - CLIENT shall provide adequate security personnel, barricades, and Police Department services as may be necessary to preclude individuals other than those authorized by PYRO from entering an area to be designated by PYRO as the area for the set-up and discharge of the Production, including a fallout area satisfactory to PYRO where the pyrotechnics may safely rise and any debris may safely fall. PYRO shall have no responsibility for monitoring or controlling CLIENT's other contractors, providers or volunteers; the public; areas to which the public or contractors have access; or any other public or contractor facilities associated with the Production.

7. **Cleanup** - PYRO shall be responsible for the removal of all equipment provided by PYRO and clean up of any live pyrotechnic debris made necessary by PYRO. CLIENT shall be responsible for any other clean up which may be required of the Production or set-up, discharge and fallout areas including any environmental clean-up.

8. **Permits** - PYRO agrees to apply for permits for the firing of pyrotechnics only from the **Riverside County Fire Department,** FAA, and USCG, if required. CLIENT shall be responsible for any fees associated with these permits including standby fees. CLIENT shall be responsible for obtaining any other necessary permits, paying associated fees, and making other appropriate arrangements for Police Departments, other Fire Departments, road closures, event/activity or land use permits or any permission or permit required by any Local, Regional, State or Federal Government.

9. **Insurance** - PYRO shall at all times during the performance of services herein ensure that the following insurance is maintained in connection with PYRO's performance of this Agreement: (1) commercial general liability insurance, including products, completed operations, and contractual liability under this Agreement; (2) automobile liability insurance, (3) workers' compensation insurance and employer liability insurance. Such insurance is to protect CLIENT from claims for bodily injury, including death, personal injury, and from claims of property damage, which may arise from PYRO's performance of this Agreement, only. The types and amounts of coverage shall be as set forth in the Scope of Work. Such insurance shall not include claims which arise from CLIENT's negligence or willful conduct or from failure of CLIENT to perform its obligations under this Agreement, coverage for which shall be provided by CLIENT.

The coverage of these policies shall be subject to reasonable inspection by CLIENT. Certificates of Insurance evidencing the required general liability coverage shall be furnished to CLIENT prior to the rendering of services hereunder and shall include that the following are named as additionally insured: CLIENT; Sponsors, Landowners, Barge Owners, if any; and Permitting Authorities, with respect to the operations of PYRO at the Production. Pyrotechnic subcontractors or providers, if any, not covered under policies of insurance required hereby, shall secure, maintain and provide their own insurance coverage with respect to their respective operations and services.

10. **Indemnification** - PYRO represents and warrants that it is capable of furnishing the necessary experience, personnel, equipment, materials, providers, and expertise to produce the Production in a safe and professional manner. Notwithstanding anything in this Agreement to the contrary, PYRO shall indemnify, hold harmless, and defend CLIENT and the additional insureds from and against any and all claims, actions, damages, liabilities and expenses, including but not limited to, attorney and other professional fees and court costs, in connection with the loss of life, personal injury, and/or damage to property, arising from or out of the Production and the presentation thereof to the extent such are occasioned by any act or omission of PYRO, their officers, agents, contractors, providers, or employees. CLIENT shall indemnify, hold harmless, and defend PYRO from and against any and all claims, actions, damages, liability and expenses, including but not limited to, attorney and other professional fees and court costs in connection with the loss of life, personal injury, and/or damage to property, arising from or out of the Production and the presentation thereof to the extent such are occasioned by any act or omission of CLIENT, its officers, agents, contractors, providers, or employees. In no event shall either party be liable for the consequential damages of the other party.

11. **Limitation of Damages for Ordinary Breach** - Except in the case of bodily injury and property damage as provided in the insurance and indemnification provisions of Paragraphs 9 and 10, above, in the event CLIENT claims that PYRO has breached this Agreement or was otherwise negligent in performing the Production provided for herein, CLIENT shall not be entitled to claim or recover monetary damages from PYRO beyond the amount CLIENT has paid to PYRO under this Agreement, and shall not be entitled to claim or recover any consequential damages from PYRO including, without limitation, damages for loss of income, business or profits.

12. **Force Majeure** - CLIENT agrees to assume the risks of weather, strike, civil unrest, terrorism, military action, governmental action, and any other causes beyond the control of PYRO which may prevent the Production from being safely discharged on the scheduled date, which may cause the cancellation of any event for which CLIENT has purchased the Production, or which may affect or damage such portion of the exhibits as must be placed and exposed a necessary time before the Production. If, for any such reason, PYRO is not reasonably able to safely discharge the Production on the scheduled date, or at the scheduled time, or should any event for which CLIENT has purchased the Production be canceled as a result of such causes, CLIENT may (i) reschedule the Production and pay PYRO such sums as provided in Paragraph 13, or (ii) cancel the Production and pay PYRO such sums as provided in Paragraph 14, based upon when the Production is canceled.

13. **Rescheduling Of Event** - If CLIENT elects to reschedule the Production, PYRO shall be paid the original Fee plus all additional expenses made necessary by rescheduling plus a 15% service fee on such additional expenses. Said expenses will be invoiced separately and payment will be due in full within 5 days of receipt. CLIENT and PYRO shall agree upon the rescheduled date taking into consideration availability of permits, materials, equipment, transportation and labor. The Production shall be rescheduled for a date not more than 90 Days subsequent to the date first set for the Production. The Production shall not be rescheduled to a date, or for an event, that historically has involved a fireworks production. The Production shall not be rescheduled between June 15th and July 15th unless the original date was July 4th of that same year, or between December 15th and January 15th unless the original date was December 31st of the earlier year unless PYRO agrees that such rescheduling will not adversely affect normal business operations during those periods.

14. **Right To Cancel** – CLIENT shall have the option to unilaterally cancel the Production prior to the scheduled date. If CLIENT exercises this option, CLIENT agrees to pay to PYRO, as liquidated damages, the following percentages of the Fee as set forth in Paragraph 3.1. 1) 50% if cancellation occurs 30 or more days prior to the scheduled date, 2) 75% if cancellation occurs 15 to 29 days prior to the scheduled date, 3) 100% thereafter. In the event CLIENT cancels the Production, it will be impractical or extremely difficult to fix actual amount of PYRO's damages. The foregoing represents a reasonable estimate of the damages PYRO will suffer if CLIENT cancels the Production.

15. **No Joint Venture** - It is agreed, nothing in this Agreement or in PYRO's performance of the Production shall be construed as forming a partnership or joint venture between CLIENT and PYRO. PYRO shall be and is an independent contractor with CLIENT and not an employee of CLIENT. The Parties hereto shall be severally responsible for their own separate debts and obligations and neither Party shall be held responsible for any agreements or obligations not expressly provided for herein.

16. **Applicable Law** - This Agreement and the rights and obligations of the Parties hereunder shall be construed in accordance with the laws of California. It is further agreed that the Central Judicial District of San Bernardino County, California, shall be proper venue for any such action. In the event that the scope of the Production is reduced by authorities having jurisdiction or by either Party for safety concerns, the full dollar amounts outlined in this Agreement are enforceable.

17. **Notices** - Any Notice to the Parties permitted or required under this Agreement may be given by mailing such Notice in the United States Mail, postage prepaid, first class, addressed as follows: PYRO – Pyro Spectaculars, Inc., P.O. Box 2329, Rialto, California, 92377, or for overnight delivery to 3196 N. Locust Avenue, Rialto, California 92377. CLIENT – **City of Banning, P.O. Box 998, Banning, CA 92220-0665.**

18. **Modification of Terms** – All terms of the Agreement are in writing and may only be modified by written agreement of both Parties hereto. Both Parties acknowledge they have received a copy of said written Agreement and agree to be bound by said terms of written Agreement only.

19. **Severability** – If there is more than one CLIENT, they shall be jointly and severally responsible to perform CLIENT's obligations under this Agreement. This Agreement shall become effective after it is executed and accepted by CLIENT and after it is executed and accepted by PYRO at PYRO's offices in Rialto, California. This Agreement may be executed in several counterparts, including faxed and emailed copies, each one of which shall be deemed an original against the Party executing same. This Agreement shall be binding upon the Parties hereto and upon their heirs, successors, executors, administrators and assigns.

20. **Price Firm** – If any changes or alterations are made by CLIENT to this Agreement or if this Agreement is not executed by CLIENT and delivered to PYRO on or before the PRICE FIRM date shown below, or if the Initial Payment is not paid on or before the due date, then the price, date, and scope of the Production are subject to review and acceptance by PYRO for a period of 15 days following delivery to PYRO of the executed Agreement. In the event it is not accepted by PYRO, PYRO shall give CLIENT written notice, and this Agreement shall be void.

PRICE FIRM through March 11, 2025
EXECUTED AGREEMENT MUST BE DELIVERED TO PYRO BY THIS DATE.
See PRICE FIRM conditions, paragraph 20, above.

EXECUTED as of the date first written above:

PYRO SPECTACULARS, INC.

By: _____

Its: Vice President

Date: 1/29/25

City of Banning

By: _____

Its: _____

_____
Print Name

Date: _____

SHOW PRODUCER: **Jeff Martin**

SCOPE OF WORK
PYRO SPECTACULARS, INC. ("PYRO")
and
City of Banning ("CLIENT")

Pyro shall provide the following goods and services to CLIENT:

- One Pyro Spectaculars, Inc., Production on **July 4, 2025**, at approximately **9:00 p.m.** at **Nicolet Middle School baseball field, 101 E Nicolet St., Banning, CA**.
- All pyrotechnic equipment, trained pyrotechnicians, shipping, and pyrotechnic product.
- Preproduction Services and Costs for the Production, including advance acquisition of materials and products; design, engineering, programming, handling, staging, storage, and maintenance of products, props, and systems; preparation of drawings, diagrams, listings, schedules, inventory controls, choreography, and computer code; picking, packing, labeling, staging, and loading of equipment, materials, and systems; transportation, and logistics and crew scheduling and support; explosive storage magazines with legally mandated distances, surfaces, security, housekeeping, and access controls; and necessary and appropriate vehicles, including legally mandated insurance, including MCS90 explosives transportation coverage, parking, security, and maintenance.
- Application for specific pyrotechnic permits relating to the Production.
- Insurance covering the preproduction and Production as set forth in the Agreement with the following limits:

Insurance Requirements	***Limits***	
Commercial General Liability	$5,000,000.00	Combined Single Limit- Each Occurrence (Bodily Injury & Property Damage)
Business Auto Liability- Owned, Non-Owned and Hired Autos	$5,000,000.00	Combined Single Limit- Each Occurrence (Bodily Injury & Property Damage)
Workers' Compensation	Statutory	
Employer Liability	$1,000,000	Per Occurrence

CLIENT shall provide to PYRO the following goods and services:

- All on-site labor costs, if any, not provided or performed by PYRO personnel including, but not limited to, local union requirements, all Site security, Police and Fire Dept. standby personnel, stagehands, electricians, audio and fire control monitors, carpenters, plumbers, clean-up crew. All these additional personnel and services shall be fully insured and the sole responsibility of CLIENT.
- Coordination and any applicable non-pyrotechnic permitting with the local, state or federal government that may hold authority within the Production.
- Costs of all permits required for the presentation of the Production and the event as a whole.
- Provision of a Safety Zone in accordance with applicable standards and all requirements of the authorities having jurisdiction throughout the entire time that the pyrotechnics are at the Site or the load site (if different) on the date of the Production and all set-up and load-out dates, including water security to keep unauthorized people, boats, etc. from entering the Safety Zone.
- General Services including, but not limited to, Site and audience security, fencing, adequate work light, dumpster accessibility, a secure office for PYRO personnel within the venue, secure parking for PYRO vehicles, access to washrooms, tents, equipment storage, hazmat storage, electrical power, fire suppression equipment, access to worksites, necessary credentialing, etc., will be required as necessary.

CITY OF BANNING
STAFF REPORT

TO: **CITY COUNCIL**

FROM: **Robert Fisher, Acting City Manager**

PREPARED BY: **Ralph Wright, Parks and Recreation Director**

MEETING DATE: **February 25, 2025**

SUBJECT: **Consideration of Resolution 2025-26, Approving a Short-Term Rental Agreement with Orlando Cobos for Use of City-Owned Property located at 150 East Ramsey Street in Banning for a series of Acrobatic Shows**

RECOMMENDATION:

Adopt Resolution 2025-26.

BACKGROUND:

The Parks and Recreation Department was contacted regarding the use of the property located at 150 E. Ramsey Street for a 2-week period to offer a series of Acrobatic Shows in Banning. The old site of the San Gorgonio Inn has been vacant for over a year and is currently unprogrammed.
Absolute Kids Non-profit Sponsor Circus Royal Spectacular has submitted a required Temporary Use Permit (TUP) application to operate the acrobatic show at the location and completed a Special Event Permit Application. As part of the permitting process, requirements for operation of a safe event will be established by Fire and Police. The operator will require the use of water at the site and will be required to request the use of a construction meter on site and pay for all costs associated with the water use.

The City will receive $750 in rent for the fifteen (15) day short-term rental. The property has had previous short-term rentals for similar events. Most recently, in September and October of 2022, the property was used for a Pumpkin Patch event and the City received $1,500 in rent for this 35 day use.

Staff believes this would be a good use of the underutilized site and would draw residents and visitors to the City's downtown core.

JUSTIFICATION:

The property is currently not being used by the City and all costs associated with the use of the property are being paid by the operator. The City will receive rent for the short-term rental in the amount of $750. The use of the property to offer a fun and exciting acrobat show for the Pass Area is a positive benefit to the City of Banning.

FISCAL IMPACT:

The term of the short-term rental agreement is 15 days - March 11, 2025 through March 25, 2025. Tenant shall pay $750 plus any associated late fees they may incur per the agreement. Tenant will also be required to secure a temporary construction water meter on site and pay all associated water costs incurred during their use.

ALTERNATIVES:

Do not adopt the resolution and provide staff alternate direction.

BUDGETED?:

No

CONTRACT/AGREEMENT:

Yes

ATTACHMENTS:

1. Resolution 2025-26, 150 E Ramsey Rental.docx
2. Draft Real Property Short-Term Rental Agreement (150 E. Ramsey St - Absolute Kids Nonprofit Sponsor Circus Royal Spectacular)_2.25.2025.pdf
3. SEP Application _ 25-02 CIrque California Dreams.pdf

RESOLUTION 2025-26

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BANNING, CALIFORNIA, APPROVING A SHORT-TERM RENTAL AGREEMENT WITH ORLANDO COBOS FOR RENTAL OF APPROXIMATELY 0.5 ACREA LOCATED ON CITY-OWNED PROPERTY LOCATED AT 150 E. RAMSEY STREET IN BANNING, CA 92220

WHEREAS, The City of Banning was contacted by Absolute Kids Non-Profit Sponsor Circus Royal Spectacular regarding the use of the property located at 150 E. Ramsey street for an acrobatic show; and

WHEREAS, Absolute Kids Non-profit Sponsor Circus Royal Spectacular has submitted a required Temporary Use Permit (TUP) application to operate the acrobatic show at the location; and

WHEREAS, the term of the rental is for fifteen (15) days from March 11, 2025 through March 25, 2025; and

WHEREAS, the City has declared the land surplus and the property is not currently in use by the City; and

WHEREAS, the City will receive $750.00 in rent for the short-term use of the property.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Banning as follows:

SECTION 1. The Short-Term Rental Agreement between Orlando Cobos and the City of Banning is hereby approved; and

SECTION 2. The City Council authorizes the City Manager or his designee to execute the Short-Term Rental Agreement on behalf of the City of Banning.

SECTION 3. The City Clerk shall certify to the adoption of this resolution and shall cause a certified resolution to be filed in the book of original resolutions.

PASSED, APPROVED AND ADOPTED this 25th day of February, 2025.

Sheri Flynn, Mayor
City of Banning

ATTEST:

Caroline Patton, Administrative City Clerk
City of Banning

APPROVED AS TO FORM AND LEGAL CONTENT:

John Pinkney, Interim City Attorney
Slovak, Baron, Empey, Murphy & Pinkney, LLP

CERTIFICATION:

I, Caroline Patton, Administrative City Clerk of the City of Banning, California, do hereby certify that the foregoing Resolution 2025-26, was duly adopted by the City Council of the City of Banning, California, at a regular meeting thereof held on the 25th day of February, 2025 by the following vote, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

Caroline Patton, Administrative City Clerk
City of Banning, California

RENTAL AGREEMENT

This **RENTAL AGREEMENT** ("Rental Agreement") is dated as of _February 26, 2025 (the "Effective Date") and entered into by and between the **CITY OF BANNING**, a California municipal corporation ("Landlord" or "City"), and **ORLANDO COBOS**, an individual doing business as Absolute Kids Non-Profit Sponsor Circus Royal Spectacular ("Tenant"). The Landlord or City and the Tenant are collectively referred to herein as "Parties," or individually referred to as a "Party."

RECITALS

A. Landlord is the owner of that certain vacant real property located at 150 E. Ramsey Street (the "Property").

B. Tenant wishes to rent on a short-term basis a portion of the Property consisting of approximately 0.5 acres, as depicted on the Site Map attached hereto as **Exhibit "A"** and incorporated herein by reference (the "Site") for the purpose of operating a temporary seasonal circus without animals, with acrobats, clowns, jugglers, and other acts for twelve (12) days in March.

C. Tenant agrees that the use of the Site under this Rental Agreement is only for a limited time on the terms and conditions set forth in this Rental Agreement.

D. Tenant is required to secure a Temporary Use Permit(TUP) from the City of Banning and follow all required conditions of approval.

E. Tenant has conducted an independent investigation concerning the desirability of renting the Site on the terms and conditions set forth in this Rental Agreement and its suitability for use by Tenant; Landlord has not provided any advice, recommendations, or information concerning the Property or the Site and any use of the Site by Tenant.

F. This Rental Agreement is in the vital and best interests of City, and the health, safety and welfare of its residents, and in accordance with the public purposes of applicable state and local laws and requirements.

NOW, THEREFORE, for and in consideration of the mutual promises, covenants, and conditions herein contained, Landlord and Tenant agree as follows:

ARTICLE 1. RENTAL AGREEMENT OF THE SITE.

1.1 Recitals. The foregoing Recitals constitute a substantive part of this Rental Agreement.

1.2 Rental of the Site. Landlord hereby rents the Site to Tenant and Tenant hereby rents the Site from the Landlord, on the terms and conditions set forth in this Rental Agreement.

1.3 Term. The Term shall be for the fifteen days in the month of March, 2025, commencing at 12:01 a.m. on March 11, 2025 (the "Commencement Date") and ending at midnight on March 25, 2025 (the "Expiration Date"). The Term shall not be extended beyond the Expiration Date.

1.4 Agreed Use. Tenant shall use the Site in compliance with, and subject to all terms and conditions imposed under, an approved City of Banning Temporary Use Permit(TUP). Tenant may use the Site for the purpose of operating a temporary, seasonal circus consisting of various acrobatic acts. The Circus will not have any animals and will operate for twelve (12) days in March 2025 (the "Agreed Use"). Tenant may not use any of Landlord's property that is adjacent to the Site, or any public street or right-of-way for any of the Agreed Use, with the only exception being the incidental access for delivery and shipping of equipment, materials and supplies to and from the Site and patron parking as permitted by TUP. Specifically, the staging, loading, and unloading of any trucks or similar vehicles used to deliver or ship equipment, materials and supplies to and from the Site associated with the Agreed Use shall only occur within the boundaries of the Site. Tenant's failure to comply with these limitations on the Agreed Use, or the terms or conditions of TUP, shall be considered a Default under this Rental Agreement.

1.5 Fencing. Prior to using the Site, Tenant shall install at its sole expense, perimeter fencing, gates, and screening, as required by TUP and City's Department of Community Development.

1.6 Size of Site. While the approximate square footage of the Site, as set forth in Recital B, may have been used for comparison purposes in the marketing of the Site or negotiating the terms of this Rental Agreement, the Rent stated in Section 2.1 of this Rental Agreement is not calculated based upon square footage and is not subject to adjustment should the actual size of the Site be determined to be different.

1.7 Condition. Landlord shall deliver the Site to Tenant "as is" on the Commencement Date, without representation or warranty, express or implied. Without limiting the foregoing disclaimer, Landlord does not warrant or represent and specifically disclaims any such representation or warranty with respect to the condition or suitability of the Site for the Agreed Use with respect to the following (as may apply): (a) the parking lot pavement, the improvement(s) that are appurtenant to the parking lot including, without limitation, curb, gutter, sidewalks, planter boxes or areas, and landscaping; (b) the presence or absence of Hazardous Substances; (c) compliance with the building codes, applicable laws, covenants or restrictions of record, regulations, and ordinances that were in effect at the time that the improvement(s) and building(s) were constructed or as of the Effective Date, or (d) compliance with the Americans with Disabilities Act ("ADA") or any similar laws.

1.8 Acknowledgements. Tenant acknowledges that: (a) it has been given an opportunity to inspect and measure the Site; (b) it has been advised by Landlord to satisfy itself with respect to the size and condition of the Site (including, but not limited to, environmental aspects, and compliance with applicable laws and the ADA), and its suitability for the Agreed Use; (c) Tenant has made such investigation as it deems necessary with reference to such matters and assumes all responsibility therefor as the same relate to its occupancy of the Site; (d) it is not relying on any representation as to the size of the Site made by Landlord; (e) the square footage of the Site was not material to Tenant's decision to Rental Agreement the Site and pay the Rent stated herein; and (f) neither Landlord, Landlord's agents, nor any Brokers have made any oral or written representations or warranties with respect to said matters other than as set forth in this Rental Agreement.

1.9 Tenant Compliance. Landlord shall not be required to tender possession of the Site to Tenant until Tenant complies with its obligation to pay the Rent as described in Section 2.2 and provide evidence of insurance (see Article 5). Pending delivery of such payments and evidence, Tenant shall be required to perform all of its obligations under this Rental Agreement from and after the

Commencement Date, notwithstanding Landlord's election to withhold possession pending receipt of such evidence of insurance.

ARTICLE 2. RENT.

2.1 Rent. The rent for the Site is Seven Hundred and fifty Dollars ($750.00) (the "Rent"). The Rent is applicable to the Term and is not tied to the actual number of days that Tenant occupies the Site. Therefore, in the event that Tenant delays its occupancy of the Site or vacates the Site prior to the Expiration Date, Tenant is not entitled to any Rent refund.

2.2 Payment. Without invoice or notice from Landlord of any kind, on or before March 5, 2025, Tenant shall cause the payment of the Rent applicable to the entire Term (i.e., Seven Hundred and Fifty Dollars [$750.00]) to be paid to Landlord in lawful money of the United States, without offset or deduction.

ARTICLE 3. USE.

3.1 Use. Tenant shall use and occupy the Site only for the Agreed Use and for no other purpose. Tenant shall not use or permit the use of the Site in a manner that is unlawful, creates damage, waste or a nuisance, or that disturbs occupants of, or causes damage to, neighboring properties. For the purposes of this Rental Agreement, "damage" does not include any modifications to the Property that are approved by Landlord and does not include any normal wear to the Property that may occur as a consequence of the Agreed Use. However, "damage" may include any modifications to the Property that are not approved by the Landlord.

3.2 Hazardous Substances.

(a) **Reportable Uses Require Consent**. The term "**Hazardous Substance**" as used in this Rental Agreement shall mean any product, substance, or waste whose presence, use, manufacture, disposal, transportation, or release, either by itself or in combination with other materials expected to be on the Site, is either: i) potentially injurious to the public health, safety, or welfare, the environment, or the Site; ii) regulated or monitored by any governmental authority; or iii) a basis for potential liability of Landlord to any governmental agency or third party under any applicable statute or common law theory. Hazardous Substances shall include, but not be limited to, hydrocarbons, petroleum, gasoline, and/or crude oil or any products, by-products or fractions thereof. Tenant shall not engage in any activity in or on the Site that constitutes a Reportable Use of Hazardous Substances without the express prior written consent of Landlord and timely compliance (at Tenant's expense) with all applicable laws. For purposes of this Section 3.2, "Reportable Use" shall mean: i) the installation or use of any above or below ground storage tank; ii) the generation, possession, storage, use, transportation, or disposal of a Hazardous Substance that requires a permit from, or with respect to which a report, notice, registration, or business plan is required to be filed with, any governmental authority; and/or iii) the presence at the Site of a Hazardous Substance with respect to which any applicable laws require that a notice be given to persons entering or occupying the Site or neighboring properties. Notwithstanding the foregoing, Tenant may use any ordinary and customary materials reasonably required to be used in the normal course of the Agreed Use, ordinary office supplies (copier toner, liquid paper, glue, etc.) and common household cleaning materials, so long as such use is in compliance with all applicable laws, is not a Reportable Use, and does not expose the Site or neighboring property to any meaningful risk of contamination or damage or expose Landlord to any liability therefor. In addition, Landlord may condition its consent to any Reportable Use upon

receiving such additional assurances as Landlord reasonably deems necessary to protect itself, the public, the Site and/or the environment against damage, contamination, injury, and/or liability, including, but not limited to, the installation (and removal on or before Rental Agreement expiration or termination) of protective modifications (such as concrete encasements).

(b) **Duty to Inform Landlord**. If Tenant knows, or has reasonable cause to believe, that a Hazardous Substance has come to be located in, on, under, or about the Site, other than as previously consented to by Landlord, Tenant shall immediately give written notice of such fact to Landlord, and provide Landlord with a copy of any report, notice, claim, or other documentation which it has concerning the presence of such Hazardous Substance.

(c) **Tenant Remediation**. Tenant shall not cause or permit any Hazardous Substance to be spilled or released in, on, under, or about the Site (including through the plumbing or sanitary sewer system) and shall promptly, at Tenant's expense, comply with all applicable laws and take all investigatory and/or remedial action reasonably recommended, whether or not formally ordered or required, for the cleanup of any contamination of, and for the maintenance, security and/or monitoring of the Site or neighboring properties, that was caused or materially contributed to by Tenant, or pertaining to or involving any Hazardous Substance brought onto the Site during the term of this Rental Agreement, by or for Tenant, or any third party.

(d) **Tenant Indemnification**. Tenant shall indemnify, defend, and hold Landlord, its agents, employees, lenders, and ground landlord, if any, harmless from and against any and all loss of rents and/or damages, liabilities, judgments, claims, expenses, penalties, and attorneys' and consultants' fees arising out of or involving any Hazardous Substance brought onto the Site by or for Tenant, or any third party (provided, however, that Tenant shall have no liability under this Rental Agreement with respect to underground migration of any Hazardous Substance under the Site from adjacent properties not caused or contributed to by Tenant). Tenant's obligations shall include, but not be limited to, the effects of any contamination or injury to person, property, or the environment created or suffered by Tenant, arising out of or involving any Hazardous Substance brought onto the Site by or for Tenant, or any third party, and the cost of investigation, removal, remediation, restoration, and/or abatement, and shall survive the expiration or termination of this Rental Agreement. **No termination, cancellation or release agreement entered into by Landlord and Tenant shall release Tenant from its obligations under this Rental Agreement with respect to Hazardous Substances, unless specifically so agreed by Landlord in writing at the time of such agreement**.

(e) **Investigations and Remediations**. Landlord shall retain the responsibility and pay for any investigations or remediation measures required by governmental entities having jurisdiction with respect to the existence of Hazardous Substances on the Site prior to Tenant's occupancy, unless such remediation measure is required as a result of the Agreed Use, in which event Tenant shall be responsible for such payment.

3.3 Tenant's Compliance with Applicable Laws and Requirements. With respect to ensuring that Tenant's on-going business operations (see Section 4.1) comply with applicable laws, Tenant shall, at Tenant's sole expense, fully, diligently, and in a timely manner, comply with all applicable laws and the requirements of any applicable fire insurance underwriter or rating bureau. Further, Tenant shall cooperate with Landlord's staff, engineers, and/or consultants regarding any recommendations that they may have that relate in any manner to the Site, without regard to whether said applicable laws are now in effect or become effective after the Commencement Date. Tenant shall, within ten (10) days after delivery of Landlord's written request, provide Landlord with copies

of all permits and other documents, and other information evidencing Tenant's compliance with any applicable laws specified by Landlord, and shall immediately upon receipt, notify Landlord in writing (with copies of any documents involved) of any threatened or actual claim, notice, citation, warning, complaint, or report pertaining to or involving the failure of Tenant or the Site to comply with any applicable laws. In addition, Tenant shall provide Landlord with copies of its business license, certificate of occupancy and/or any similar document within ten (10) days of the delivery of a written request therefor.

3.4 Inspection; Compliance. Landlord and consultants authorized by Landlord shall have the right to enter into Site at any time, in the case of an emergency, and otherwise at reasonable times after reasonable notice, for the purpose of inspecting and/or testing the condition of the Site and/or for verifying compliance by Tenant with this Rental Agreement. The cost of any such inspections shall be paid by Landlord, unless a violation of applicable laws, or a Hazardous Substance Condition (see Section 3.2) is found to exist or be imminent, or the inspection is requested or ordered by a governmental authority. In such case, Tenant shall upon request reimburse Landlord for the cost of such inspection, so long as such inspection is reasonably related to the violation or contamination. In addition, Tenant shall provide copies of all relevant material safety data sheets to Landlord within ten (10) days of the receipt of a written request therefor. Tenant acknowledges that any failure on its part to allow such inspections or testing will expose Landlord to risks and potentially cause Landlord to incur costs not contemplated by this Rental Agreement, the extent of which will be extremely difficult to ascertain. Accordingly, if the Tenant fails to authorize such inspections and/or testing within ten (10) days of written notice therefor, the Rent shall be automatically increased by an amount equal to ten percent (10%) of the Rent and the unpaid rent shall be due within ten (10) days. The Parties agree that such increase in Rent represents fair and reasonable compensation for the additional risk/costs that Landlord will incur by reason of Tenant's failure to authorize such inspection and/or testing. Such increase in Rent shall in no event constitute a waiver of Tenant's Default or Breach with respect to such failure nor prevent the exercise of any of the other rights and remedies granted hereunder.

ARTICLE 4. MAINTENANCE; REPAIRS

4.1 Tenant's Obligations.

(a) **In General**. Tenant shall, at Tenant's sole expense, keep the Site in good order, condition, and repair. Tenant, in keeping the Site in good order, condition, and repair, shall exercise and perform good maintenance practices, specifically including the procurement and maintenance of the service contracts required by Section 4.1(b) below. Tenant's obligations shall include restorations, replacements, or renewals when necessary to keep the Site and all improvements thereon or a part thereof in good order, condition, and state of repair. Tenant shall, during the term of this Rental Agreement, keep the exterior appearance of the perimeter fencing and the equipment, materials, and supplies required for the Agreed Use that are visible from a public right-of-way in a first-class condition including, without limitation, graffiti removal/abatement.

(b) **Service Contracts**. As applicable, Tenant shall, at Tenant's sole expense, procure and maintain contracts, with copies to Landlord, in customary form and substance for, and with contractors specializing and experienced in the maintenance of equipment located on the Site, including, without limitation, fencing.

(c) **Failure to Perform**. If Tenant fails to perform Tenant's obligations under this Section 4.1, Landlord may enter upon the Site after ten (10) days' prior written notice to Tenant (except

in the case of an emergency, in which case no notice shall be required), perform such obligations on Tenant's behalf, put the Site in good order, condition, and repair, and Tenant shall promptly pay to Landlord a sum equal to one hundred ten percent (110%) of the cost thereof.

4.2 Landlord's Obligations. It is intended by the Parties hereto that Landlord have no obligation, in any manner whatsoever, to repair and maintain the Site, or the equipment therein, all of which obligations are intended to be that of the Tenant. It is the intention of the Parties that the terms of this Rental Agreement govern the respective obligations of the Parties as to maintenance and repair of the Site.

4.3 Removal and Restoration.

(a) **Removal**. As of or prior to the Expiration Date, Tenant shall, at its sole expense, remove all of its property (i.e., equipment, materials, supplies, fencing, vehicles, etc.) from the Site. If Tenant fails to do so, then Landlord may retain or dispose of such property with no obligation or liability to Tenant.

(b) **Surrender; Restoration**. Tenant shall surrender the Site by the Expiration Date, or any earlier termination date, with all of its surfaces, including curb/gutter/sidewalk, thereof broom clean and free of debris, and in good condition and state of repair, except for any ordinary wear and tear. "Ordinary wear and tear" shall not include any damage or deterioration that would have been prevented by good maintenance practice. Tenant shall repair any damage occasioned by the delivery, storage and/or shipping of any equipment, materials, and/or supplies required for the Agreed Use. The failure by Tenant to timely vacate the Site pursuant to this Section 4.3(b) without the express written consent of Landlord shall constitute a holdover.

ARTICLE 5. INSURANCE; INDEMNITY.

5.1 Obligation to Maintain Insurance. During the Term, Tenant shall procure and maintain insurance against claims for injuries to persons or damages to property which may arise from or in connection with the Tenant's operation and use of the Site. The cost of all insurance required by the Rental Agreement shall be borne by the Tenant. The extent and coverage levels of the insurance at a minimum shall include the following:

(a) **Liability Insurance.** Tenant shall obtain and keep in force a Commercial General Liability policy of insurance protecting Tenant and Landlord as an additional insured against claims for bodily injury, personal injury, and property damage based upon or arising out of the ownership, use, occupancy, or maintenance of the Site and all areas appurtenant thereto. Such insurance shall be on an occurrence basis providing single limit coverage in an amount not less than One Million Dollars ($1,000,000) per occurrence with an annual aggregate of not less than Two Million Dollars ($2,000,000). Tenant shall add Landlord as an additional insured by means of an endorsement at least as broad as the Insurance Service Organization's "Additional Insured-Managers or Landlords of Property" Endorsement. The policy shall not contain any intra-insured exclusions as between insured persons or organizations and shall include coverage for liability assumed under this Rental Agreement as an "insured contract" for the performance of Tenant's indemnity obligations under this Rental Agreement. The limits of said insurance shall not, however, limit the liability of Tenant nor relieve Tenant of any obligation hereunder. Tenant shall provide an endorsement on its liability policy(ies) which provides that its insurance shall be primary to and not contributory with any similar insurance carried by Landlord, whose insurance shall be considered excess insurance only.

(b) **Auto Liability**. Tenant shall obtain and maintain automobile liability insurance with minimum combined single limit of Two Million Dollars ($2,000,000).

(c) **Workers' Compensation Insurance**. Tenant shall obtain and maintain Workers' Compensation Insurance with no less than One Million Dollars ($1,000,000) per accident for bodily injury or disease. Such policy shall include a 'Waiver of Subrogation' endorsement. Tenant shall provide Landlord with a copy of such endorsement along with the certificate of insurance or copy of the policy required by Section 5.5.

5.2 Insurance Policies. Insurance required herein shall be by companies maintaining during the policy term a "General Policyholders Rating" of at least A-, VII, as set forth in the most current issue of "Best's Insurance Guide," or such other rating as may be required by a Lender. Tenant shall not do or permit to be done anything which invalidates the required insurance policies. Tenant shall, prior to the Commencement Date, deliver to Landlord certified copies of policies of such insurance or certificates with copies of the required endorsements evidencing the existence and amounts of the required insurance. No such policy shall be cancelable or subject to modification except after thirty (30) days' prior written notice to Landlord. Tenant shall, at least ten (10) days prior to the expiration of such policies, furnish Landlord with evidence of renewals or "insurance binders" evidencing renewal thereof, or Landlord may increase the liability insurance coverage and charge the cost thereof to Tenant, which amount shall be payable by Tenant to Landlord upon demand. Such policies shall be for a term of at least one (1) year. If either Party shall fail to procure and maintain the insurance required to be carried by it, the other Party may, but shall not be required to, procure and maintain the same.

5.3 Waiver of Subrogation. To the extent permitted by law, Tenant hereby releases Landlord and its elected and appointed officials, employees, and volunteers, and others working on Landlord's behalf, from any and all liability or responsibility to Tenant or anyone claiming through or under Tenant by way of subrogation or otherwise, for any loss or damage to property caused by fire or any other casualty, even if such fire or other casualty shall have been caused by the fault or negligence of Landlord its elected or appointed officials, employees, or volunteers, or others working on Landlord's behalf. This provision shall be applicable and in full force and effect only with respect to loss of damage occurring during the time of Tenant's occupancy or use, and Tenant's policies of insurance shall contain a clause or endorsement to the effect that such release shall not adversely affect or impair such policies or prejudice the right of Tenant to recover thereunder. Tenant agrees that its policies will include such a clause or endorsement.

5.4 Indemnity. Except for Landlord's gross negligence or willful misconduct, Tenant agrees to indemnify, defend (upon request by Landlord), and save harmless Landlord, its elected and appointed officials, officers, agents, and employees from and against any liability, expense, including defense costs and legal fees, and claims for damages of any nature whatsoever, including, but not limited to, bodily injury, death, personal injury, or property damage arising from or connected with Tenant's operations, or its services, acts, and/or omissions under this Rental Agreement, including any workers' compensation suit, liability, or expense, arising from or connected with the services performed by or on behalf of Tenant by any person pursuant to this Rental Agreement.

5.5 Failure to Provide Insurance. Tenant acknowledges that any failure on its part to obtain or maintain the insurance required herein will expose Landlord to risks and potentially cause Landlord to incur costs not contemplated by this Rental Agreement, the extent of which will be extremely difficult to ascertain. Therefore, within ten (10) calendar days of the Effective Date, Tenant

shall provide Landlord evidence of the insurance required herein. Following this period, if there are any months or portions thereof for which Tenant must reconfirm such evidence of the insurance required herein, and Tenant, after a ten (10) day notice from Landlord to provide such evidence, has failed to provide evidence that it maintains the required insurance, then the Rent shall be automatically increased, without any further requirement for notice to Tenant, by an amount equal to ten percent (10%) of the Rent. The Parties agree that such increase in the Rent represents fair and reasonable compensation for the additional risk/costs that Landlord will incur by reason of Tenant's failure to maintain the required insurance. Such increase in the Rent shall in no event constitute a waiver of Tenant's Default or Breach with respect to the failure to maintain such insurance, prevent the exercise of any of the other rights and remedies granted under this Rental Agreement, nor relieve Tenant of its obligation to maintain the insurance specified in this Rental Agreement.

ARTICLE 6. UTILITIES AND SERVICES; POSSESSORY INTEREST TAXES.

6.1 Tenant shall pay for all water, gas, heat, light, power, telephone, trash disposal, and other utilities and services supplied to the Site, together with any taxes thereon. If any such services are not separately metered or billed to Tenant, Tenant shall pay a reasonable proportion, to be determined by Landlord, of all charges jointly metered or billed. There shall be no abatement of rent and Landlord shall not be liable in any respect whatsoever for the inadequacy, stoppage, interruption, or discontinuance of any utility or service due to riot, strike, labor dispute, breakdown, accident, repair, or other cause beyond Landlord's reasonable control or in reasonable cooperation with governmental requests or directions.

6.2 Tenant acknowledges that this Rental Agreement creates a possessory interest which is subject to property taxation, and Tenant agrees to pay all possessory interest taxes billed by the County Assessor to Tenant.

ARTICLE 7. ASSIGNMENT AND SUBLETTING.

7.1 No Assignment. Tenant shall not voluntarily or by operation of law assign, transfer, mortgage, or encumber or sublet all or any part of Tenant's interest in this Rental Agreement or in the Site.

ARTICLE 8. DEFAULT; BREACH; REMEDIES.

8.1 Default; Breach. A "Default" is defined as a failure by Tenant to comply with or perform any of the terms, covenants, conditions, or Rules and Regulations under this Rental Agreement. A "Breach" is defined as the occurrence of one or more of the following Defaults, and the failure of Tenant to cure such Default within any applicable grace period:

(a) The abandonment of the Site; or the vacating of the Site without providing a commercially reasonable level of security, or where the coverage of the property insurance described in Article 5 is jeopardized as a result thereof, or without providing reasonable assurances to minimize potential vandalism.

(b) The failure of Tenant to make any payment of the Rent required to be made by Tenant hereunder, whether to Landlord or to a third party, when due, to provide reasonable evidence of insurance or surety bond, or to fulfill any obligation under this Rental Agreement that endangers or threatens life or property, where such failure continues for a period of three (3) business days following

written notice to Tenant. THE ACCEPTANCE BY LANDLORD OF A PARTIAL PAYMENT OF RENT SHALL NOT CONSTITUTE A WAIVER OF ANY OF LANDLORD'S RIGHTS, INCLUDING LANDLORD'S RIGHT TO RECOVER POSSESSION OF THE SITE.

(c) The failure of Tenant to allow Landlord and/or its agents access to the Site or the commission of waste, act or acts constituting public or private nuisance, and/or an illegal activity on the Site by Tenant, where such actions continue for a period of three (3) business days following written notice to Tenant. If Tenant commits waste, a nuisance or an illegal activity a second time, then Landlord may elect to treat such conduct as a non-curable Breach rather than a Default.

(d) The failure by Tenant to provide: i) reasonable written evidence of compliance with applicable laws; ii) an unauthorized assignment or subletting; iii) an Estoppel Certificate or financial statements; iv) a requested subordination; v) any document requested pursuant to this Rental Agreement vi) material safety data sheets; or vii) any other documentation or information that Landlord may reasonably require of Tenant under the terms of this Rental Agreement, where any such failure continues for a period of ten (10) days following written notice to Tenant.

(e) A Default by Tenant as to the terms, covenants, conditions or provisions of this Rental Agreement that is not otherwise covered by subsections (a), (b), (c) or (d) above, where such Default continues for a period of ten (10) days after delivery by Landlord of written notice of the default; provided; however, that if the nature of Tenant's Default is such that more than ten (10) days are reasonably required for its cure, then it shall not be deemed to be a Breach if Tenant commences such cure within said ten (10) day period and thereafter diligently prosecutes such cure to completion prior to the Expiration Date.

(f) The occurrence of any of the following events: i) the making of any general arrangement or assignment for the benefit of creditors; ii) becoming a "debtor" as defined in 11 U.S.C. § 101 or any successor statute thereto (unless, in the case of a petition filed against Tenant, the same is dismissed within sixty (60) days); iii) the appointment of a trustee or receiver to take possession of substantially all of Tenant's assets located at the Site or of Tenant's interest in this Rental Agreement, where possession is not restored to Tenant within thirty (30) days; or (iv) the attachment, execution, or other judicial seizure of substantially all of Tenant's assets located at the Site or of Tenant's interest in this Rental Agreement, where such seizure is not discharged within thirty (30) days; provided, however, in the event that any provision of this subparagraph is contrary to any applicable law, such provision shall be of no force or effect, and not affect the validity of the remaining provisions.

(g) The discovery that any financial statement of Tenant given to Landlord was materially false.

8.2 Remedies. If Tenant fails to perform any of its affirmative duties or obligations, within ten (10) days after written notice (or in case of an emergency, without notice), Landlord may, at its option, perform such duty or obligation on Tenant's behalf, including, but not limited to, the obtaining of reasonably required bonds, insurance policies, or governmental licenses, permits, or approvals. Tenant shall pay to Landlord an amount equal to the actual costs and expenses incurred by Landlord in such performance upon receipt of an invoice therefor. In the event of a Breach, Landlord may, with or without further notice or demand, and without limiting Landlord in the exercise of any right or remedy that Landlord may have by reason of such Breach:

(a) Terminate Tenant's right to possession of the Site by any lawful means, in which case this Rental Agreement shall terminate, and Tenant shall immediately surrender possession to Landlord;

(b) Continue the Rental Agreement and Tenant's right to possession and recover the Rent as it becomes due; or

(c) Pursue any other remedy now or hereafter available under the laws of California.

The expiration or earlier termination of this Rental Agreement and/or the termination of Tenant's right to possession shall not relieve Tenant from liability under any defense or indemnity provisions of this Rental Agreement as to matters occurring or accruing during the term hereof or by reason of Tenant's occupancy of the Site.

8.3 Late Charges. Tenant hereby acknowledges that late payment by Tenant of the Rent will cause Landlord to incur costs not contemplated by this Rental Agreement, the exact amount of which will be extremely difficult to ascertain. Such costs include, but are not limited to, processing and accounting charges, and late charges that may be imposed upon Landlord by any Lender. Accordingly, if any Rent shall not be received by Landlord within five (5) days after such amount shall be due, then, without any requirement for notice to Tenant, Tenant shall immediately pay to Landlord a one-time late charge of Five Hundred Dollars ($500). The Parties hereby agree that such late charge represents a fair and reasonable estimate of the costs Landlord will incur by reason of such late payment. Acceptance of such late charge by Landlord shall in no event constitute a waiver of Tenant's Default or Breach with respect to such overdue amount, nor prevent the exercise of any of the other rights and remedies granted under this Rental Agreement.

8.4 Interest. Any monetary payment due Landlord hereunder, other than late charges, not received by Landlord, when due shall bear interest from the date it was due. The interest (the "Interest") charged shall be computed daily at an annualized rate of three percent (3%). The Interest is payable in addition to the potential late charge provided for in Section 8.3.

8.5 Breach by Landlord. Landlord shall not be deemed in breach of this Rental Agreement unless Landlord fails within a reasonable time to perform an obligation required to be performed by Landlord. For purposes of this Section, a reasonable time shall in no event be less than thirty (30) days after receipt by Landlord, and any Lender whose name and address shall have been furnished Tenant in writing for such purpose, of written notice specifying wherein such obligation of Landlord has not been performed; provided, however, that if the nature of Landlord's obligation is such that more than thirty (30) days are reasonably required for its performance, then Landlord shall not be in breach if performance is commenced within such thirty (30) day period and thereafter diligently pursued to completion.

ARTICLE 9. SEVERABILITY.

The invalidity of any provision of this Rental Agreement, as determined by a court of competent jurisdiction, shall in no way affect the validity of any other provision of this Rental Agreement.

ARTICLE 10. DAYS.

Unless otherwise specifically indicated to the contrary, the word "days" as used in this Rental Agreement shall mean and refer to calendar days.

ARTICLE 11. TIME OF ESSENCE.

Time is of the essence with respect to the performance of all obligations to be performed or observed by the Parties under this Rental Agreement.

ARTICLE 12. NO PRIOR OR OTHER AGREEMENTS.

This Rental Agreement contains all agreements between the Parties with respect to any matter mentioned herein, and no other prior or contemporaneous agreement or understanding shall be effective.

ARTICLE 13. NOTICES.

13.1 Notice Requirements. Any notice, demand, request, consent, approval, or communication that either Party desires or is required to give to the other Party or any other person shall be in writing and either served by certified mail or by reputable overnight delivery service (and the phone numbers and email addresses provided below are for convenience, and not for purposes of legal notice). Any notice, demand, request, consent, approval, or communication that either Party desires or is required to give to the other Party shall be addressed to the other party at the address set forth below. Either Party may change its address by notifying the other Party of the change of address. Notice shall be deemed communicated two (2) business working days from the time of mailing or delivery to the applicable delivery service for next business day delivery.

Landlord:

City of Banning
99 East Ramsey Street
Banning, California 92220-0998
Attention: Douglas Schulze, City Manager
Tel. (951) 922-4860
Email: dshulze@banningca.gov

Tenant:

Absolute Kids nonprofit sponsor circus royal spectacular
4382 Tequesquite Ave. Riverside, CA 92501
Riverside, California 92501
Attention: Andrea T. Caro
Tel.: (323) 382-8541
Email: chamita296@yahoo.com

ARTICLE 14. WAIVERS.

14.1 No waiver by a Party of the Default or Breach of any term, covenant or condition hereof by the other Party, shall be deemed a waiver of any other term, covenant or condition hereof, or of any subsequent Default or Breach of the same or of any other term, covenant or condition hereof.

Landlord's consent to, or approval of, any act shall not be deemed to render unnecessary the obtaining of Landlord's consent to, or approval of, any subsequent or similar act by Tenant, or be construed as the basis of an estoppel to enforce the provision or provisions of this Rental Agreement requiring such consent.

14.2 The acceptance of the Rent by Landlord shall not be a waiver of any Default or Breach by Tenant. Any payment by Tenant may be accepted by Landlord on account of moneys or damages due Landlord, notwithstanding any qualifying statements or conditions made by Tenant in connection therewith, which such statements and/or conditions shall be of no force or effect whatsoever unless specifically agreed to in writing by Landlord at or before the time of deposit of such payment.

14.3 THE PARTIES AGREE THAT THE TERMS OF THIS RENTAL AGREEMENT SHALL GOVERN WITH REGARD TO ALL MATTERS RELATED THERETO AND HEREBY WAIVE THE PROVISIONS OF ANY PRESENT OR FUTURE STATUTE TO THE EXTENT THAT SUCH STATUTE IS INCONSISTENT WITH THIS RENTAL AGREEMENT.

ARTICLE 15. NO RIGHT TO HOLDOVER.

Tenant has no right to retain possession of the Site or any part thereof beyond the expiration or termination of this Rental Agreement. Nothing contained in this Rental Agreement shall be construed as consent by Landlord to any holding over by Tenant.

ARTICLE 16. CUMULATIVE REMEDIES.

No remedy or election under this Agreement shall be deemed exclusive but shall, wherever possible, be cumulative with all other remedies at law or in equity.

ARTICLE 17. COVENANTS AND CONDITIONS; CONSTRUCTION OF AGREEMENT.

All provisions of this Rental Agreement to be observed or performed by the Parties hereto are both covenants and conditions. In construing this Rental Agreement, all headings and titles are for the convenience of the Parties only and shall not be considered a part of this Rental Agreement. Whenever required by the context, the singular shall include the plural and vice versa. This Rental Agreement shall not be construed as if prepared by one of the Parties, but rather according to its fair meaning as a whole, as if both Parties had prepared it.

ARTICLE 18. ATTORNEYS' FEES.

If any Party brings an action or proceeding involving the Site whether founded in tort, contract, or equity, or to declare rights under this Rental Agreement, the Prevailing Party (as hereafter defined) in any such proceeding, action, or appeal thereon, shall be entitled to reasonable attorneys' fees. Such fees may be awarded in the same suit or recovered in a separate suit, whether or not such action or proceeding is pursued to decision or judgment. The term "Prevailing Party" shall include, without limitation, a Party who substantially obtains or defeats the relief sought, as the case may be, whether by compromise, settlement, judgment, or the abandonment by the other Party of its claim or defense. The attorneys' fees award shall not be computed in accordance with any court fee schedule, but shall be such as to fully reimburse all attorneys' fees reasonably incurred. In addition, Landlord shall be entitled to attorneys' fees, costs, and expenses incurred in the preparation and service of notices of Default and consultations in connection therewith, whether or not a legal action is subsequently

commenced in connection with such Default or resulting Breach (Two Hundred Dollars ($200) is a reasonable minimum per occurrence for such services and consultation).

ARTICLE 19. LANDLORD'S ACCESS; SHOWING SITE; REPAIRS.

Landlord and Landlord's agents shall have the right to enter the Site at any time, in the case of an emergency, and otherwise at reasonable times after reasonable prior notice for the purpose of showing the same to prospective purchasers, lenders, or tenants, as long as there is no material adverse effect on Tenant's use of the Site. All such activities shall be without abatement of rent or liability to Tenant.

ARTICLE 20. CONSENTS.

All requests for consent shall be in writing. Except as otherwise provided herein, wherever in this Rental Agreement the consent of a Party is required to an act by or for the other Party, such consent shall not be unreasonably withheld or delayed. Landlord's consent to any act, assignment, or subletting shall not constitute an acknowledgment that no Default or Breach by Tenant of this Rental Agreement exists, nor shall such consent be deemed a waiver of any then-existing Default or Breach, except as may be otherwise specifically stated in writing by Landlord at the time of such consent. The failure to specify herein any particular condition to Landlord's consent shall not preclude the imposition by Landlord at the time of consent of such further or other conditions as are then reasonable with reference to the particular matter for which consent is being given. In the event that either Party disagrees with any determination made by the other hereunder and reasonably requests the reasons for such determination, the determining Party shall furnish its reasons in writing and in reasonable detail within ten (10) days following such request.

ARTICLE 21. QUIET POSSESSION.

Subject to payment by Tenant of the Rent and performance of all of the covenants, conditions, and provisions on Tenant's part to be observed and performed under this Rental Agreement, Tenant shall have quiet possession and quiet enjoyment of the Site during the Term.

ARTICLE 22. SECURITY MEASURES.

Tenant hereby acknowledges that the Rent payable to Landlord hereunder does not include the cost of guard service or other security measures, and that Landlord shall have no obligation whatsoever to provide same. Tenant assumes all responsibility for the protection of the Site, Tenant, its agents and invitees and their property from the acts of third parties.

ARTICLE 23. MISCELLANEOUS

(a) **Severability**. Each and every section of this Rental Agreement shall be construed as a separate and independent covenants and agreements. If any term or provision of this Rental Agreement or the application thereof to certain circumstances shall be declared invalid or unenforceable, the remainder of this Rental Agreement, or the application of such term or provision to circumstances other than those to which it is declared invalid or unenforceable, shall not be affected thereby, and each term and provision of this Rental Agreement shall be valid and enforceable to the fullest extent permitted by law.

(b) **Entire Agreement**. This Rental Agreement constitutes the entire agreement between the Parties. This Rental Agreement supersedes all prior negotiation, discussions, and

agreements between the Parties concerning the subject matters covered herein. The Parties intend this Rental Agreement to be the final expression of their agreement with respect to the subjects covered herein and a complete and exclusive statement of such terms.

(c) **Amendment or Modification**. This Rental Agreement may only be modified or amended by written instrument duly approved and executed by each of the Parties hereto. Any such modification or amendment shall be valid, binding, and legally enforceable only if in written form and executed by each of the Parties hereto, following all necessary approvals and authorizations for such execution.

(d) **Governing Law; Choice of Venue**. This Rental Agreement shall be governed by the laws of the State of California. Any legal action arising from or related to this Rental Agreement shall be brought in the Superior Court of the State of California in and for the County of Riverside.

(e) **Non-Waiver**. Failure of either Party to enforce any provision of this Rental Agreement shall not constitute a waiver of the right to compel enforcement of the same provision or any remaining provisions of this Rental Agreement.

(f) **Representations of Persons Executing Agreement**. The persons executing this Rental Agreement warrant that they are duly authorized to execute this Rental Agreement on behalf of and bind the Parties each of which purport to represent.

(g) **Execution in Counterparts**. This Rental Agreement may be executed in one (1) or more counterparts, each of which will constitute an original.

(i) **Conflict**. Any conflict between the printed provisions of this Rental Agreement and the typewritten or handwritten provisions shall be controlled by the typewritten or handwritten provisions.

(j) **Offer**. Preparation of this Rental Agreement by either Party or their agent and submission of same to the other Party shall not be deemed an offer to Rental Agreement to the other Party. This Rental Agreement is not intended to be binding until executed and delivered by all Parties hereto.

(k) **No Relocation Benefits; No Payments for Loss of Goodwill; Waiver**. The Parties desire to confirm that Tenant will begin the tenancy and rent the Site after the date City acquired the Site and that Tenant's occupancy of the Site is, will be, and shall remain as a "post-acquisition" occupant pursuant to applicable laws and regulations, including without limitation, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, 42 U.S.C. 4601–4655, and the implementing regulations thereto set forth in 49 CFR Part 24, (ii) the California Relocation Assistance Act, Government Code Section 7260, *et seq.* and the implementing regulations thereto set forth in Title 25, Section 6000, *et seq.* of the California Code of Regulations, and (iii) any other benefits, or compensation for moving and for property interests (including, without limitation, goodwill and furnishings, fixtures and equipment, and moving expenses) (together, "Relocation Law"). Tenant agrees and acknowledges that, without regard to the time or circumstances associated with the cessation of the Term or the use of the Site by Tenant, Tenant shall have no right to relocation assistance or benefits arising from the dispossession of the Tenant or such person or persons regardless of the circumstances thereof (including, without limitation, with respect to any improvements made to the Site) pursuant to the relocation law or other review. Tenant waives any rights to relocation benefits

and/or relocation advisory assistance in connection with the use of the Site or the cessation of use of the Site. The provisions of this Section are a material part of this Rental Agreement and, but for such provisions, Landlord would not have entered into this Rental Agreement. Tenant further agrees that, without regard to whether the possession of Tenant under this Rental Agreement is terminated at any time hereunder, Tenant shall not be entitled to receive any compensation for loss of goodwill; Tenant waives any rights to such remuneration.

LANDLORD AND TENANT HAVE CAREFULLY READ AND REVIEWED THIS RENTAL AGREEMENT AND EACH TERM AND PROVISION CONTAINED HEREIN, AND BY THE EXECUTION OF THIS RENTAL AGREEMENT SHOW THEIR INFORMED AND VOLUNTARY CONSENT THERETO. THE PARTIES HEREBY AGREE THAT, AT THE TIME THIS RENTAL AGREEMENT IS EXECUTED, THE TERMS OF THIS RENTAL AGREEMENT ARE COMMERCIALLY REASONABLE AND EFFECTUATE THE INTENT AND PURPOSE OF LANDLORD AND TENANT WITH RESPECT TO THE SITE.

[Execution on following page]

IN WITNESS WHEREOF, the Parties hereto have executed this Rental Agreement as of the Commencement Date.

"LANDLORD":

CITY OF BANNING,
a California municipal corporation

By:_____
Douglas Schulze, City Manager

ATTEST:

_____
Caroline Patton, Deputy City Clerk

APPROVED AS TO FORM:

_____
John Pinkney, City Attorney

"TENANT":

ORLANDO COBOS,

By:_____
Orlando Cobos

EXHIBIT "A"
SITE MAP

(Attached.)

EXHIBIT "B"
TUP

(Attached.)

CITY OF BANNING TRANSMITTAL

PARKS AND RECREATION DEPARTMENT
789 N. San Gorgonio Avenue, P.O. Box 998, Banning, CA 92220 / Phone # (951) 922-3242
Email: sfoster@banningca.gov

Special Event Permit

TO:

BUILDING DEPARTMENT	**X**	**POLICE DEPARTMENT**	**X**
PUBLIC WORKS DEPT.	**X**	**PARKS AND RECREATION**	**X**
FIRE DEPARTMENT	**X**	**RISK MANAGEMENT**	**X**
PLANNING DIRECTOR	**X**	**ELECTRIC DEPARTMENT**	**X**
ASSOCIATE PLANNER	**X**	**STREETS**	**X**

DATE TRANSMITTED: 02/06/20245 DUE DATE: 02/28/2025

SEP #: 25-02 **Cirque California Dreams 90 Minutes Acrobat Show**

APPLICANT: **Absolute Kids Non-profit Sponsor Circus Royal Spectacular**

RECREATION MANAGER: Scott Foster

ADDRESS / APN: 150 E. Ramsey Street, Banning CA 92220

EVENT DATE: March 13 – 24, 2025

COMMENTS REQUIRED: ***Please review the attached application and provide your comments and / or conditions in the space below. Please initial your box as soon as you have completed your review. Please return to the Parks and Recreation Department by Due Date. Thank you.***

APPLICATION FOR

SPECIAL EVENT PERMIT

CITY OF BANNING
Parks & Recreation Dept.
P.O. Box 998
789 N. San Gorgonio Avenue
Banning, CA 92220
(951) 922-3242
recreation@banningca.gov

Banning Parks & Recreation

Instructions: Type or print using black ink only. ***Incomplete applications will be returned.*** Applications mut be turned in at least two (2) weeks prior to the event date. If you have any questions, contact the Banning Parks & Recreation Department at 951-922-3242.

Event Organizer Information

Event's Sponsor/Organization: Absolute kids nonprofit sponsor circus royal spectacular

Organization's Non-Profit Tax Identification Number (if applicable): 86-2314514

Organization's Address: 4382 Tequesquite Ave. Riverside CA. 92501

Contact Person: Orlando cobos founder Phone Number: (951) 732-1115

Contact Person's Email Address: chamita296@yahoo.com

Person in charge day of event (on site): Andrea caro

Public Information Phone Number: (323) 382-8541

Event Information

Type of Event/Event Title: Cirque California Dreams 90 minutes acrobat show.

(*Examples: block party, concert, parade, carnival*)

Location of Event (street address): _____

Date(s) of Event: March 13-24 2025

Hours of Event:

Set-Up	8:00pm	to	8:00pm
Event	3:30pm	to	9:00pm
Clean-Up	8:00am	to	8:00pm

Estimated Attendance (including spectators): 150-200 Estimated Participants: _____

Is the event open to the public? (●) Yes ( ) No

Will admission be charged? (●) Yes ( ) No Charge: $ $10-30

Will participants be charged? ( ) Yes (●) No Charge: $ _____

Will there be amplified sound? (●) Yes ( ) No ( ) Live Music (●) Recorded Music

Will food be served? (●) Yes ( ) No (●) Sold ( ) Free

Riverside County Health Department Permit must be obtained as required by law.

Will alcohol be served? ( ) Yes (●) No ( ) Sold (●) Free

Alcoholic Beverage Control (ABC) Permit must be obtained as required by State Law

Will Vendors be at the event? (●) Yes ( ) No How Many? 11

Vendors require a day business license from the City to sell items.

City of Banning
Application for SPECIAL EVENT PERMIT Special Event Permit # _____

Description of Event: _____
90 minutes acrobatic show, jugglers, aerial artists, contortionists, clowns, hands balancing, hula hoop acrobat, etc.

What City Services, if any, do you require for this Special Event? _____
N/A

How does this Special Event benefit the residents of the City of Banning? _____
N/A

Pleas attach the following information to this application:

Certificate of Insurance: Events taking place on City-owned property or City-controlled property, including the public right-of-way require a $1,000,000 General Liability Insurance policy naming the City as additional insured by policy endorsement. The Carrier is required to provide notice of cancellation or reductions of coverage to the City.
Additional Information: Any other documents that will assist City Staff in understanding the scope of the Special Event.

The information provided in this application is true and complete to the best of knowledge. I, for myself and the above organization and all members thereof, agree to abide by the policies and procedures set forth by the City for this Special Event.

Signature of Applicant: _____ Date: 02/05/2025

City of Banning
Application for SPECIAL EVENT PERMIT Special Event Permit # _____

Event Site Plan

Applicant must provide a drawing or a detailed map of special event site to include;
1. the area to be used (including parking areas and event boundaries),
2. Entrances and exits
3. Set-up of structures (i.e., bleachers, fences, rides, inflatables, stages, etc.) for your event.

No bleachers, fences, rides, inflatables, stage, or animals.

City of Banning
Application for SPECIAL EVENT PERMIT Special Event Permit # _____

VENDOR LIST
(Use additional pages as needed)

Owner/Contact Person Name: Andrea caro Phone #: (3239) 382-85411
Business/Organization Name: Absolute kids
Business/Organization Address: 4382 Tequesquite Ave. Riverside CA. 92501
City Business Tax Certificate # _____

Owner/Contact Person Name: _____ Phone #: _____
Business/Organization Name: _____
Business/Organization Address: _____
City Business Tax Certificate # _____

Owner/Contact Person Name: _____ Phone #: _____
Business/Organization Name: _____
Business/Organization Address: _____
City Business Tax Certificate # _____

Owner/Contact Person Name: _____ Phone #: _____
Business/Organization Name: _____
Business/Organization Address: _____
City Business Tax Certificate # _____

Owner/Contact Person Name: _____ Phone #: _____
Business/Organization Name: _____
Business/Organization Address: _____
City Business Tax Certificate # _____

Owner/Contact Person Name: _____ Phone #: _____
Business/Organization Name: _____
Business/Organization Address: _____
City Business Tax Certificate # _____

CITY OF BANNING
STAFF REPORT

TO:	**CITY COUNCIL**
FROM:	**Robert Fisher, Acting City Manager**
PREPARED BY:	**Nate Smith, Deputy Director of Public Works/City Engineer** **Art Vela, Director of Public Works**
MEETING DATE:	**February 25, 2025**
SUBJECT:	**Consideration of Resolution 2025-27, Approving Final Tract Maps 37389-4, 37389-6, and 37389 and Release the Maps for Recordation; Authorize Staff to Sign the Subdivision Improvement Agreements and Final Tract Maps; Accept Faithful Performance and Labor Bonds for Public Improvements**

RECOMMENDATION:

Adopt Resolution 2025-27.

BACKGROUND:

Tentative Tract Map (TTM) No. 37389 was approved by City Council on June 22, 2021 as Resolution 2021-59. The proposed map implements the Atwell Specific Plan (also known as the Butterfield Specific Plan; "Specific Plan") originally approved by the City Council in March of 2012, with minor modifications approved in 2017 and provides for the development as allowed by the Specific Plan.

The applicant has processed the final 3 Final Maps for portions of the approved Tentative Tract Map, as permitted by the Subdivision Map Act. The first four final maps (FM 37389-1, FM 37389-2, FM 37389-3, & FM 37388-5 were approved by City Council on September 13, 2022 with Resolution 2022-122. The final three maps are ready for approval. Final Tract Map 37389-4 subdivides Planning Area 12 with 79 residential lots and 8 street and open space lots. Final Map 37389-6 subdivides Planning Area 9A with 84 residential lots and 8 street and open space lots. Final Map 37389 subdivides Planning Area 13 with 85 residential lots and 9 street and open space lots. All three maps are consistent with the approved Tentative Tract Map and Conditions of Approval.

Prior to bringing these maps to City Council for recordation, Tri-Pointe Homes was required to obtain an Streambed Alteration Agreement from the California Department of Fish and Wildlife (CDFW) for proposed changes and impacts to the existing Smith Creek in the area to be subdivided. These agreements have been obtained and provided to the City as required in the Conditions of Approval. Further, as these maps impact areas identified as a Zone A Floodplain by the Federal Emergency Management Agency (FEMA), the applicant was required to show that storm water flows can be mitigated to not cause flooding within the project or downstream. This is achieved by the construction of a large interim storm water detention basin north of the Southern California Edison powerline easement to reduce peak storm water flow through the project site. This was demonstrated with the preparation of a Conditional Letter of Map Approval (CLOMR) prepared and processed by the City of Banning and FEMA for the entirety of the project. The proposed interim basin was checked for consistency with the project CLOMR. Tri-Pointe Homes is continuing to work with the Riverside County Flood Control District (RCFCD), CDFW, and the Regional Water Quality Control Board (RWQCB) on the final design for the

Smith Creek Detention Facility that would be the replacement for the interim basin and maintained by RCFCD.

The applicant has been working with the church on Wilson Street regarding the impacts to their property due to the channelization of Smith Creek and residential lots to the north of the church property. A separate and future action regarding that parcel will be brought to Council for action. That action will include some transference of property between the entities, that have been agreed to by both parties. Those documents are currently in technical review with the Engineering Division.

When these maps are recorded, the subdivision of Atwell Phase 2A and Tentative Tract Map 37389 will be complete.

JUSTIFICATION:

Final Maps 37389-4, 37389-6, and 37389 were checked by the City's consulting surveyor and were found to be technically correct and conform to the requirements of the Subdivision Map Act. All Conditions of Approval required to be met prior to the recording have been met. The City Engineer has verified that the final maps are in substantial conformance with the approved TTM 37389.

FISCAL IMPACT:

There is no direct fiscal impact based on the approval of final maps. However, the recordation of the maps allows for the development of the project which will increase the assessed value of the properties resulting in an increase in property tax revenue. Additionally, the project will generate development impact fee revenues. The City's cost for processing the project will be offset by processing fees.

ALTERNATIVES:

Do not adopt Resolution 2025-27 and provide staff with additional direction.

BUDGETED?:

No

CONTRACT/AGREEMENT:

No

ATTACHMENTS:

1. Resolution 2025-27, FTM 37389-4, 37389-6, AND 37389.docx
2. Reso 2025-27 Exb. A TM 37389-4.pdf
3. Reso 2025-27 Exb. B SIA TM 37389-4.pdf
4. Reso 2025-27 Exb. C TM 37389-6.pdf
5. Reso 2025-27 Exb. D SIA TM 37389-6.pdf
6. Reso 2025-27 Exb. E TM 37389.pdf
7. Att 1 - Atwell Composite Site Plan 2024_0115.pdf
8. Att 2 - Reso 2021-059.pdf
9. Att 3 - TM 37389-4 Bonds.pdf
10. Att 4 - TM 37389-6 Bonds.pdf
11. Att 5 - TM 37389 Bonds.pdf
12. Reso 2025-27 Exb. F SIA TM 37389.pdf

RESOLUTION 2025-27

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BANNING, CALIFORNIA, APPROVING FINAL TRACT MAPS NOS. 37389-4, 37389-6, AND 37389; AUTHORIZING STAFF TO SIGN THE FINAL TRACT MAPS AND SUBDIVISION IMPROVEMENT AGREEMENTS; RELEASING THE FINAL MAPS FOR RECORDATION; AND ACCEPTING THE PERFORMANCE AND LABOR AND MATERIAL BONDS FOR PUBLIC IMPROVEMENTS

WHEREAS, Tentative Tract Map (TTM) No. 37388 was approved by City Council on January 10, 2023. The proposed map implements the Atwell Specific Plan (also known as the Butterfield Specific Plan; "Specific Plan") originally approved by the City Council in March of 2012, with minor modifications approved in 2017 and provides for the development as allowed by the Specific Plan; and

WHEREAS, Final Tract Map (TM) No. 37389-4, 37389-6, and 37389 will subdivide approximately 44.43 acres of vacant land into 248 numbered lots and 25 lettered lots for street and public utility and public park purposes; and is located south of Meadowline Way and west of Highland Home Road within the Specific Plan area; and

WHEREAS, the property owner has signed a Subdivision Agreement and has submitted bonds to assure that the required improvements including street, sewer, water, and storm drain improvements are constructed; and

WHEREAS, the TM 37389-4, 37389-6, and 37389 have been deemed technically correct and that they conform to the requirements of the Subdivision Map Act and the City Engineer has verified that TM 37389-4, TM 37389-6, and TM 37389 are in substantial conformance with the approved TTM 37389.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Banning as follows:

SECTION 1. The City Council approves TM 37389-4, TM 37389-6, and TM 37389, copies of which is hereby attached as Exhibit "A", Exhibit "C", and Exhibit "E" and made part of this Resolution.

SECTION 2. The City Council approves the execution of the Subdivision Improvement Agreement to be signed by the Mayor which is hereby attached as Exhibit "B", Exhibit "D" and Exhibit "F" and made part of this resolution.

SECTION 3. The City Council accepts the performance and labor and material bonds and authorize staff to sign the final maps

SECTION 4. The City Council directs the Administrative City Clerk to transmit TM 37389-4, TM 37389-6, and TM 37389 to the County Recorder of the County of Riverside for recordation.

SECTION 5. The City Clerk shall certify to the adoption of this resolution and shall cause a certified resolution to be filed in the book of original resolutions.

PASSED, APPROVED AND ADOPTED this 25th day of February, 2025.

Sheri Flynn, Mayor
City of Banning

ATTEST:

Caroline Patton, Administrative City Clerk
City of Banning

APPROVED AS TO FORM:

John Pinkney, City Attorney

CERTIFICATION:

I, Caroline Patton, Administrative City Clerk of the City of Banning, California, do hereby certify that the foregoing Resolution 2025-27, was duly adopted by the City Council of the City of Banning, California, at a regular meeting thereof held on the 25th day of February 2025 by the following vote, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

Caroline Patton, Administrative City Clerk
City of Banning, California

EXHIBIT A
Final Tract Map 37389-4

EXHIBIT B
Subdivision Improvement Agreement for Final Tract Map 37389-4

EXHIBIT C
Final Tract Map 37389-6

EXHIBIT D
Subdivision Improvement Agreement for Final Tract Map 37389-6

EXHIBIT E
Final Tract Map 37389

EXHIBIT F
Subdivision Improvement Agreement for Final Tract Map 37389

IN THE CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

TRACT NO. 37389-4

BEING A SUBDIVISION OF A PORTION OF REMAINDER LOT 2, OF TRACT NO. 37389-1 AS SHOWN BY MAP ON FILE IN BOOK 485 PAGES 68 THROUGH 75, INCLUSIVE, OF MAPS IN THE OFFICE OF THE COUNTY RECORDER OF THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, LYING WITHIN SECTION 1, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SAN BERNARDINO MERIDIAN.

DARYL J. CHRISTIAN, L.S. 8554 MDS CONSULTING DECEMBER, 2024

THIS SUBDIVISON CONTAINS

NUMBERED LOTS: 79
LETTERED LOTS: 8
GROSS AREA: 12.30 ACRES

RECORDER'S STATEMENT

FILED THIS _____ DAY OF_____ , 20 __
AT_____M. IN BOOK _____ OF MAPS,
AT PAGES _____ AT THE REQUEST OF THE CLERK OF THE CITY OF BANNING

NO. _____

FEE _____

PETER ALDANA, COUNTY ASSESSOR - CLERK - RECORDER

BY: _____ DEPUTY

SUBDIVISION GUARANTEE BY:
FIRST AMERICAN TITLE INSURANCE COMPANY

OWNER'S STATEMENT

WE HEREBY STATE THAT WE ARE THE OWNERS OF THE LAND INCLUDED WITHIN THE SUBDIVISION SHOWN HEREON, THAT WE ARE THE ONLY PERSONS WHOSE CONSENT IS NECESSARY TO PASS A CLEAR TITLE TO SAID LAND, THAT WE CONSENT TO THE MAKING AND RECORDING OF THIS SUBDIVISION AS SHOWN WITHIN THE DISTINCTIVE BORDER LINE.

THE REAL PROPERTY DESCRIBED BELOW IS DEDICATED AS AN EASEMENT FOR PUBLIC PURPOSES:

1. WE HEREBY DEDICATE TO THE CITY OF BANNING LOTS "A" THROUGH "F", INCLUSIVE, FOR STREET AND PUBLIC UTILITY PURPOSES.
2. WE HEREBY DEDICATE TO THE CITY OF BANNING A NON-EXCLUSIVE USE EASEMENT LYING ADJACENT TO LOTS "A" THROUGH "F", INCLUSIVE, AS SHOWN HEREON. THE DEDICATION IS FOR PUBLIC UTILITY PURPOSES.
3. WE HEREBY DEDICATE TO THE CITY OF BANNING THE 3.0 FOOT WIDE NON-EXCLUSIVE USE EASEMENTS LYING ADJACENT TO THE SIDE LINES OF LOTS 1-79, INCLUSIVE, AS SHOWN HEREON. THE DEDICATION IS FOR PUBLIC UTILITY PURPOSES.
4. WE HEREBY DEDICATE TO THE CITY OF BANNING A NON-EXCLUSIVE USE EASEMENT LYING WITHIN LOTS 27, 28 AND "H", AS SHOWN HEREON. THE DEDICATION IS FOR PUBLIC UTILITY PURPOSES.

WE ALSO HEREBY RESERVE FOR THE SOLE BENEFIT OF OURSELVES, OUR SUCCESSORS, ASSIGNEES AND LOT OWNERS WITHIN THIS TRACT MAP:

1. LOTS "G" AND "H" FOR OPEN SPACE, LANDSCAPING AND MAINTENANCE PURPOSES.
2. ACCESS AND DRAINAGE EASEMENT LYING WITHIN LOT 28, FOR THE BENEFIT OF LOT 27, AS SHOWN HEREON.

TRI POINTE HOMES IE-SD, INC., A CALIFORNIA CORPORATION, FORMERLY KNOWN AS PARDEE HOMES, A CALIFORNIA CORPORATION

NAME: MICHAEL C. TAYLOR
TITLE: DIVISION PRESIDENT

NOTARY ACKNOWLEDGMENT

A NOTARY PUBLIC OR OTHER OFFICER COMPLETING THIS CERTIFICATE VERIFIES ONLY THE IDENTITY OF THE INDIVIDUAL WHO SIGNED THE DOCUMENT TO WHICH THIS CERTIFICATE IS ATTACHED, AND NOT THE TRUTHFULNESS, ACCURACY, OR VALIDITY OF THAT DOCUMENT.

STATE OF California)
) SS
COUNTY OF Riverside)

ON 1.29 2025 BEFORE ME, Edelmira Gonzales A NOTARY PUBLIC,

PERSONALLY APPEARED Michael C. Taylor
WHO PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE, TO BE THE PERSON(S) WHOSE NAME(S) IS/ARE SUBSCRIBED TO THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE/SHE/THEY EXECUTED THE SAME IN HIS/HER/THEIR AUTHORIZED CAPACITY(IES), AND THAT BY HIS/HER/THEIR SIGNATURE(S) ON THE INSTRUMENT THE PERSON(S), OR THE ENTITY UPON BEHALF OF WHICH THE PERSON(S) ACTED, EXECUTED THE INSTRUMENT.

I CERTIFY UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA THAT THE FOREGOING PARAGRAPH IS TRUE AND CORRECT.

WITNESS MY HAND

SIGNATURE

Edelmira Gonzales
PRINT NAME

MY PRINCIPAL PLACE OF BUSINESS IS IN Riverside COUNTY

MY COMMISSION EXPIRES 10.22.27

My Commission# 2466323

TAX COLLECTOR'S CERTIFICATE

I HEREBY CERTIFY THAT ACCORDING TO THE RECORDS OF THIS OFFICE, AS OF THIS DATE, THERE ARE NO LIENS AGAINST THE PROPERTY SHOWN ON THE WITHIN MAP FOR UNPAID STATE, COUNTY, MUNICIPAL OR LOCAL TAXES OR SPECIAL ASSESSMENTS COLLECTED AS TAXES, EXCEPT TAXES OR SPECIAL ASSESSMENTS COLLECTED AS TAXES NOW A LIEN, BUT NOT YET PAYABLE, WHICH ARE ESTIMATED TO BE $ 200.00 .

DATED: JANUARY 29 , 2025.
MATTHEW JENNINGS, TREASURER-TAX COLLECTOR

BY: _____, DEPUTY

TAX BOND CERTIFICATE

I HEREBY CERTIFY THAT A BOND IN THE SUM OF $ 200.00 HAS BEEN EXECUTED AND FILED WITH THE BOARD OF SUPERVISORS OF THE COUNTY OF RIVERSIDE, CALIFORNIA, CONDITIONED UPON THE PAYMENT OF ALL TAXES, STATE, COUNTY, MUNICIPAL OR LOCAL, AND ALL SPECIAL ASSESSMENTS COLLECTED AS TAXES, WHICH AT THE TIME OF FILING OF THIS MAP WITH THE COUNTY RECORDER ARE A LIEN AGAINST SAID PROPERTY BUT NOT YET PAYABLE AND SAID BOND HAS BEEN DULY APPROVED BY SAID BOARD OF SUPERVISORS.

DATED: JANUARY 29 , 2025

CASH OR SURETY TAX BOND
MATTHEW JENNINGS, TREASURER-TAX COLLECTOR

BY: _____, DEPUTY

SIGNATURE OMISSIONS: SEE SHEET 2

EASEMENT NOTES: SEE SHEET 4

SURVEYOR'S STATEMENT

THIS MAP WAS PREPARED BY ME OR UNDER MY DIRECTION AND IS BASED UPON A FIELD SURVEY IN CONFORMANCE WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCE AT THE REQUEST OF TRI POINTE HOMES IN DECEMBER, 2020. I HEREBY STATE THAT ALL MONUMENTS ARE OF THE CHARACTER AND OCCUPY THE POSITIONS INDICATED, OR THAT THEY WILL BE SET IN ACCORDANCE WITH THE TERMS OF THE MONUMENT AGREEMENT FOR THE MAP AND THAT THE MONUMENTS ARE, OR WILL BE, SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED, AND THAT THIS FINAL MAP SUBSTANTIALLY CONFORMS TO THE CONDITIONALLY APPROVED TENTATIVE MAP. THIS SURVEY IS TRUE AND COMPLETE AS SHOWN.

DATE: 1-16 , 2025.

DARYL J. CHRISTIAN L.S. 8554

PROFESSIONAL LAND SURVEYOR — DARYL J. CHRISTIAN — LS 8554 — STATE OF CALIFORNIA

CITY ENGINEER'S STATEMENT

I HEREBY STATE THAT I HAVE EXAMINED THE WITHIN MAP, THAT THE SUBDIVISION SHOWN THEREON IS SUBSTANTIALLY THE SAME AS IT APPEARED ON THE TENTATIVE MAP OF TRACT NO. 37389 WHICH WAS APPROVED BY THE CITY OF BANNING CITY COUNCIL ON JUNE 22, 2021, AND ANY APPROVED ALTERATIONS THEREOF; THAT ALL PROVISIONS OF THE SUBDIVISION MAP ACT (DIVISION 2 OF TITLE 7 OF THE CALIFORNIA GOVERNMENT CODE) AND CHAPTER 22 OF THE BANNING MUNICIPAL CODE APPLICABLE AT THE TIME OF THE APPROVAL OF THE TENTATIVE MAP HAVE BEEN COMPLIED WITH.

DATE: _____ , 20___ .

NATHAN C. SMITH, RCE 74754
CITY ENGINEER, CITY OF BANNING

REGISTERED PROFESSIONAL ENGINEER — NATHAN C. SMITH — No. 74754 — CIVIL — STATE OF CALIFORNIA

CITY SURVEYOR'S STATEMENT

I HEREBY STATE THAT I HAVE EXAMINED THIS MAP AND THAT SAID MAP IS TECHNICALLY CORRECT.

DATE: 2-3 , 2025.

BY: ROBERT C. OLLERTON, PLS 7731
ENGINEERING RESOURCES OF SOUTHERN CALIFORNIA

PROFESSIONAL LAND SURVEYOR — ROBERT C. OLLERTON — 7731 — STATE OF CALIFORNIA

COMMUNITY DEVELOPMENT DIRECTOR'S STATEMENT

THE TENTATIVE MAP WAS APPROVED BY THE CITY COUNCIL ON JUNE 22, 2021.

DATED: _____

DAVID A. NEWELL
COMMUNITY DEVELOPMENT DIRECTOR

CITY ACCEPTANCE CERTIFICATE

I, _____ CITY CLERK AND EX-OFFICIO CLERK OF THE CITY COUNCIL OF THE CITY OF BANNING, STATE OF CALIFORNIA, DO HEREBY CERTIFY THAT THE SAID CITY COUNCIL AT ITS REGULAR MEETING HELD ON THE _____ DAY OF _____ , 20 ___ , DULY APPROVED THE WITHIN SUBDIVISION, AND ACCEPTED ON BEHALF OF THE PUBLIC AS OFFERED FOR DEDICATION:

1. LOTS "A" THROUGH "F", INCLUSIVE, FOR STREET AND PUBLIC UTILITY PURPOSES, SUBJECT TO IMPROVEMENT.
2. THE NON-EXCLUSIVE USE EASEMENTS LYING ADJACENT TO LOTS "A" THROUGH "F", INCLUSIVE, AS SHOWN HEREON, FOR PUBLIC UTILITY PURPOSES.
3. THE 3.0 FOOT WIDE NON-EXCLUSIVE USE EASEMENTS LYING ADJACENT TO THE SIDE LINES OF LOTS 1 THROUGH 79, INCLUSIVE, FOR PUBLIC UTILITY PURPOSES.
4. THE NON-EXCLUSIVE USE EASEMENT LYING WITHIN LOTS 27, 28 AND "H", AS SHOWN HEREON. THE DEDICATION IS FOR PUBLIC UTILITY PURPOSES.

DATED: _____

BY: _____
CITY CLERK

IN THE CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

TRACT NO. 37389-4

BEING A SUBDIVISION OF A PORTION OF REMAINDER LOT 2, OF TRACT NO. 37389-1 AS SHOWN BY MAP ON FILE IN BOOK 485 PAGES 68 THROUGH 75, INCLUSIVE, OF MAPS IN THE OFFICE OF THE COUNTY RECORDER OF THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, LYING WITHIN SECTION 1, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SAN BERNARDINO MERIDIAN.

DARYL J. CHRISTIAN, L.S. 8554 MDS CONSULTING DECEMBER, 2024

EASEMENT NOTES:

A EASEMENT FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES IN FAVOR OF SOUTHERN SIERRAS POWER COMPANY, RECORDED DECEMBER 1, 1919 IN BOOK , PAGE 40, OF PATENTS. LOCATION CANNOT BE DETERMINED FROM RECORD INFORMATION.

B RIGHT OF WAY FOR DITCHES AND CANALS IN FAVOR THE UNITED STATES OF AMERICA, RECORDED DECEMBER 1, 1919 IN BOOK 8, PAGE 40, OF PATENTS. LOCATION CANNOT BE DETERMINED FROM RECORD INFORMATION.

[1] INDICATES VARIABLE WIDTH NON-EXCLUSIVE EASEMENTS OVER LOTS "A" THROUGH "F", INCLUSIVE, FOR STREET AND PUBLIC UTILITY PURPOSES, DEDICATED TO THE CITY OF BANNING, AS SHOWN HEREON.

[2] INDICATES NON-EXCLUSIVE USE EASEMENTS, LYING ADJACENT TO LOTS "A" THROUGH "F", INCLUSIVE, DEDICATED TO THE CITY OF BANNING FOR PUBLIC UTILITY PURPOSES, AS SHOWN HEREON.

[3] INDICATES 3.0 FOOT WIDE NON-EXCLUSIVE USE EASEMENTS, LYING ADJACENT TO THE SIDE LINES OF LOTS 1 THROUGH 79, INCLUSIVE, DEDICATED TO THE CITY OF BANNING FOR PUBLIC UTILITY PURPOSES, AS SHOWN HEREON.

[4] INDICATES A NON-EXCLUSIVE USE EASEMENT, LYING WITHIN LOTS 27, 28 AND "H", DEDICATED TO THE CITY OF BANNING FOR PUBLIC UTILITY PURPOSES, AS SHOWN HEREON.

[5] INDICATES PRIVATE ACCESS AND DRAINAGE EASEMENT LYING WITHIN LOT 28, FOR THE BENEFIT OF LOT 27, AS SHOWN HEREON.

SIGNATURE OMISSIONS:

PURSUANT TO SECTION 66436(a)(3) OF THE SUBDIVISION MAP ACT, THE SIGNATURES OF THE FOLLOWING OWNERS OF EASEMENTS AND/OR OTHER INTERESTS HAVE BEEN OMITTED, AS THEIR INTERESTS CANNOT RIPEN INTO FEE.

SOUTHERN SIERRAS POWER COMPANY, HOLDER OF AN EASEMENT FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES, RECORDED DECEMBER 1, 1919 IN BOOK 8, PAGE 40 OF PATENTS.

UNITED STATES OF AMERICA, HOLDER OF A RIGHT OF WAY FOR DITCHES AND CANALS AS RESERVED IN THE PATENT RECORDED DECEMBER 1, 1919 IN BOOK 8, PAGE 40 OF PATENTS.

SOILS REPORT:

PURSUANT TO SECTION 66490 OF THE SUBDIVISION MAP ACT, A PRELIMINARY SOILS REPORT, PREPARED BY GEOCON WEST, INC., PROJECT NO. T2305-22-13, DATED JANUARY 25, 2021, IS ON FILE WITH THE CITY OF BANNING, ENGINEERING DEPARTMENT.

VICINITY MAP

NOT TO SCALE

BASIS OF BEARINGS AND COORDINATES NOTE

THE BASIS OF BEARINGS AND COORDINATES FOR THIS SURVEY IS THE CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 6, (POSITIONS PER NATIONAL GEODETIC SURVEY, NAD 83, EPOCH 1995.5) BASED ON CONTROL STATIONS "TRAK" AND "MATH" AS SHOWN HEREON. ALL DISTANCES ARE GROUND DISTANCES, UNLESS OTHERWISE NOTED. GRID DISTANCES MAY BE OBTAINED BY MULTIPLYING GROUND DISTANCES BY AN AVERAGE COMBINATION FACTOR OF 0.99988764.

I:\89408\MAPPING\TR 37389-4 MAP SHTS 1-10-2025

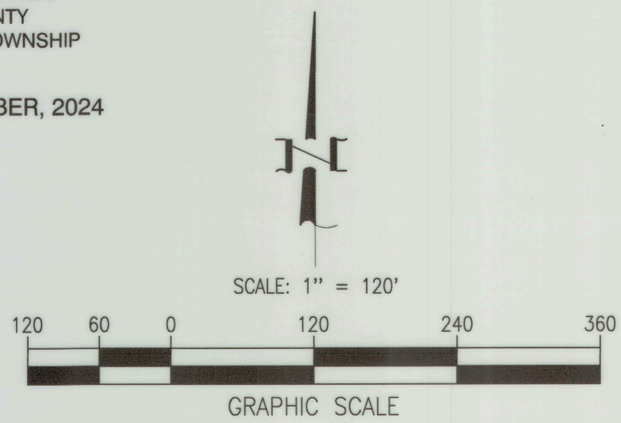
IN THE CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

TRACT NO. 37389-4

BEING A SUBDIVISION OF A PORTION OF REMAINDER LOT 2, OF TRACT NO. 37389-1 AS SHOWN BY MAP ON FILE IN BOOK 485 PAGES 68 THROUGH 75, INCLUSIVE, OF MAPS IN THE OFFICE OF THE COUNTY RECORDER OF THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, LYING WITHIN SECTION 1, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SAN BERNARDINO MERIDIAN.

DARYL J. CHRISTIAN, L.S. 8554 MDS CONSULTING DECEMBER, 2024

BOUNDARY SURVEY



SURVEYOR'S NOTES

● — INDICATES FOUND 1" I.P., L.S. 8554, FLUSH, TO BE SET PER TRACT NO. 37389-1, M.B. 485/68-75, OR TRACT NO. 37389-5, M.B. 485/95-103, UNLESS OTHERWISE NOTED.

◉ — INDICATES FOUND SPIKE & WASHER, L.S. 8554, FLUSH, PER TRACT NO. 37389-1, M.B. 485/68-75, UNLESS OTHERWISE NOTED.

○ — INDICATES SET 1" IRON PIPE TAGGED L.S. 8554, FLUSH; AT ALL TRACT CORNERS AND ANGLE POINTS IN TRACT BOUNDARY, UNLESS OTHERWISE NOTED.

1" IRON PIPE, TAGGED L.S. 8554 FLUSH IN DIRT OR SPIKE & WASHER, STAMPED L.S. 8554 FLUSH IN ASPHALT, OR LEAD, TACK AND TAG, L.S. 8554, FLUSH IN CONCRETE OR TOP OF WALL, TO BE SET AT ALL REAR LOT CORNERS, CENTERLINE INTERSECTIONS, AND POINTS OF CONTROL, UNLESS OTHERWISE NOTED.

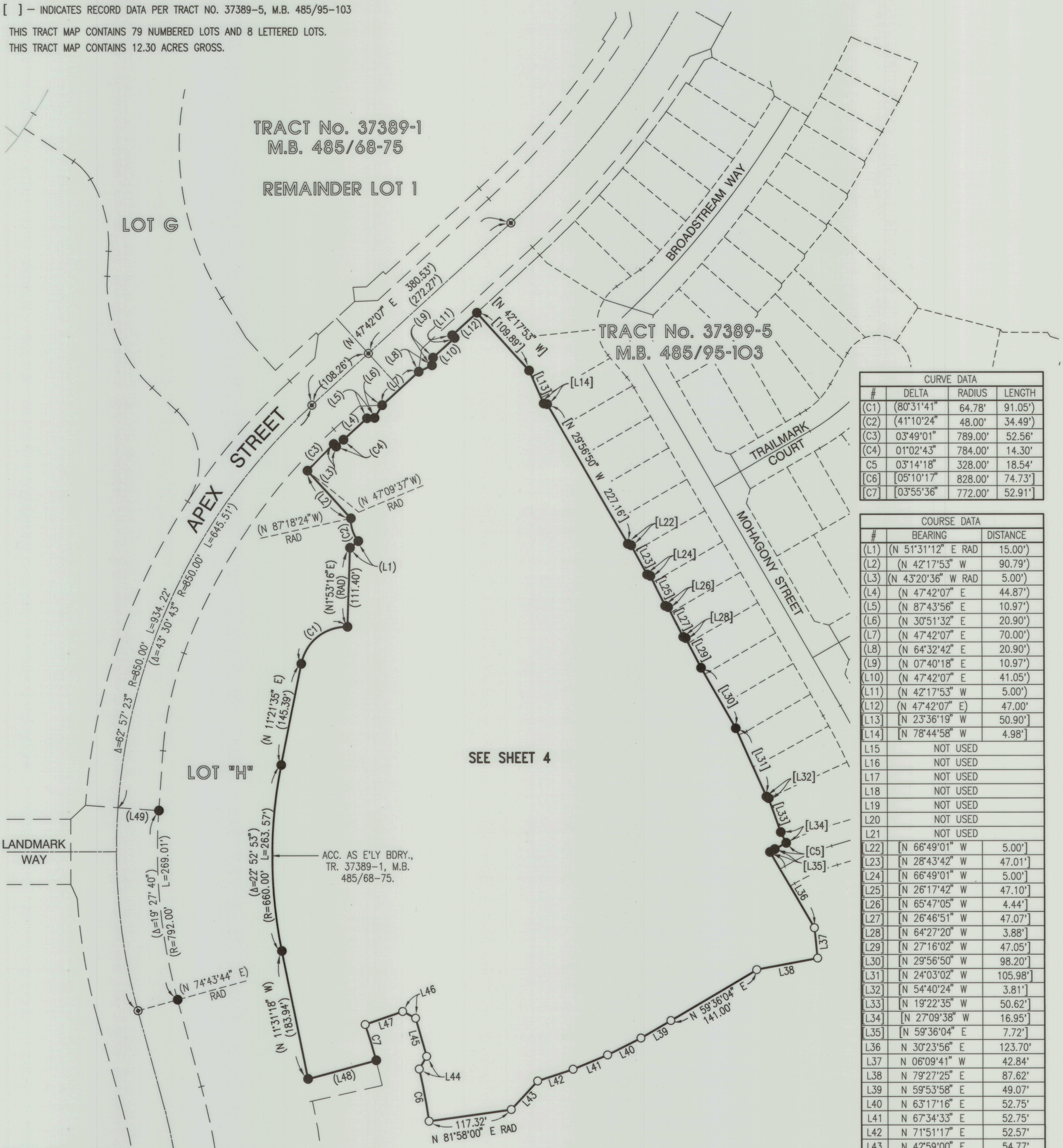
NAIL AND TAG, LS 8554 TO BE SET IN TOP OF CURB AT THE PROLONGATION OF SIDE LOT LINES IN LIEU OF FRONT LOT CORNERS, UNLESS OTHERWISE NOTED.

( ) — INDICATES RECORD DATA PER TRACT NO. 37389-1, M.B. 485/68-75

[ ] — INDICATES RECORD DATA PER TRACT NO. 37389-5, M.B. 485/95-103

THIS TRACT MAP CONTAINS 79 NUMBERED LOTS AND 8 LETTERED LOTS.

THIS TRACT MAP CONTAINS 12.30 ACRES GROSS.



CURVE DATA			
#	DELTA	RADIUS	LENGTH
(C1)	(80°31'41"	64.78'	91.05')
(C2)	(41°10'24"	48.00'	34.49')
(C3)	03°49'01"	789.00'	52.56'
(C4)	01°02'43"	784.00'	14.30'
C5	03°14'18"	328.00'	18.54'
[C6]	[05°10'17"	828.00'	74.73']
[C7]	[03°55'36"	772.00'	52.91']

COURSE DATA		
#	BEARING	DISTANCE
(L1)	(N 51°31'12" E RAD	15.00')
(L2)	(N 42°17'53" W	90.79')
(L3)	(N 43°20'36" W RAD	5.00')
(L4)	(N 47°42'07" E	44.87')
(L5)	(N 87°43'56" E	10.97')
(L6)	(N 30°51'32" E	20.90')
(L7)	(N 47°42'07" E	70.00')
(L8)	(N 64°32'42" E	20.90')
(L9)	(N 07°40'18" E	10.97')
(L10)	(N 47°42'07" E	41.05')
(L11)	(N 42°17'53" W	5.00')
(L12)	(N 47°42'07" E)	47.00'
[L13]	[N 23°36'19" W	50.90']
[L14]	[N 78°44'58" W	4.98']
L15	NOT USED	
L16	NOT USED	
L17	NOT USED	
L18	NOT USED	
L19	NOT USED	
L20	NOT USED	
L21	NOT USED	
[L22]	[N 66°49'01" W	5.00']
[L23]	[N 28°43'42" W	47.01']
[L24]	[N 66°49'01" W	5.00']
[L25]	[N 26°17'42" W	47.10']
[L26]	[N 65°47'05" W	4.44']
[L27]	[N 26°46'51" W	47.07']
[L28]	[N 64°27'20" W	3.88']
[L29]	[N 27°16'02" W	47.05']
[L30]	[N 29°56'50" W	98.20']
[L31]	[N 24°03'02" W	105.98']
[L32]	[N 54°40'24" W	3.81']
[L33]	[N 19°22'35" W	50.62']
[L34]	[N 27°09'38" W	16.95']
[L35]	[N 59°36'04" E	7.72']
L36	N 30°23'56" E	123.70'
L37	N 06°09'41" W	42.84'
L38	N 79°27'25" E	87.62'
L39	N 59°53'58" E	49.07'
L40	N 63°17'16" E	52.75'
L41	N 67°34'33" E	52.75'
L42	N 71°51'17" E	52.57'
L43	N 42°59'00" E	54.77'
L44	N 30°20'00" E	20.67'
L45	N 16°07'42" W	56.00'
L46	N 62°35'25" W	20.67'
L47	N 70°56'52" E RAD	56.00'
(L48)	(N 74°52'28" E	99.76')
(L49)	(N 85°48'36" W	58.00')

BASIS OF BEARINGS SEE SHEET 2

EASEMENT NOTES SEE SHEET 4

IN THE CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

TRACT NO. 37389-4

BEING A SUBDIVISION OF A PORTION OF REMAINDER LOT 2, OF TRACT NO. 37389-1 AS SHOWN BY MAP ON FILE IN BOOK 485 PAGES 68 THROUGH 75, INCLUSIVE, OF MAPS IN THE OFFICE OF THE COUNTY RECORDER OF THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, LYING WITHIN SECTION 1, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SAN BERNARDINO MERIDIAN.

DARYL J. CHRISTIAN, L.S. 8554 MDS CONSULTING DECEMBER, 2024

SCALE: 1" = 100'

100 50 0 100 200 300

GRAPHIC SCALE

SHEET INDEX MAP

(X) INDICATES SHEET NUMBER



BASIS OF BEARINGS SEE SHEET 2

EASEMENT NOTES SEE SHEET 2

I:\89408\MAPPING\TR 37389-4 MAP SHTS 1-10-2025

IN THE CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

SHEET 5 OF 6 SHEETS

TRACT NO. 37389-4

BEING A SUBDIVISION OF A PORTION OF REMAINDER LOT 2, OF TRACT NO. 37389-1 AS SHOWN BY MAP ON FILE IN BOOK 485 PAGES 68 THROUGH 75, INCLUSIVE, OF MAPS IN THE OFFICE OF THE COUNTY RECORDER OF THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, LYING WITHIN SECTION 1, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SAN BERNARDINO MERIDIAN.

DARYL J. CHRISTIAN, L.S. 8554 — MDS CONSULTING — DECEMBER, 2024

SCALE: 1" = 40'

GRAPHIC SCALE 40 20 0 40 80 120

CURVE DATA			
#	DELTA	RADIUS	LENGTH
C1	02°06'55"	800.00'	29.53'
C2	02°06'55"	772.00'	28.50'
C3	02°06'55"	828.00'	30.57'
C4	03°55'36"	772.00'	52.91'
C5	06°02'31"	772.00'	81.41'
C6	01°33'29"	772.00'	20.99'
C7	06°18'18"	272.00'	29.93'
C8	06°20'26"	328.00'	36.30'

COURSE DATA		
#	BEARING	DISTANCE
L1	N 75°23'56" W	21.21'
L2	N 30°23'56" W	26.70'
L3	N 70°40'21" W	22.74'
L4	N 15°03'10" E	21.21'
L5	N 88°25'55" E	25.83'
L6	N 40°59'58" E	22.09'
L7	N 44°08'07" W	22.09'
L8	N 01°34'05" W	56.00'
L9	N 29°56'50" W	28.00'
L10	N 59°36'04" E	56.00'
L11	(N 11°21'35" E	145.39')
L12	[N 11°21'35" E	7.72']

TRACT No. 37389-1
M.B. 485/68-75
LOT "H"

TRACT No. 37389-1
M.B. 485/68-75
REMAINDER LOT 2

TRACT No. 37389-5
M.B. 485/95-103

SEE SHEET 6

SEE SHEET 6

ACC. AS E'LY LINE, LOT H, PER TRACT NO. 37389-1, M.B. 485/68-75

PLUMWOOD LANE

LOT "C" 0.59 AC

TOPAZ LANE

LOT "F" 0.50 AC

CEDARWOOD DRIVE

LOT "A" 1.14 AC

LARKSPUR ROAD

LOT "B" 0.75 AC

ACC. AS W'LY BDRY., TRACT NO. 37389-5, M.B. 485/95-103

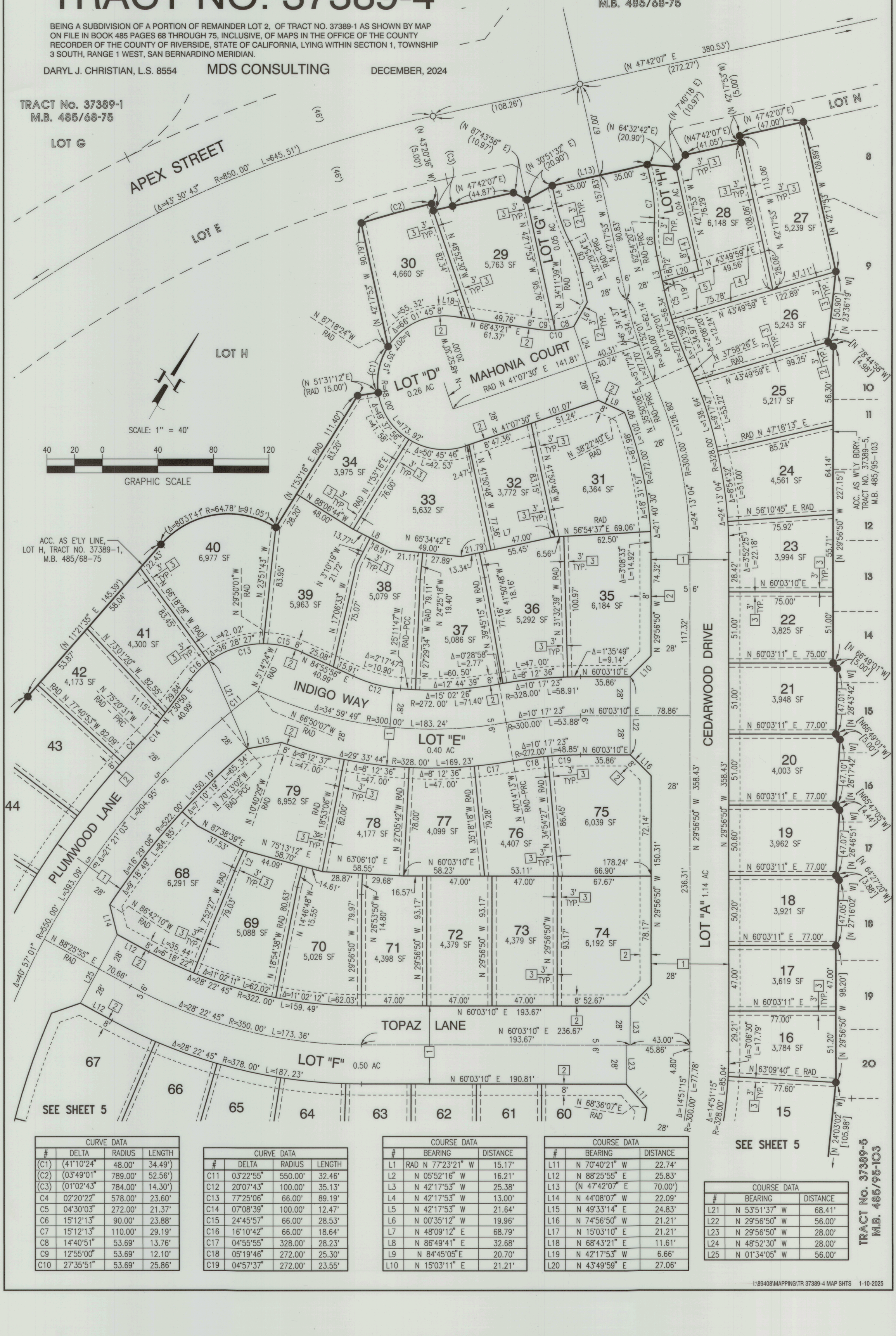
I:\89408\MAPPING\TR 37359-4 MAP SHTS 1-10-2025

IN THE CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

TRACT NO. 37389-4

BEING A SUBDIVISION OF A PORTION OF REMAINDER LOT 2, OF TRACT NO. 37389-1 AS SHOWN BY MAP ON FILE IN BOOK 485 PAGES 68 THROUGH 75, INCLUSIVE, OF MAPS IN THE OFFICE OF THE COUNTY RECORDER OF THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, LYING WITHIN SECTION 1, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SAN BERNARDINO MERIDIAN.

DARYL J. CHRISTIAN, L.S. 8554 MDS CONSULTING DECEMBER, 2024


TRACT No. 37389-1
M.B. 485/68-75
LOT G
APEX STREET
(Δ=43° 30' 43" R=850.00' L=645.51')
LOT E
LOT H
TRACT No. 37389-1
M.B. 485/68-75
(N 47°42'07" E 380.53')
(272.27')
(108.26')
(N 43°20'36" W (5.00'))
(N 87°43'56" E (10.97'))
(N 30°51'32" E (20.90'))
(N 64°32'42"E) (20.90')
(N 7°40'18 E) (10.97')
(N 42°17'53"W) (5.00')
(N 47°42'07" E) (47.00')
LOT N
(N47°42'07"E) (41.05')
(N 47°42'07" E) (44.87')
67.00'
35.00'
LOT "G" 0.05 AC
LOT "H" 0.04 AC
30 4,660 SF
29 5,763 SF
28 6,148 SF
27 5,239 SF
26 5,243 SF
25 5,217 SF
24 4,561 SF
23 3,994 SF
22 3,825 SF
21 3,948 SF
20 4,003 SF
19 3,962 SF
18 3,921 SF
17 3,619 SF
16 3,784 SF
15
LOT "D" 0.26 AC
MAHONIA COURT
RAD N 41°07'30" E 141.81'
(N 51°31'12"E) (RAD 15.00')
(N 87°18'24"W RAD)
L=55.32' Δ=66°01'45" 8'
49.76' N 68°43'21" E 61.37'
N 48°52'30"W 20.00'
Δ=207°35'57" R=48.00' L=173.92'
34 3,975 SF
33 5,632 SF
32 3,772 SF
31 6,364 SF
(N 1°53'16" E RAD 111.40')
83.20'
76.00'
Δ=50°45'46" L=42.53'
N 88°06'44"W 48.00'
RAD N 1°53'16"E
N 41°50'48"W 83.15'
N 41°50'48"W 77.36'
N 41°17'53" W 157.83'
N 41°17'53" W 90.83'
N 41°17'53" W 90.79'
N 42°17'53" W 95.76'
N 34°11'39" W RAD
N 32°29'54"E RAD-PRC
N 62°54'20"E RAD-PRC
N 36°29'54"E RAD-PRC
N 42°17'53" W 113.06'
N 42°17'53" W 108.06'
N 42°17'53" W 76.29'
N 43°49'59" E 49.56'
N 43°49'59" E 122.89'
N 43°49'59" E 99.25'
N 37°58'26"E RAD
N 78°44'58"W [4.98']
[50.90' N 23°36'19" W]
109.89'
[N 42°17'53" W 227.15']
ACC. AS W'LY BDRY., TRACT NO. 37389-5, M.B. 485/95-103
Δ=7°21'58" R=272.00' L=34.97'
Δ=2°08'20" L=12.24'
Δ=11°52'01" R=300.00' L=62.14'
Δ=11°52'01" R=272.00' L=56.34'
Δ=6°34'37" L=34.44'
Δ=5°17'24" L=27.70'
Δ=35°50'06"E L=102.90'
N 35°50'06"E RAD-PRC
Δ=18°31'57" R=272.00' L=87.98'
Δ=21°40'30" R=300.00' L=126.80'
Δ=24°13'04" R=328.00' L=138.64'
Δ=9°17'47" L=53.22'
Δ=8°54'32" L=51.00'
Δ=24°13'04" R=300.00' L=126.80'
N 41°07'30" E 101.07'
N 41°07'30" E 51.24'
N 38°22'40"E RAD
RAD N 47°16'13" E 85.24'
N 56°10'45" E RAD 75.92'
RAD N 56°54'37"E 69.06'
62.50'
N 60°03'10"E 75.00'
N 60°03'10" E 78.86'
N 60°03'10" E 35.86'
N 60°03'10" E 193.67'
N 60°03'10" E 236.67'
N 60°03'10" E 190.81'
Δ=3°08'33" L=14.92'
Δ=1°35'49" L=9.14'
Δ=14°51'15" R=300.00' L=77.78'
Δ=14°51'15" R=328.00' L=85.04'
N 63°09'40" E RAD
[N 66°49'01"W] [5.00']
[N 28°43'42" W]
[N 26°17'42" W]
[N 64°27'20" W] [3.88']
[N 27°16'02" W]
[N 24°03'02" W] [105.98']
N 29°56'50" W 358.43'
N 29°56'50" W 150.31'
N 29°56'50" W 117.32'
N 29°56'50" W 227.15'
LOT "A" 1.14 AC
236.31'
78.17'
INDIGO WAY
Δ=34°59'49" R=300.00' L=183.24'
Δ=15°02'26" R=272.00' L=71.40'
Δ=12°44'39" L=60.50'
Δ=0°28'58" L=2.77'
Δ=2°17'47" L=10.90'
Δ=10°17'23" R=328.00' L=58.91'
Δ=10°17'23" R=300.00' L=53.88'
Δ=10°17'23" R=272.00' L=48.85'
Δ=29°33'44" R=328.00' L=169.23'
Δ=8°12'36" L=47.00'
Δ=8°12'37" L=47.00'
Δ=8°12'36" L=47.00'
LOT "E" 0.40 AC
TOPAZ LANE
LOT "F" 0.50 AC
Δ=28°22'45" R=350.00' L=173.36'
Δ=28°22'45" R=322.00' L=159.49'
Δ=28°22'45" R=378.00' L=187.23'
Δ=11°02'11" L=62.02'
Δ=11°02'12" L=62.03'
Δ=40°57'01" R=550.00' L=393.09'
Δ=21°21'03" L=204.95'
Δ=16°29'08" R=522.00' L=150.19'
Δ=7°10'19" L=65.34'
Δ=9°18'49" L=84.85'
Δ=80°31'41" R=64.78' L=91.05'
ACC. AS E'LY LINE, LOT H, TRACT NO. 37389-1, M.B. 485/68-75
(N 11°21'35" E 145.39')
N 66°18'28" W RAD
N 73°01'20" W 82.55'
N 7°30'50 E 40.99'
RAD N 77°40'53"W 82.09'
N 75°20'31"W RAD-PRC
N 29°50'01"W RAD
N 23°51'43" W 83.95'
N 17°06'33" W 75.07'
N 25°11'47"W RAD-PCC
N 27°29'34" W RAD 79.11'
N 24°25'18"W 19.40'
N 39°45'15" W RAD
N 41°50'48"W 18.16'
N 31°32'39" W RAD
N 5°14'24"W RAD
N 84°55'56" E 40.99'
N 70°13'02"W RAD-PCC
N 10°40'29"W RAD
RAD N 18°53'06"W
N 27°05'42"W RAD
N 35°18'18"W RAD
N 40°14'13"W RAD-PRC
N 34°54'27" W RAD
N 87°38'39"E 37.53'
N 75°13'12" E 58.70'
N 63°06'10" E 58.55'
N 60°03'10"E 58.23'
N 60°03'10"E 53.11'
N 60°03'10"E 66.90'
N 88°25'55" E RAD
RAD N 86°42'10"W
N 7°52'27" W RAD
N 18°54'38"W RAD 80.63'
N 14°46'48"W 15.55'
N 26°53'50"W 14.80'
N 29°56'50" W 79.97'
N 29°56'50" W 93.17'
N 29°56'50"W
N 65°34'42"E 49.00'
N 3°10'19"W 21.72'
RAD N 29°50'01"W
N 42°17'53" W 90.79'
N 48°52'30"W 83.34'
N 87°18'24"W RAD
N 51°31'12"E (RAD 15.00')
RAD N 41°07'30" E
RAD N 38°22'40"E
RAD N 56°54'37"E
RAD N 47°16'13" E
RAD N 41°07'30" E
RAD N 77°23'21" W
RAD N 77°40'53"W
RAD N 88°25'55" E
RAD N 29°50'01"W
RAD N 66°50'07"W
RAD N 68°36'07"E
RAD N 60°03'10"E
RAD N 56°10'45" E
RAD N 63°09'40" E
RAD N 60°03'10"E
RAD N 60°03'10"E
RAD N 60°03'10"

CITY OF BANNING

SUBDIVISION IMPROVEMENT AGREEMENT

* * * * * * SUBDIVISION REFERENCE DATA * * * * * *

[X] FINAL TRACT MAP NO. 37389-4 ("Final Map" herein)

[ ] PARCEL MAP NO. _____("Parcel Map" herein)

NAME OR TRACT NUMBER OF SUBDIVISION ("Subdivision" herein):	ATWELL – PA 12
NAME AND ADDRESS OF SUBDIVIDER(S):	TRI POINTE HOMES, IE-SD 1250 CORONA POINTE CT, #600 CORONA, CA 92879
CITY COUNCIL RESOLUTION OF APPROVAL NO.	_____ ("Resolution of Approval" herein)

DATE(S) THAT IMPROVEMENT PLANS WERE APPROVED BY THE CITY ENGINEER: see below

IMPROVEMENT/PLAN NO.:	Sewer Improvement Plan	
	Street Improvement Plan	
	Water Improvement Plan	
	Monumentation Improvement Plan	
ESTIMATED TOTAL COSTS:	IMPROVEMENTS	$1,785,250.64
	GRADING	$_____
	MONUMENTATION	$26,237.20
	TOTAL:	$1,811,487.84

FORM OF IMPROVEMENT SECURITY:

[ ] AAA Corporate surety bonds

[ ] Deposit of money

NAME AND ADDRESS OF CORPORATE SURETY (if applicable):

The Continental Insurance Company
(Name of Corporate Entity)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

SURETY BOND NUMBERS (if applicable):

Sewer Imp: Bond No. 30239069

Street Imp: Bond No. 30239067

Water Imp: Bond No. 30239068

Monumentation Imp: Bond No. 30239070

EFFECTIVE DATE OF AGREEMENT:

(to be inserted by City)

COMPLETION PERIOD: All improvements of Tract _____ ~~(including the complete water and sewer system in _____ Street) with the exception of the roadway (street) improvements on _____ Street~~, shall be completed within two years from the Effective Date of the Agreement. _____ ~~Street roadway (street) construction (so that _____ Street is a continuous route from _____ to _____) shall be constructed prior to the Certificate of Occupancy for development of lots ____ and ____ of Tract _____.~~

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SUBDIVISION IMPROVEMENT AGREEMENT

THIS SUBDIVISION IMPROVEMENT AGREEMENT ("Agreement") is made and entered into by and between the City of Banning, a municipal corporation ("City"), and the Subdivider whose name and address is set forth above in the Subdivision Reference Data.

RECITALS

A. Subdivider has presented to the City for approval and recordation a Final Map, identified above in the Subdivision Reference Data, of a proposed subdivision pursuant to the Subdivision Map Act of the State of California and the City's ordinances and regulations as such ordinances and regulations are vested under the development agreement recorded in the official records of the County of Riverside on July 17, 2012 as Document No. 2012-0332888 ("Development Agreement") relating to the filing, approval and recordation of subdivision maps (collectively referred to herein as the "Subdivision Laws").

B. A tentative map of the Subdivision was previously approved by City, subject to the Subdivision Laws and to the City's standard requirements as vested under the Development Agreement and conditions of approval contained in the City Council's Resolution of Approval, a copy of which is on file in the Office of the City Clerk and which is incorporated herein by this reference.

C. The Subdivision Laws establish, as a condition precedent to the approval of a Final Map, that the Subdivider comply with the City Council's Resolution of Approval and either (i) complete, in compliance with applicable City standards, all of the improvements and land development work required by the Subdivision Laws and the City Council's Resolution of Approval; or (ii) enter into a secured agreement with the City to complete the improvements and land development work within a period of time specified by the City.

D. In consideration of approval of the Final Map for the Subdivision by the City Council, Subdivider desires to enter into this Agreement whereby Subdivider promises to install and complete, at its sole expense, except as otherwise provided in a credit/reimbursement agreement as provided for in the Development Agreement, all public improvement work required by the City as set forth on the Improvement Plans (as defined below) for the proposed Subdivision. Subdivider has secured this Agreement by improvement security required by the Subdivision Laws and approved by the City. In any conflict between the terms in this Agreement and the Development Agreement, the Development Agreement shall be the controlling document.

E. Improvement Plans, and related specifications, numbered as designated above in the Subdivision Reference Data, for the construction, installation and completion of the Improvements identified in Schedule A hereto, have been prepared by the Subdivider, approved by the City Engineer, and are on file in the office of the City Engineer. Said Improvement Plans, and related specifications, subsequently modified by the mutual written agreement of the parties, are hereby referred to as the "Improvement Plans" and are incorporated herein by this reference.

Any improvement to be constructed pursuant to the Improvement Plan is hereby referred to individually as an "**Improvement**" and collectively as the "**Improvements**".

NOW, THEREFORE, in consideration of the approval and recordation by the City Council of the Final Map of the Subdivision, Subdivider and City agree as follows:

1. SUBDIVIDER'S OBLIGATION TO CONSTRUCT IMPROVEMENTS

A. Subdivider shall, at its sole expense, unless otherwise provided in a credit/reimbursement agreement as provided for in the Development Agreement, and in compliance with the provisions of the Subdivision Laws, the Improvement Plans, conditions of approval of the Tentative Map, and all applicable City standards and fees, and in a good and workmanlike fashion, furnish, construct, install and guarantee (as set forth in Section 3) the Improvements, Grading, and Monumentation described on the tentative map and in the City Council's Resolution of Approval relating thereto (collectively, the "Improvements").

B. To the extent necessary to construct the Improvements, as determined by the City Engineer, the Subdivider shall acquire and dedicate, or pay the reasonable, documented cost of acquisition by City of, all rights-of-way, easements and other interests in real property for the construction or installation of the Improvements, free and clear of all liens and encumbrances. If the Subdivider is unable to acquire such rights-of-way, easements and other interests in real property by negotiation, then Subdivider shall, within 120 days of Final Map approval, enter into a condemnation agreement with City pursuant to Government Code Section 66462.5, by which the City will commence the process for the acquisition of the rights-of-way, easements or other real property.

C. Subject to any time extensions granted in accordance with Section 4, Subdivider shall complete all Improvements within its respective "Completion Period" specified in the Subdivision Reference Data; provided, however, that if the City Engineer reasonably determines in good faith that accelerated construction of the Improvements is essential in order to protect the public health, welfare and safety, the City Engineer shall give Subdivider not less than fifteen (15) business days' prior written notice to commence or accelerate installation and construction of such Improvements, or any portion thereof. The notice shall be in writing, and shall describe the work to be done by Subdivider, the time within which the work will commence, the period within which the work will be completed and identify the reasons that such early commencement is essential in order to protect the public health, welfare and safety. All or any portions of said Improvements may be required to be constructed or completed at a specified time, providing the foregoing criteria is met. If the Subdivider objects to the commencement or acceleration of the Improvements as specified by the City Engineer, Subdivider may appeal the decision of the City Engineer to the City Council. Any such appeal shall be filed with the City Clerk within 10 days after receipt by Subdivider of the written notice from the City Engineer.

D. If the Improvements to be constructed by Subdivider include monumentation, such monumentation shall be installed not later than thirty (30) days after the City's acceptance of all other Improvements pursuant to Section 2. As used herein,

"monumentation" shall mean the setting of survey monuments and tie points in accordance with the Subdivision Laws, and the delivery to the City Engineer of tie notes for said points.

E. Subdivider shall , at its sole expense, unless otherwise provided in a credit/reimbursement agreement as provided for in the Development Agreement, replace or repair all public improvements, public utility facilities, and surveying or subdivision monuments which are destroyed or damaged as a result of any work performed by Subdivider under this Agreement during or after the Completion Period. Any such replacement or repair shall be subject to the approval of the City Engineer.

F. In addition to, and separate from, the indemnity obligations contained in Section 9 of this Agreement, and without limiting the City's remedies under general construction defect law, Subdivider shall be responsible for the care, repair and maintenance of the applicable portion of the Improvements until the latter of the following time periods: (i) the Improvements or applicable portion thereof is accepted in writing by the City; or (ii) the expiration of the required one-year guarantee and warranty period as specified herein; or (iii) the expiration of any applicable period of time requiring the care, repair and maintenance of the applicable Improvement specified in the Development Agreement (not including the term of any Development Agreement). Neither City, nor its officers, agents and employees, shall have any liability for any accident, loss or damage to the Improvements and that may result from the construction of the Improvements prior to their completion and written acceptance by the City

G. In addition to, and separate from: (1) the indemnity obligations contained in Section 7 of this Agreement, (2) the care, repair and maintenance provisions under paragraph E of this Section 1 of this Agreement; and (3) the warranty and guarantee provisions of Section 3 of this Agreement, Subdivider shall repair and correct, or be liable to the City for any cost to repair and correct, any defect in the construction of the Improvements that is identified by City within in accordance with general construction defect law ten (10) years after City's acceptance of the Improvement, provided the City provides written notice to Subdivider of the existence of the defect within that the time period under law, and the defect is caused directly or indirectly by the design, construction, functionality, installation, assembly or workmanship of Subdivider. Nothing contained in this paragraph is intended to limit or otherwise waive any right or cause of action under applicable construction defect law that City may assert against Subdivider.

H. Subdivider shall, at its sole expense, unless otherwise provided in a credit/reimbursement agreement as provided for in the Development Agreement, obtain all necessary permits and licenses for the construction and installation of the Improvements, give all necessary notices, and pay all applicable fees required by City ordinance or resolution and all taxes required by law.

I. Not less than seven (7) days prior to commencement of work on the Improvements, Subdivider shall give written notice to the City Engineer of the date fixed for such commencement of work in order that the City Engineer shall have adequate time to schedule all necessary inspections.

J. SUBDIVIDER shall pay all applicable City fees and costs stipulated in the latest fee resolution as adopted by the City Council from time to time as required for the development of the SUBDIVISION including but not limited to the following:

1. Building Permit Fees --- to be paid at the time of building permit issuance;

2. Final Map Plan Check Fees --- to be paid at time of submittal of final map for plan check and resubmittal of revised final map for plan check;

3. Final Map Moratorium Fees --- to be paid from cash deposit established at time of filing final map;

4. Plan Check and Review Fees --- to be paid from cash deposit established at time of filing improvement plans for plan check;

5. Encroachment Permit Fees --- to be paid at time of application for encroachment permit;

6. Inspection Fees --- to be paid from cash deposit established at time of construction permit issuance; and

7. Grading Permit Fee --- to be paid from cash deposit established at time of grading permit issuance.

K. Subdivider shall provide City with final Record Drawings of all plans developed for the Subdivision, showing all changes and as built conditions as specified in the Tentative Tract Map Conditions of Approval, and shall provide electronic image files of those final Record Drawings consistent with electronic image file size and type specifications of the City prior to the acceptance of improvements and release of bonds or other security.

2. INSPECTION OF WORK AND FINAL ACCEPTANCE

A. Subdivider shall at all times maintain proper facilities and safe access for inspection of the Improvements by the City Engineer and other City personnel and inspection consultants.

B. Upon completion of the work on all or any category of the Improvements, the Subdivider may request a final inspection by the City Engineer. Within forty-five (45) days of receipt of the written letter request, the City Engineer shall inspect the Improvements and provide written notice to Subdivider of the list of items which have been found to be incomplete and the list of items which have been found to be complete. If the City Engineer determines that all or any specified category of the Improvements have been completed in accordance with this Agreement and in compliance with the Improvement Plans and all applicable City standards, then the City Engineer shall acknowledge that determination in a report to the City Council. If the Improvements that are completed are to be dedicated to or owned by the City (Improvements within City right of way and property for public use), the City Engineer's determination shall be

submitted to the City Council for final acceptance by the City, unless such power to accept has been delegated by the City Council to the City Engineer or some other officer of the City, in which case the final acceptance shall be subject to the approval of that specified official. If the Improvements that are completed are to be dedicated to or owned by a public entity other than the City, the Subdivider's written request shall be submitted to the applicable public entity or other owner, for final acceptance. Subdivider shall bear all costs of inspection and determination of completeness in accordance with City's formally adopted and applicable fees and rates.

C. Acceptance of all or any specified category of the Improvements by the City Council shall be made upon recommendation and certification of the City Engineer following inspection of said Improvements pursuant to subparagraph B above. The City Council shall act upon the City Engineer's recommendation that such public Improvements have been completed unless such power to accept has been delegated by the City Council to the City Engineer or some other officer of the City, in which case the final acceptance shall be subject to the approval of that specified official. Acceptance by the City or by the governing body of the entity that is to accept dedication or ownership of the public improvements shall not constitute a waiver by the City or such other public entity of any defects in the public Improvements.

3. GUARANTEE AND WARRANTY OF THE IMPROVEMENTS

A. If, within a period of one year following acceptance by the City of the applicable Improvements specified in Schedule A, any Improvements or part of any Improvements specified in Section A furnished, installed or constructed by the Subdivider, or any of the work performed under this Agreement by Subdivider, fails to comply with any requirements of this Agreement, or the Subdivision Laws, or the Improvement Plans and related specifications, the Subdivider shall, without delay and without cost to the City, repair, replace or reconstruct any defective or otherwise unsatisfactory part or parts of the Improvements. Subdivider's obligations hereunder shall include the repair, replacement or reconstruction of all irrigation systems and all trees, shrubs, ground cover and landscaping for such one year.

B. Should the Subdivider fail or refuse to act promptly or in accordance with subparagraph A above, or should the exigencies of the situation require repair, replacement, or reconstruction to be undertaken before the Subdivider can be notified and can perform the necessary work, then the City may, in its discretion, make the necessary repairs or replacements or perform the necessary reconstruction and draw upon the Subdivider's improvement security to reimburse itself for the costs incurred. If the Subdivider's improvement security does not cover the total cost of such repair, replacement, or reconstruction, the Subdivider shall reimburse the City for any excess costs incurred.

C. The security furnished for the faithful performance of the Subdivider's obligation to construct and install the Improvements described herein shall include the Subdivider's liability and obligation hereunder to provide the one-year guarantee and warranty of the Improvements.

4. TIME EXTENSIONS

A. Upon a showing by the Subdivider of good cause therefor, the duration of the Completion Period for the Improvements (or any of them) may be extended by the City Engineer in writing. As used herein, "good cause" may include, without limitation, delay resulting from, arising out of or relating to an act of the City; acts of God or force majeure, strikes, boycotts or similar job actions by employees or labor organizations which prevent the conduct of the work; findings made by a governmental entity that the site of a particular Improvement is of archeological significance or requires further permitting and approval; and/or actions or failure to act of native American monitor(s); and, the order of any court.

B. A time extension may be granted without notice to any surety or sureties of the Subdivider and shall not affect the validity of this Agreement nor release the surety or sureties on any bond given as an improvement security pursuant to this Agreement.

C. As a condition of any time extension provided for herein, the City Engineer, may require the Subdivider to furnish new or modified improvement security guaranteeing performance of this Agreement, as extended, in an increased amount as necessary to compensate for any projected increase in the Estimated Total Cost of Improvements, as determined by the City Engineer.

5. IMPROVEMENT SECURITY

A. Prior to City's execution of this Agreement, Subdivider shall provide as security to the City:

1. For Performance and Guarantee: Security in an amount equal to one hundred percent (100%) of the Estimated Total Cost of the Improvements, excluding Grading, as set forth above in the Subdivision Reference Data. The security shall be issued by a bonding company licensed to issue bonds in the State of California and having a Best rating of AAA or better. With this security, the form of which shall be subject to City Attorney's prior approval, the Subdivider assures faithful performance under this Agreement and guarantees the Improvements for one year after the completion and acceptance of the applicable portion of such Improvements, against any defective workmanship or materials or any unsatisfactory performance, pursuant to Section 3 hereof.

2. For Payment: Security in an amount equal to one hundred percent (100%) of the Estimated Total Cost of the Improvements, excluding Grading, as set forth above in the Subdivision Reference Data. The security shall be issued by a bonding company licensed to issue bonds in the State of California and having a Best rating of AAA or better. With this security, the form of which shall be subject to City Attorney's prior approval, the Subdivider guarantees payment to contractors, subcontractors, and persons renting equipment or furnishing labor or materials to them or to the Subdivider.

B. If the improvement security is a corporate surety bond and, in the opinion of the City, any surety or sureties thereon become insufficient, because (i) the surety becomes

insolvent; (ii) the surety's bond rating is downgraded; (iii) the surety declares bankruptcy; or (iv) the surety is no longer deemed to be an admitted surety in California by the California Department of Insurance, or (v) the form of the surety or the amount is found by City to be in error or materially insufficient, the Subdivider shall renew or replace any such surety bond with good and sufficient surety or sureties within thirty (30) days after receiving from City written demand therefor.

C. The amount of security for performance, payment and warranty obligations provided by this section shall not include the cost of monumentation, as required by Government Code Section 66497 so long as a separate cash deposit or security acceptable to the City Engineer for the estimated cost of monumentation has been submitted to the City.

D. Improvement security consisting of corporate surety bonds, in a form accepted by the City Attorney, shall be filed with the City Engineer and then kept on file with the City Clerk. If a corporate surety bond is replaced by another approved bond, the replacement shall be submitted to the City Engineer and, upon filing with the City Clerk, shall be deemed to have been made a part of and incorporated into this Agreement. Upon submission to the City Engineer and then filing with the City Clerk of a replacement bond, the former improvement security shall be released following written approval of the City Engineer.

E. Modifications of the Improvement Plans and related specifications, and modifications of the Improvements, not exceeding ten percent (10%) of the original Estimated Total Cost of the Improvements, shall not relieve or release any improvement security furnished by Subdivider pursuant to this Agreement. If any such modifications exceed ten percent (10%) of the Estimated Total Cost of the Improvements, Subdivider shall furnish additional improvement security for performance and guarantee, and for payment, as required by subparagraph A above, for one hundred percent (100%) of the revised Estimated Total Cost of the Improvements.

F. Subject to any time extensions granted in accordance with Section 4 herein, the Subdivider shall be in default if the Subdivider has not completed all improvements within two years from the Execution Date of the Agreement and has not repaired any defects in the completed Improvements within the one-year guarantee and warranty period.

Alternatively, in the event of a default by the Subdivider pursuant to Section 10, and after written notice to Subdivider and reasonable opportunity to cure, City, at its sole option, shall have the right, without limiting any other rights and/or remedies available to City at law or in equity, to draw upon or utilize the improvement security furnished herewith to construct and install the Improvements itself. If City exercises this right, the release of any unused portion of such improvement security shall be in accordance with the procedures outlined in Section 6 herein, including any retention necessary for the one-year guarantee period.

6. REDUCTION OR RELEASE OF IMPROVEMENT SECURITY

A. All public Improvements (Improvements that are to be owned or dedicated to the City or other public entity as distinguished from those owned by a private community

association) shall be first completed, deemed completed by the City Engineer and then accepted as complete by the City prior to release of sureties. All private Improvements (Improvements that are to be owned by a private community association and not dedicated or owned by the City or other public entity) shall be first completed and then accepted as complete in writing by the City Engineer.

B. Partial releases or reductions in the Subdivider's improvement (performance) security may be authorized prior to the City's acceptance of all Improvements required hereunder, as follows:

1. At the time that the Subdivider believes that the obligation to perform the work for which security was required is complete, the Subdivider may notify the City in writing of the completed work, including a list of work completed. Upon receipt of the written notice, the City shall review and comment or approve the completion of the required work within forty-five (45) days. If the City does not agree that all work has been completed in accordance with the plans and specifications for the Improvements, it shall supply a list of all remaining work to be completed within this 45-day period.

2. Within forty-five (45) days of receipt of the list of remaining work from the local agency, the Subdivider may then provide cost estimates for all remaining work for review and approval by the City. Upon receipt of the cost estimates, the City shall then have forty-five (45) days to review, comment, and approve, modify, or disapprove those cost estimates. The City shall not be required to engage in this process of partial release more than once between the start of work and completion and acceptance of all work; however, nothing in this section prohibits the City from allowing for multiple and phased partial releases as it otherwise deems appropriate.

3. If the City approves the cost estimate, the City shall release all performance security except for security in an amount up to two hundred percent (200%) of the cost estimate of the remaining work. The process allowing for a partial release of performance security shall occur when the cost estimate of the remaining work does not exceed twenty percent (20%) of the total original performance security unless the City allows for a release at an earlier time. Substitute bonds or other security may be used as a replacement for the performance security, subject to the approval of the City. If substitute bonds or other security is used as a replacement for the performance security released, the release shall not be effective unless and until the City receives and approves that form of replacement security. A reduction in the performance security, authorized under this section, is not, and shall not be deemed to be, an acceptance by the City of the completed improvements in and of itself, and the risk of loss or damage to the Improvements and the obligation to maintain the Improvements shall remain the sole responsibility of the Subdivider until the applicable required public Improvements have been accepted by the City in writing and all other required improvements have been fully completed in accordance with the plans and specifications for the improvements.

4. The Subdivider shall complete the works of Improvement until all remaining items are accepted by the City.

5. Upon the completion of the Improvements, the Subdivider, or his or her assigns, shall be notified in writing by the City within forty-five (45) days.

6. Within sixty (60) days of the issuance of the notification by the City Engineer, any remaining performance security, except ten percent (10%) of the original amount of the security to guarantee and warrant the Improvements for the one-year guarantee and warranty period, shall be released within sixty (60) days of the issuance of the written statement of completion.

C. Security securing the payment to the contractor, his or her subcontractors and to persons furnishing labor, materials or equipment shall, after passage of the time within which claims of lien are required to be recorded pursuant to Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code and after acceptance of the work, be reduced to an amount equal to the total claimed by all stop notice claimants for whom stop notices have been filed with the City, and if no claims have been filed, the security shall be released in full.

D. The partial release provisions of this Section 6 shall not apply to any required guarantee and warranty period required by Section 66499.9 for the guarantee or warranty nor to the amount of the security deemed necessary by the local agency for the guarantee and warranty period nor to costs and reasonable expenses and fees, including reasonable attorneys' fees. Security furnished to guarantee and warrant the Improvements against any defective work or labor done or defective materials furnished, shall be released within thirty (30) days after the completion of the one-year period following completion and acceptance of all Improvements.

E. If Subdivider's obligations relating to any Improvements are subject to the approval of another governmental agency, the City shall not release the improvement (performance) security therefor until the obligations are performed to the satisfaction of such other governmental agency. Such agency shall have sixty (60) days after receipt of written notice from the Subdivider of the Subdivider's performance of the obligation to register its satisfaction or dissatisfaction. If at the end of that period it has not registered its satisfaction or dissatisfaction, it shall be conclusively deemed that the Subdivider's performance of the obligation was done to its satisfaction, and such improvement security shall be promptly released.

F. In the event the time periods for action by the City specified in this Section conflict with a shorter or longer time period for such actions as provided in Government Code Section 66499.7, the time periods in Government Code Section 66499.7 shall control.

7. INDEMNIFICATION OF CITY BY SUBDIVIDER

A. Neither the City, nor its officers, agents and employees, shall be liable or responsible for any accident, injury, loss or damage to either property or person attributable to or arising out of the defective design, construction, functionality, installation assembly or improper

maintenance including, without limitation, the use of defective methods, materials or workmanship (collectively "Subdivider's Faults") of the Improvements by Subdivider, its officers, employees and agents. Subdivider shall indemnify, hold harmless and defend the City, its officers, agents and employees, from and against any and all losses, claims, costs, expenses, liabilities, damages, actions, causes of action and judgments, including attorneys' fees, arising directly or indirectly out of or attributable to Subdivider's Faults.

B. Subdivider's obligations under this Section 7 are not conditioned or dependent upon whether the City, or its officers, agents and employees, prepared, supplied or reviewed any Improvement Plans or related specifications in connection with the Subdivision or the Improvements, or has insurance or other indemnification covering any of these matters.

C. Subdivider's obligation to indemnify, hold harmless and defend the City under this Section 7 shall extend to injuries to persons and damages to or alleged taking of property resulting from the Subdivider's Faults, and the Improvements required herein, and shall likewise extend to claims asserted by adjacent property owners based upon the diversion of waters caused by the Subdivider's defective design or defective construction of public drainage systems, streets, and other public facilities or improvements. Except for a City Directive as defined below, the City's acceptance of the Improvements shall not constitute an assumption by the City of any responsibility or liability for any damage or alleged taking of property referenced herein. City shall not be responsible or liable for the design or construction of the Subdivision or the Improvements constructed or installed pursuant to the approved Improvement Plans or the Final Map, regardless of any act or omission by the City in approving the Improvement Plans or the Final Map, unless the particular Improvement design was required by the City over the written objection of the Subdivider, which objection stated that the Improvement design was potentially dangerous or defective and set forth an alternative design (a "City Directive"). After City's acceptance of the Improvements, the Subdivider shall remain obligated to correct or eliminate all dangerous conditions created by defects in design, construction or Subdivider's Faults (other than those required by a City Directive); provided, however, that Subdivider shall not be responsible for routine maintenance as specified in Section 1(F) of this Agreement. Subdivider's indemnity obligations hereunder shall remain in effect for ten (10) years following acceptance of the respective Improvement(s) by the City Council. Subdivider acknowledges and agrees that Subdivider shall be responsible and liable for the Subdivider's Faults with respect to the Improvements and other work done pursuant to this Agreement, unless same is due to a City Directive. City shall not be liable for any acts or omissions in approving, reviewing, checking, correcting or modifying any Improvement Plans or related specifications, or in inspecting, reviewing or approving any work or construction of Improvements, unless same is due to a City Directive. The Subdivider's improvement security shall not be required to secure the Subdivider's obligations under this subparagraph C beyond the one-year guarantee and warranty period, unless the City Engineer provides notice to Subdivider prior to the expiration of the one-year period of the existence of, or continued existence of, defects in the improvements, in which case the portion of the improvement security to guarantee and warranty the improvements against defective work shall not be released and shall remain in place until the City Engineer provides written confirmation that the defects have been cured and corrected. The indemnity shall be effective retroactively to the earliest recordation date of the Final Map.

D. Subdivider shall pay and satisfy any judgment, award or decree that may be rendered against City, its officers, officials, employees, agents, representatives and volunteers (collectively hereinafter "City and City Personnel") to the extent of the indemnity provided above, in any such suit, action, or other legal proceeding, provided City gives Subdivider prompt written notice of such claim and allows Subdivider to undertake the defense thereof, and provided further that City cooperates in any such suit, action, or other legal proceeding, but shall retain its right to reject a settlement that the City deems, in its sole and absolute discretion, to be contrary to the interests of the City.

E. Subdivider's obligation to indemnify shall not be restricted to Insurance proceeds, if any, received by the City and City Personnel.

F. Subdivider, on behalf of itself and all parties claiming under or through it, hereby waives all rights of subrogation and contribution against City and City Personnel to the extent of the indemnity above provided.

8. INSURANCE

The following coverages will be provided by Subdivider and maintained on behalf of City and in accordance with the requirements set forth herein. If Subdivider performs construction activities through a general contractor, some or all of these insurance requirements for the period of construction may be satisfied by the general contractor's insurance coverages. In such case, Subdivider shall maintain during this same construction period, and after the construction period, the coverages shown below as "Insurance After Construction." In addition, Subdivider may elect to obtain, for all or any portion of the Project, an "Owner-Controlled Wrap Up" insurance policy in satisfaction of the insurance requirements for general contractors and subcontractors provided it satisfies all of the insurance requirements below for general contractors and subcontractors. Throughout these specifications, the word "Subdivider" refers to the Party responsible to provide the coverages as specified and, depending on context, may refer either to Subdivider or to a separate General Contractor.

A. Insurance During Construction. Subdivider shall provide the following insurance during construction of the Improvements. Insurance requirements may be met through insurance provided by Subdivider's General Contractor:

1. Commercial General Liability Insurance. Commercial General Liability Insurance (primary) shall be provided on ISO-CGL Form No. CG 00 01 or equivalent coverage, including provisions for defense of additional insureds. Policy limits shall be no less than two million dollars ($2,000,000) per occurrence for all coverages and five million dollars ($5,000,000) general aggregate. City and its officers, employees and agents shall be added as additional insureds using ISO Form CG 20 10 11 85 or other revision of the CG 20 10 form if available from the insurer and reasonably acceptable to the City, not limiting coverage for the additional insured to "ongoing operations" or in any way excluding coverage for completed operations. Coverage shall apply on a primary non-contributing basis in relation to any other insurance or self-insurance, primary or excess, available to City or any officer, employee or agent of City.

Coverage shall not be limited to the vicarious liability or supervisory role of any additional insured. Coverage shall contain no contractors' limitation or other endorsement limiting the scope of coverage for liability arising from pollution, explosion, collapse, or underground property damage.

2. Umbrella Liability Insurance. Umbrella Liability Insurance (or, at Subdivider's election, Excess Liability Insurance) (over primary) shall apply to bodily injury/property damage, personal injury/advertising injury, at a minimum. Coverage shall be at least as broad as any underlying coverage. Coverage shall be provided on a "pay on behalf" basis. There shall be no cross liability exclusion and no contractor's limitation endorsement. Policy limits shall be not less than five million dollars ($5,000,000) per occurrence and in the aggregate, including any limits required in the underlying policies. The policy shall have a starting date no later than and an ending date no earlier than those of the underlying coverages. The Named Insured (Subdivider or General Contractor as appropriate) may determine the layering of primary and excess liability insurance provided that if such layering differs from that described here, the actual coverage program meets the minimum total required limits and complies with all other requirements listed here.

3. Business Auto Coverage. Business Auto Coverage shall be written on ISO Business Auto Coverage Form CA 00 01 or the equivalent, including symbol (1) (any Auto). If Subdivider (or Contractor) does not own any vehicles, this requirement may be satisfied by a non-owned vehicle endorsement to the general and umbrella liability policies. Limits shall be no less than one million dollars ($1,000,000) per accident. This policy shall be scheduled as underlying insurance to the umbrella policy required above for a total limit of no less than five million dollars ($5,000,000) each accident.

4. Workers' Compensation/Employer's Liability. Workers' Compensation/Employer's Liability shall provide workers' compensation statutory benefits as required by law. Employer's liability limits shall be no less than one million dollars ($1,000,000) per accident or disease. Employer's liability coverage shall be scheduled under the umbrella or excess liability policy described above. This policy shall be endorsed to waive any right of subrogation with respect to City, its officers, employees or agents.

5. Builder's Risk Insurance. Builder's Risk Insurance covering all real and personal property for "all risks" of loss or "comprehensive perils" coverage including but not limited to the perils of earth movement, including earthquake (if required by Subdivider's lender or if available at commercially reasonable rates) and flood for all Improvements.

B. Insurance After Construction. Upon completion of construction of the Improvements, and for the required one-year guarantee and warranty period for Improvements and the required 10-year indemnification period, Subdivider at Subdivider's expense shall maintain or cause to be maintained the following insurance:

1. Commercial Property Insurance. Commercial Property Insurance covering the Improvements. Coverage shall be at least as broad as the Insurance Services Offices broad causes of loss form CP 10 20, and reasonably approved of in writing by the City. Coverage shall be sufficient to insure 100% of the replacement value and there shall be no coinsurance provisions. The policy shall include an inflation guard endorsement, 100% rents coverage, contents coverage, coverage for personal property of others, ordinance or law and increased cost of construction coverage. Subdivider also agrees to provide builder's all-risk insurance using an inland marine form during the period of any major alteration or improvement, using the broadest form available.

The insurance coverage for the peril of earthquake required for this project is subject to availability on the open market at commercially reasonable premium cost, as determined by mutual agreement between Subdivider and City. If such earthquake insurance coverage should, after diligent effort by Subdivider, be unobtainable at such mutually determined commercially reasonable premium cost, then Subdivider shall obtain the maximum insurance reasonably obtainable at commercially reasonable premium cost (if any) and give notice to City of the extent of Subdivider's inability to obtain, in full, the required insurance, and in such event, Subdivider's obligation to procure and maintain such insurance may be excused, subject to City's verification of inability to obtain the required insurance. Subdivider and City agree that a premium cost of earthquake insurance coverage of up to 150% of the premium cost paid by Subdivider for such coverage on the Effective Date (to be adjusted over time based on the Consumer Price Index,) shall constitute a commercially reasonable premium cost. Non-availability at commercially reasonable premium cost must be documented by a letter from Subdivider's insurance broker or agent indicating a good faith effort to place the required insurance and showing, at a minimum, the names of the insurance carriers and the declinations or quotations received from each.

2. Commercial General Liability Insurance. Commercial General Liability Insurance (primary) shall be provided on ISO-CGL form No. CG 00 01 or equivalent coverage, including provisions for defense of additional insureds. Policy limits shall be no less than two million dollars ($2,000,000) per occurrence for all coverages and five million dollars ($5,000,000) general aggregate. City and its officers, employees and agents shall be added as additional insureds using ISO form CG 20 10 or equivalent if available from the insurer and reasonably acceptable to the City. Coverage shall apply on a primary non-contributing basis in relation to any other insurance or self-insurance, primary or excess, available to City or any officer, employee or agent of City until the warranty period specified in this Agreement expires.

3. Umbrella Liability Insurance. Umbrella Liability Insurance (or, at Subdivider's election, Excess Liability Insurance) (over primary) shall apply to bodily injury/property damage, personal injury/advertising injury, at a minimum. Coverage shall be at least as broad as any underlying coverage. Coverage shall be provided on a "pay on behalf" basis. There shall be no cross liability exclusion. Policy limits shall be not less than five million dollars ($5,000,000) per occurrence and in the aggregate, including any limits required in the underlying policies. The policy shall have a starting

date no later than and an ending date no earlier than those of the underlying coverages. Subdivider may determine the layering of primary and excess liability insurance provided that if such layering differs from that described here, the actual coverage program meets the minimum total required limits.

4. Workers Compensation Insurance. Workers' Compensation/Employer's Liability shall provide workers' compensation statutory benefits as required by law. Employer's liability limits shall be no less than one million dollars per accident or disease. Employer's liability coverage shall be scheduled under any umbrella or excess liability policy described above. Unless otherwise agreed, this policy shall be endorsed to waive any right of subrogation as respects City, its employees or agents.

5. Business Auto Coverage. Business Auto Coverage for vehicles owned, operated or maintained in any way connected with the project, shall be written on ISO Business Auto Coverage form CA 00 01 or the equivalent, including symbol (1) (any Auto). If Subdivider (or Contractor) does not own any vehicles, this requirement may be satisfied by a non-owned vehicle endorsement to the general and umbrella liability policies. Limits shall be no less than one million dollars ($1,000,000) per accident. This policy shall be scheduled as underlying insurance to the umbrella or excess liability policy required above for a total limit of no less than five million dollars ($5,000,000) each accident.

C. Provisions Pertaining to Insurance Provided by Subdivider

1. All insurance coverage and limits provided pursuant to this Agreement shall apply to the full extent of the policies involved, available or applicable. Nothing contained in this Agreement or any other agreement relating to City or its operations limits the application of such insurance coverage.

2. Requirements of specific coverage features or limits contained in this Section are not intended as a limitation on coverage, limits or other requirements, or a waiver of any coverage normally provided by any insurance. Specific reference to a given coverage feature is for purposes of clarification only and is not intended by any Party to be all inclusive, or to the exclusion of other coverage, or a waiver of any type.

3. All general or auto liability insurance coverage provided pursuant to this Agreement, or any other agreements pertaining to the performance of this Agreement, shall not prohibit Subdivider, and Subdivider's employees, or agents, from waiving the right of subrogation prior to a loss. Subdivider waives its right of subrogation against City.

4. None of the policies required herein shall be in compliance with these requirements if they include any limiting endorsement that has not been first submitted to City and approved in writing by the City.

5. Unless otherwise approved by City, Subdivider's insurance and insurance provided by any contractor or subcontractor relating to the construction of the Improvements shall be written by insurers authorized to do business in the State of California and with a minimum "Best's" Insurance Guide rating of at least "A-:VII." Self-insurance will not comply with these insurance specifications unless expressly approved in writing by the City.

6. In the event any policy of insurance required under this Agreement does not comply with these requirements and Subdivider does not cure the non-compliance within thirty (30) days after written notice from City (or Subdivider does not provide reasonable evidence of such cure within such period), or if the insurance is canceled and not replaced, City has the right but not the duty to obtain the insurance it deems necessary and any reasonable premium paid by City will be promptly reimbursed by Subdivider.

7. Subdivider agrees to provide evidence of the insurance required herein, satisfactory to City, consisting of certificate(s) of insurance evidencing all of the coverages required and an additional insured endorsement to Subdivider's general liability and umbrella liability policies using ISO Form CG 20 10 11 85. Certificate(s) are to reflect that the insurer will provide 30 days' notice of any cancellation of coverage and policies are to have a "cancellation endorsement" to the same effect. Subdivider agrees to provide copies of any endorsements modifying coverage in any way upon request from City.

8. Subdivider shall provide proof that policies of insurance required herein expiring during the term of this Agreement have been renewed or replaced with other policies providing at least the same coverage.

9. Any actual or alleged failure on the part of City or any other additional insured under these requirements to obtain proof of insurance required under this Agreement in no way waives any right or remedy of City or any additional insured, in this or any other regard.

10. Subdivider agrees to require all subcontractors or other parties (but not including a general contractor) hired for this project to construct the Improvements to purchase and maintain insurance for general liability (minimum limit $1,000,000 per occurrence), automobile liability ($1,000,000 per accident) and workers' compensation (statutory benefits). Prior to the issuance of the Certificate of Completion for each Phase, Subdivider shall, upon request by City, provide the City with copies of all insurance policies, certificates and endorsements related to such Phase.

11. Subdivider agrees to monitor and review all coverage required by this Section and assumes all responsibility for ensuring that such coverage is provided as required here. Subdivider agrees to obtain certificates evidencing such coverage. Subdivider agrees that upon request, all agreements with subcontractors or others with whom Subdivider contracts with on behalf of City, and all certificates of insurance

obtained in compliance with this paragraph will be submitted to City for review upon request by City. Failure of City to request copies of such documents will not impose any liability on City, or its employees.

12. Subdivider agrees to require that no contract used by any general contractor or subcontractor in connection with construction of the Improvements, or contracts Subdivider enters into on behalf of City, will reserve the right to charge back to City the cost of insurance required by this Agreement.

13. Where appropriate (such as in the case of automobile insurance coverages), coverage will not be limited to the specific location designated as the Property.

14. Subdivider agrees to provide notice to City of any claim or loss against Subdivider that includes City as a defendant promptly after Subdivider receives written notice or obtains knowledge thereof. City assumes no obligation or liability by such notice, but has the right (but not the duty) to monitor the handling of any such claim or claims if they are likely to involve City. City agrees to provide similar notice to Subdivider of any such claims it is notified of respecting the Property.

15. Subdivider agrees not to attempt to avoid its defense and indemnity obligations to City, and its officers, employees, agents by using as a defense Subdivider's statutory immunity under workers' compensation and similar statutes.

16. Subdivider agrees to ensure that coverage provided to meet these requirements is applicable separately to each insured and that there will be no cross liability exclusions that preclude coverage for suits between Subdivider and City or between City and any other insured or Named Insured under the policy, or between City and any Party associated with City or its employees.

17. If Subdivider or any contractor or subcontractor is a Limited Liability Company, general liability coverage must apply so that the Limited Liability Company and its Managers, Members, Affiliates, and their employees are insureds.

18. Subdivider shall require General Contractor to maintain commercial general liability, and if necessary, commercial umbrella liability insurance with a limit of not less than $15,000,000 for each occurrence, until the warranty period specified in this Agreement expires.

19. Subdivider agrees to obtain and provide to City evidence of professional liability coverage for Architects, Engineers or other design professionals working on the Improvements. The limit of liability required is subject to City approval, but in no event to be less than $1,000,000 per claim and in the aggregate, and Subdivider shall use reasonable efforts to require and cause such professionals to maintain coverage with respect to each occurrence for at least three years following substantial completion of the work and, in the event Subdivider is unable to do so, Subdivider shall promptly inform the City of the scope of such efforts and the reasons that it was unable to do so. If

Subdivider requests that the City approve a lower limit for any particular design professional Subdivider seeks to employ on the Improvements, City will evaluate each such request based on City's perception of liability exposure associated with the work that would be performed by that design professional.

20. To the extent a particular coverage or policy form or specification is not reasonably available from Subdivider's insurer or would result in an additional premium that is extraordinary or unreasonably disproportionate to the premium for the policy as a whole, then Subdivider shall provide substantially similar coverage reasonably acceptable to City for which the cost is not extraordinary or unreasonably disproportionate.

9. OWNERSHIP OF THE IMPROVEMENTS

A. Ownership of all or any category of the Improvements constructed and installed by the Subdivider pursuant to this Agreement and shown on the Map to be dedicated to the public shall vest, as applicable, in the City (or other specified governmental agency) upon acceptance of said Improvements by the City. The acceptance of the Improvements shall either be shown by a certificate on the Final Map or by subsequent resolution accepting the Improvements adopted by the City pursuant to Government Code Section 66477.2 and recorded with the County Recorder or by other writing.

B. The Subdivider shall at all times prior to the acceptance of the Improvements by the City, give good and adequate warning to the public of each and every dangerous and defective condition caused by the construction of the Improvements and shall take all steps reasonably necessary to protect the public from such dangerous or defective conditions. The Subdivider agrees and understands that until acceptance of the Improvements by the City in writing, each Improvement and Improvement area that is offered for dedication shall be under the charge of the Subdivider, and the Subdivider may close all or a portion of any street or area whenever necessary to protect the public during the construction of the Improvements.

10. PREPARATION AND RECORDATION OF CC&RS.

A. The Subdivider shall establish a Homeowners Association for the residential areas of the Final Map owned by Subdivider, and to pay all costs associated with the creation of the associations.

B. The Subdivider shall prepare and record Covenants, Conditions, and Restrictions (CC&Rs) which obligate each homeowners association to provide for maintenance of the shared facilities, improvements, and landscaping within the boundaries of the associations in perpetuity in accordance with the Development Agreement and conditions of approval. The CC&Rs shall describe the homeowners association and the City's responsibilities and rights, and shall be subject to the approval of the City prior to recordation.

C. The Subdivider shall implement applicable provisions of the Mitigation Monitoring and Reporting Program.

11. DEFAULT AND BREACH BY THE SUBDIVIDER AND REMEDIES OF THE CITY

A. Upon the occurrence of any of the following events, the Subdivider shall be deemed to be in default under this Agreement:

1. Subject to any time extensions granted in accordance with Section 4, failure to complete construction and installation of the Improvements or any of them by the completion date set forth above in the Subdivision Reference Data;

2. Failure to promptly correct or cure any defect in the Improvements or any of them (other than a City Directive) during the one-year guarantee and warranty period as required by Section 3.A or failure to commence correction or cure of any such defect or failure to diligently prosecute same to completion, in each instance following receipt by Subdivider of written notice that such defect exists;

3. Subject to any time extensions granted in accordance with Section 4, failure to perform substantial construction work of the Improvements or any of them, after commencement of work on same, for a period of thirty (30) days after Subdivider's receipt of written notice thereof from the City;

4. Insolvency, appointment of a receiver, or the filing of any petition in bankruptcy, whether voluntary or involuntary, and such is not cured or discharged within a period of thirty (30) days;

5. Commencement of a foreclosure action against the Subdivision or any portion thereof, or any conveyance by the Subdivider in lieu or in avoidance of foreclosure, within thirty (30) days after receipt by Subdivider of written notice thereof from the City; or

6. Failure to perform any other obligations in accordance with the terms and provisions of this Agreement within thirty (30) days after receipt by Subdivider of written notice thereof from the City.

B. City reserves to itself all remedies available to it at law or in equity for any breach of Subdivider's obligations under this Agreement. City shall have the right, without limitation of other rights or remedies, after written notice to Subdivider and a reasonable opportunity for Subdivider to cure any such alleged default, to draw upon or utilize any improvement security furnished hereunder to complete the Improvements or otherwise mitigate City's damages in the event of Subdivider's default.

C. Following Subdivider's receipt of written notice of alleged default and failure by Subdivider to promptly commence the cure of any alleged default and to diligently prosecute such cure to completion, the City may serve written notice of any such default upon the surety on any corporate surety bond furnished as improvement security hereunder, and request that said surety take over and complete the Improvements herein specified. If such surety, within thirty (30) days after service of such notice of default, does not give the City

written notice of its intention to perform this Agreement, or does not commence such performance within thirty (30) days after notice to the City of such intention to perform, the City may take over the work and prosecute the same to completion, by contract or by any other method the City deems advisable, for the account and at the expense of the Subdivider and its surety.

D. Subdivider acknowledges that the Estimated Total Costs and Improvement Security amounts set forth herein may not reflect the actual cost of construction or installation of the Improvements, and, consequently, City's damages for Subdivider's default shall be measured by the actual cost of completing the required Improvements. If the damages incurred by the City in taking over and completing the Improvements exceeds the principal amount of the improvement security, then the Subdivider shall reimburse the City in the amount of such excess damages.

E. Following Subdivider's receipt of written notice of alleged default and failure by Subdivider to promptly commence the cure of any alleged default and to diligently prosecute such cure to completion, City may, without liability for so doing, take possession of, and utilize in completing the Improvements, such materials, appliances, plant and other property belonging to Subdivider as may be on the site of the work and necessary for the performance of the work. Subdivider hereby consents to such entry by the City and its representatives, including contractors, following written notice to Subdivider upon the real property in the Subdivision owned by Subdivider and necessary for City to enter or access under this Agreement, in the event the City elects to maintain or complete the work on the Improvements following Subdivider's default.

F. Subdivider acknowledges and agrees that approval of the Final Map for the Subdivision conferred substantial rights upon the Subdivider, including the right to sell, lease or finance lots within the Subdivision, and that such approval constitutes the final act necessary to permit the division of land within the Subdivision. As a result, City will be damaged to the extent of the cost of construction or installation of the Improvements upon Subdivider's failure to perform its obligations under this Agreement, which failure is not promptly remedied by sureties or by Subdivider.

G. The City's failure to take an enforcement action with respect to a default, or to declare a default or breach, shall not be construed as a waiver of that default or breach or any subsequent default or breach of the Subdivider.

H. If City sues to compel Subdivider's performance of this Agreement, or to recover damages or costs incurred in completing or maintaining the work on the Improvements, and is the prevailing party, Subdivider agrees to pay all reasonable attorneys' fees and other costs and expenses of litigation incurred by the City in connection therewith, even if Subdivider subsequently resumes and completes the work.

12. RELATIONSHIP OF THE PARTIES

Neither Subdivider, nor any of Subdivider's contractors, employees or agents, are or shall be deemed to be, agents of the City in connection with the performance of Subdivider's obligations under this Agreement.

13. ASSIGNMENT

A. Subdivider shall not assign this Agreement, or any portion thereof without the prior written consent of the City in accordance with the Development Agreement. Any attempted or purported assignment in violation of this subparagraph A shall be null and void and shall have no force or effect.

B. The sale or other disposition of the Subdivision shall not relieve Subdivider of its obligations hereunder. If Subdivider intends to sell the Subdivision, or any portion thereof (except for the sale of individual lots with homes to individual purchasers), to any other person or entity, the Subdivider may request an assignment or novation of this Agreement and a substitution of improvement security. Upon the City's approval of the assignment or novation and substitution of improvement security, the Subdivider may request a release or reduction of the improvement security furnished pursuant to this Agreement.

14. NOTICES

All notices required or provided for in this Agreement shall be in writing and delivered in person or by mail, postage prepaid, and addressed as follows:

If to the City:	Art Vela Director of Public Works/City Engineer City of Banning 99 E. Ramsey Drive Banning, California 92220
If to the Subdivider:	To the address set forth above in the Subdivision Reference Data, or to such other address as may subsequently be designated in written notice to the City.

Notice shall be effective on the date that it is delivered in person, or, if mailed, three (3) days after the date of deposit in the United States Mail.

15. ENTIRE AGREEMENT

This Agreement constitutes the entire agreement of the parties with respect to its subject matter. All modifications, amendments, or waivers of any terms of this Agreement shall be in writing and signed by the duly authorized representatives of the parties. In the case of the City, the duly authorized representative, unless otherwise specified herein, shall be the City Engineer.

16. SEVERABILITY

The provisions of this Agreement are severable. If any portion of this Agreement is held invalid by a court of competent jurisdiction, the remainder of the Agreement shall remain in full force and effect.

17. INCORPORATION OF SUBDIVISION REFERENCE DATA AND RECITALS

The Subdivision Reference Data and the Recitals are incorporated into this Agreement.

18. GOVERNING LAW

This Agreement shall be governed by the laws of the State of California.

19. EFFECTIVE DATE OF THE AGREEMENT

This Agreement shall be and become effective as of the date that it is executed by a duly authorized officer or employee of the City, it being the intention of the parties that the Subdivider shall first execute this Agreement and thereafter submit it to the City. The City shall insert the effective date in the Subdivision Reference Data in all counterparts of this Agreement and shall transmit a fully executed counterpart to the Subdivider.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their respective officers, thereunto duly authorized, as of the dates set forth below their respective signatures.

[Note: All signatures must be acknowledged by a notary public and the acknowledgement must be attached. If signed by a Corporation, the signatures of two Corporate officers are required, unless a resolution of the Corporation's Board of Directors is provided indicating that the signature of the one signatory is sufficient to bind the Corporation.]

SUBDIVIDER

By: _____
Print Name: Michael C. Taylor
Title: Division President

Date: 1·29·25

CITY

CITY OF BANNING

_____
MAYOR

ATTEST:

_____ (SEAL)

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ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES NOTARY PUBLIC - CALIFORNIA COMMISSION # 2466323 RIVERSIDE COUNTY My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

CITY CLERK

Approved as to form:

_____

CITY ATTORNEY

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[This page for acknowledgments.]

IN THE CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

TRACT NO. 37389-6

BEING A SUBDIVISION OF A PORTION OF REMAINDER LOT 2, OF TRACT NO. 37389-1 AS SHOWN BY MAP ON FILE IN BOOK 485, PAGES 68 THROUGH 75, INCLUSIVE, OF MAPS IN THE OFFICE OF THE COUNTY RECORDER OF THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, LYING WITHIN SECTION 1, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SAN BERNARDINO MERIDIAN.

DARYL J. CHRISTIAN, L.S. 8554 MDS CONSULTING DECEMBER, 2024

THIS SUBDIVISON CONTAINS

NUMBERED LOTS: 84
LETTERED LOTS: 8
GROSS AREA: 18.69 ACRES

RECORDER'S STATEMENT

FILED THIS _____ DAY OF_____ , 20 __
AT_____M. IN BOOK _____ OF MAPS,
AT PAGES _____ AT THE REQUEST OF THE CLERK OF THE CITY OF BANNING

NO. _____

FEE _____

PETER ALDANA, COUNTY ASSESSOR - CLERK - RECORDER

BY: _____ DEPUTY

SUBDIVISION GUARANTEE BY:
FIRST AMERICAN TITLE INSURANCE COMPANY

OWNER'S STATEMENT

WE HEREBY STATE THAT WE ARE THE OWNERS OF THE LAND INCLUDED WITHIN THE SUBDIVISION SHOWN HEREON, THAT WE ARE THE ONLY PERSONS WHOSE CONSENT IS NECESSARY TO PASS A CLEAR TITLE TO SAID LAND, THAT WE CONSENT TO THE MAKING AND RECORDING OF THIS SUBDIVISION AS SHOWN WITHIN THE DISTINCTIVE BORDER LINE.

WE HEREBY DEDICATE IN FEE TO THE CITY OF BANNING, LOT G, FOR PUBLIC UTILITY PURPOSES.

THE REAL PROPERTY DESCRIBED BELOW IS DEDICATED AS AN EASEMENT FOR PUBLIC PURPOSES:

1. WE HEREBY DEDICATE TO THE CITY OF BANNING LOTS "A" THROUGH "F", INCLUSIVE, FOR STREET AND PUBLIC UTILITY PURPOSES.
2. WE HEREBY DEDICATE TO THE CITY OF BANNING A NON-EXCLUSIVE USE EASEMENT LYING ADJACENT TO LOTS "A" THROUGH "E", INCLUSIVE, AS SHOWN HEREON. THE DEDICATION IS FOR PUBLIC UTILITY PURPOSES.
3. WE HEREBY DEDICATE TO THE CITY OF BANNING THE VARIABLE WIDTH NON-EXCLUSIVE USE EASEMENTS LYING ADJACENT TO THE SIDE LINES OF LOTS 1-84, INCLUSIVE, AS SHOWN HEREON. THE DEDICATION IS FOR PUBLIC UTILITY PURPOSES.
4. WE HEREBY DEDICATE TO THE CITY OF BANNING THE VARIABLE WIDTH NON-EXCLUSIVE USE EASEMENTS LYING ADJACENT TO THE REAR LINES OF LOTS 19-33, INCLUSIVE, AS SHOWN HEREON. THE DEDICATION IS FOR PUBLIC UTILITY PURPOSES.

WE ALSO HEREBY RESERVE FOR THE SOLE BENEFIT OF OURSELVES, OUR SUCCESSORS, ASSIGNEES AND LOT OWNERS WITHIN THIS TRACT MAP:

1. VARIABLE WIDTH NON-EXCLUSIVE USE EASEMENTS FOR PRIVATE DRAINAGE AND MAINTENANCE PURPOSES, LYING WITHIN LOTS 19, 20, 22, 23, 24, 26, 27 AND 28, AS SHOWN HEREON.
2. LOT "H" FOR OPEN SPACE, LANDSCAPING AND MAINTENANCE PURPOSES.

TRI POINTE HOMES IE-SD, INC., A CALIFORNIA CORPORATION, FORMERLY KNOWN AS PARDEE HOMES, A CALIFORNIA CORPORATION

NAME: MICHAEL C. TAYLOR
TITLE: DIVISION PRESIDENT

NOTARY ACKNOWLEDGMENT

A NOTARY PUBLIC OR OTHER OFFICER COMPLETING THIS CERTIFICATE VERIFIES ONLY THE IDENTITY OF THE INDIVIDUAL WHO SIGNED THE DOCUMENT TO WHICH THIS CERTIFICATE IS ATTACHED, AND NOT THE TRUTHFULNESS, ACCURACY, OR VALIDITY OF THAT DOCUMENT.

STATE OF California)
) SS
COUNTY OF Riverside)

ON 1.29 2025 BEFORE ME, Edelmira Gonzales A NOTARY PUBLIC, PERSONALLY APPEARED Michael C. Taylor
WHO PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE, TO BE THE PERSON(S) WHOSE NAME(S) IS/ARE SUBSCRIBED TO THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE/SHE/THEY EXECUTED THE SAME IN HIS/HER/THEIR AUTHORIZED CAPACITY(IES), AND THAT BY HIS/HER/THEIR SIGNATURE(S) ON THE INSTRUMENT THE PERSON(S), OR THE ENTITY UPON BEHALF OF WHICH THE PERSON(S) ACTED, EXECUTED THE INSTRUMENT.

I CERTIFY UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA THAT THE FOREGOING PARAGRAPH IS TRUE AND CORRECT.

WITNESS MY HAND

Edelmira Gonzales
SIGNATURE

Edelmira Gonzales
PRINT NAME

MY PRINCIPAL PLACE OF BUSINESS IS IN Riverside COUNTY

MY COMMISSION EXPIRES 10.22.27

My Commission# 24660323

TAX COLLECTOR'S CERTIFICATE

I HEREBY CERTIFY THAT ACCORDING TO THE RECORDS OF THIS OFFICE, AS OF THIS DATE, THERE ARE NO LIENS AGAINST THE PROPERTY SHOWN ON THE WITHIN MAP FOR UNPAID STATE, COUNTY, MUNICIPAL OR LOCAL TAXES OR SPECIAL ASSESSMENTS COLLECTED AS TAXES, EXCEPT TAXES OR SPECIAL ASSESSMENTS COLLECTED AS TAXES NOW A LIEN, BUT NOT YET PAYABLE, WHICH ARE ESTIMATED TO BE $ 300.00 .

DATED: JANUARY 29 , 20 25.
MATTHEW JENNINGS, COUNTY TAX COLLECTOR

BY: _____ , DEPUTY

TAX BOND CERTIFICATE

I HEREBY CERTIFY THAT A BOND IN THE SUM OF $ 300.00 HAS BEEN EXECUTED AND FILED WITH THE BOARD OF SUPERVISORS OF THE COUNTY OF RIVERSIDE, CALIFORNIA, CONDITIONED UPON THE PAYMENT OF ALL TAXES, STATE, COUNTY, MUNICIPAL OR LOCAL, AND ALL SPECIAL ASSESSMENTS COLLECTED AS TAXES, WHICH AT THE TIME OF FILING OF THIS MAP WITH THE COUNTY RECORDER ARE A LIEN AGAINST SAID PROPERTY BUT NOT YET PAYABLE AND SAID BOND HAS BEEN DULY APPROVED BY SAID BOARD OF SUPERVISORS.

DATED: JANUARY 29 , 20 25

CASH OR SURETY TAX BOND
MATTHEW JENNINGS, COUNTY TAX COLLECTOR

BY: _____ , DEPUTY

SIGNATURE OMISSIONS: SEE SHEET 2

EASEMENT NOTES: SEE SHEET 4

SURVEYOR'S STATEMENT

THIS MAP WAS PREPARED BY ME OR UNDER MY DIRECTION AND IS BASED UPON A FIELD SURVEY IN CONFORMANCE WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCE AT THE REQUEST OF TRI POINTE HOMES IN DECEMBER, 2020. I HEREBY STATE THAT ALL MONUMENTS ARE OF THE CHARACTER AND OCCUPY THE POSITIONS INDICATED, OR THAT THEY WILL BE SET IN ACCORDANCE WITH THE TERMS OF THE MONUMENT AGREEMENT FOR THE MAP AND THAT THE MONUMENTS ARE, OR WILL BE, SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED, AND THAT THIS FINAL MAP SUBSTANTIALLY CONFORMS TO THE CONDITIONALLY APPROVED TENTATIVE MAP. THIS SURVEY IS TRUE AND COMPLETE AS SHOWN.

DATE: 1-16 , 2025.

DARYL J. CHRISTIAN L.S. 8554

PROFESSIONAL LAND SURVEYOR — DARYL J. CHRISTIAN — LS 8554 — STATE OF CALIFORNIA

CITY ENGINEER'S STATEMENT

I HEREBY STATE THAT I HAVE EXAMINED THE WITHIN MAP, THAT THE SUBDIVISION SHOWN THEREON IS SUBSTANTIALLY THE SAME AS IT APPEARED ON THE TENTATIVE MAP OF TRACT NO. 37389 WHICH WAS APPROVED BY THE CITY OF BANNING CITY COUNCIL ON JUNE 22, 2021, AND ANY APPROVED ALTERATIONS THEREOF; THAT ALL PROVISIONS OF THE SUBDIVISION MAP ACT (DIVISION 2 OF TITLE 7 OF THE CALIFORNIA GOVERNMENT CODE) AND CHAPTER 22 OF THE BANNING MUNICIPAL CODE APPLICABLE AT THE TIME OF THE APPROVAL OF THE TENTATIVE MAP HAVE BEEN COMPLIED WITH.

DATE: _____ , 20___ .

NATHAN C. SMITH, RCE 74754
CITY ENGINEER, CITY OF BANNING

REGISTERED PROFESSIONAL ENGINEER — NATHAN C. SMITH — No. 74754 — CIVIL — STATE OF CALIFORNIA

CITY SURVEYOR'S STATEMENT

I HEREBY STATE THAT I HAVE EXAMINED THIS MAP AND THAT SAID MAP IS TECHNICALLY CORRECT.

DATE: 2-3 , 2025.

BY: ROBERT C. OLLERTON, PLS 7731
ENGINEERING RESOURCES OF SOUTHERN CALIFORNIA

PROFESSIONAL LAND SURVEYOR — ROBERT C. OLLERTON — 7731 — STATE OF CALIFORNIA

COMMUNITY DEVELOPMENT DIRECTOR'S STATEMENT

THE TENTATIVE MAP WAS APPROVED BY THE CITY COUNCIL ON JUNE 22, 2021.

DATED: _____

DAVID A. NEWELL
COMMUNITY DEVELOPMENT DIRECTOR

CITY ACCEPTANCE CERTIFICATE

I, _____ CITY CLERK AND EX-OFFICIO CLERK OF THE CITY COUNCIL OF THE CITY OF BANNING, STATE OF CALIFORNIA, DO HEREBY CERTIFY THAT THE SAID CITY COUNCIL AT ITS REGULAR MEETING HELD ON THE _____ DAY OF _____ , 20 ___ , DULY APPROVED THE WITHIN SUBDIVISION, AND ACCEPTED ON BEHALF OF THE PUBLIC AS OFFERED FOR DEDICATION:

LOT G , IN FEE, FOR PUBLIC UTILITY PURPOSES.

1. LOTS "A" THROUGH "F", INCLUSIVE, FOR STREET AND PUBLIC UTILITY PURPOSES, SUBJECT TO IMPROVEMENT.
2. THE NON-EXCLUSIVE USE EASEMENTS LYING ADJACENT TO LOTS "A" THROUGH "E", INCLUSIVE, AS SHOWN HEREON, FOR PUBLIC UTILITY PURPOSES.
3. THE VARIABLE WIDTH NON-EXCLUSIVE USE EASEMENTS LYING ADJACENT TO THE SIDE LINES OF LOTS 1 THROUGH 84, INCLUSIVE, FOR PUBLIC UTILITY PURPOSES.
4. THE VARIABLE WIDTH NON-EXCLUSIVE USE EASEMENTS LYING ADJACENT TO THE REAR LINES OF LOTS 19 THROUGH 33, INCLUSIVE, FOR PUBLIC UTILITY PURPOSES.

DATED: _____

BY: _____
CITY CLERK

I:\89408\MAPPING\TR 37389-6 MAP SHTS 1-16-2025

TRACT NO. 37389-6

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DARYL J. CHRISTIAN, L.S. 8554 MDS CONSULTING DECEMBER, 2024

EASEMENT NOTES:

A EASEMENT FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES IN FAVOR OF SOUTHERN SIERRAS POWER COMPANY, RECORDED DECEMBER 1, 1919 IN BOOK , PAGE 40, OF PATENTS. LOCATION CANNOT BE DETERMINED FROM RECORD INFORMATION.

B RIGHT OF WAY FOR DITCHES AND CANALS IN FAVOR THE UNITED STATES OF AMERICA, RECORDED DECEMBER 1, 1919 IN BOOK 8, PAGE 40, OF PATENTS. LOCATION CANNOT BE DETERMINED FROM RECORD INFORMATION.

(C) EASEMENT FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES, IN FAVOR OF HE CITY OF BANNING AND CALIFORNIA WATER AND TELEPHONE COMPANY, RECORDED FEBRUARY 4, 1960 AS INSTRUMENT NO. 9894 OF OFFICIAL RECORDS.

[1] INDICATES VARIABLE WIDTH NON-EXCLUSIVE EASEMENTS OVER LOTS "A" THROUGH "F", INCLUSIVE, FOR STREET AND PUBLIC UTILITY PURPOSES, DEDICATED TO THE CITY OF BANNING, AS SHOWN HEREON.

[2] INDICATES NON-EXCLUSIVE USE EASEMENTS, LYING ADJACENT TO LOTS "A" THROUGH "E", INCLUSIVE, DEDICATED TO THE CITY OF BANNING FOR PUBLIC UTILITY PURPOSES, AS SHOWN HEREON.

[3] INDICATES VARIABLE WIDTH NON-EXCLUSIVE USE EASEMENTS, LYING ADJACENT TO THE SIDE LINES OF LOTS 1 THROUGH 84, INCLUSIVE, DEDICATED TO THE CITY OF BANNING FOR PUBLIC UTILITY PURPOSES, AS SHOWN HEREON.

[4] INDICATES VARIABLE WIDTH NON-EXCLUSIVE USE EASEMENTS, LYING ADJACENT TO THE REAR LINES OF LOTS 19 THROUGH 33, INCLUSIVE, DEDICATED TO THE CITY OF BANNING FOR PUBLIC UTILITY PURPOSES, AS SHOWN HEREON.

[5] INDICATES VARIABLE WIDTH PRIVATE NON-EXCLUSIVE USE EASEMENTS, LYING WITHIN LOTS 19, 20, 22, 23, 24, 26, 27 AND 28, RESERVED HEREON FOR PRIVATE DRAINAGE AND MAINTENANCE PURPOSES, AS SHOWN HEREON.

SIGNATURE OMISSIONS:

PURSUANT TO SECTION 66436(a)(3) OF THE SUBDIVISION MAP ACT, THE SIGNATURES OF THE FOLLOWING OWNERS OF EASEMENTS AND/OR OTHER INTERESTS HAVE BEEN OMITTED, AS THEIR INTERESTS CANNOT RIPEN INTO FEE.

SOUTHERN SIERRAS POWER COMPANY, HOLDER OF AN EASEMENT FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES, RECORDED DECEMBER 1, 1919 IN BOOK 8, PAGE 40 OF PATENTS.

UNITED STATES OF AMERICA, HOLDER OF A RIGHT OF WAY FOR DITCHES AND CANALS AS RESERVED IN THE PATENT RECORDED DECEMBER 1, 1919 IN BOOK 8, PAGE 40 OF PATENTS.

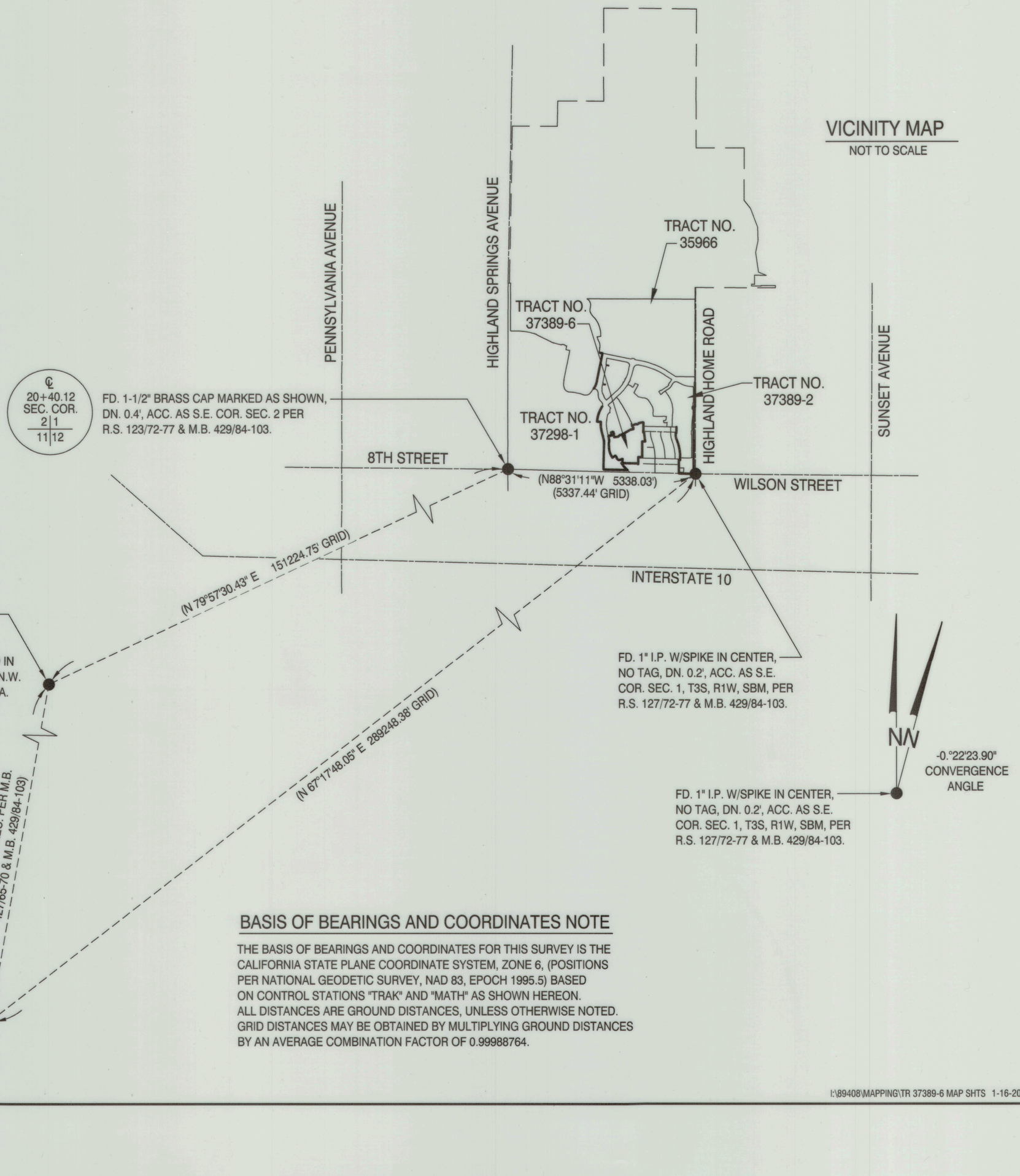
CALIFORNIA WATER & TELEPHONE COMPANY AND THE CITY OF BANNING, HOLDER OF AN EASEMENT FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES RECORDED FEBRUARY 4, 1960 AS INSTRUMENT NO. 9894 OF OFFICIAL RECORDS.

SOILS REPORT:

PURSUANT TO SECTION 66490 OF THE SUBDIVISION MAP ACT, A PRELIMINARY SOILS REPORT, PREPARED BY GEOCON WEST, INC., PROJECT NO. T2305-22-13, DATED JANUARY 25, 2021, IS ON FILE WITH THE CITY OF BANNING, ENGINEERING DEPARTMENT.

VICINITY MAP

NOT TO SCALE



BASIS OF BEARINGS AND COORDINATES NOTE

THE BASIS OF BEARINGS AND COORDINATES FOR THIS SURVEY IS THE CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 6, (POSITIONS PER NATIONAL GEODETIC SURVEY, NAD 83, EPOCH 1995.5) BASED ON CONTROL STATIONS "TRAK" AND "MATH" AS SHOWN HEREON. ALL DISTANCES ARE GROUND DISTANCES, UNLESS OTHERWISE NOTED. GRID DISTANCES MAY BE OBTAINED BY MULTIPLYING GROUND DISTANCES BY AN AVERAGE COMBINATION FACTOR OF 0.99988764.

I:\89408\MAPPING\TR 37389-6 MAP SHTS 1-16-2025

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DARYL J. CHRISTIAN, L.S. 8554 MDS CONSULTING DECEMBER, 2024

SCALE: 1" = 100'

100 50 0 100 200 300

GRAPHIC SCALE

BOUNDARY SURVEY

CURVE DATA			
#	DELTA	RADIUS	LENGTH
C1	(02°41'25"	772.00'	36.25' R1)
C2	(03°55'36"	772.00'	52.91' R2)
C3	(05°10'17"	828.00'	74.73' R2)
C4	(13°53'18"	272.00'	65.93' R3)
C5	(00°19'57"	800.00'	4.64' R3)
C6	(17°41'47"	272.00'	84.01' R3)
C7	(20°07'43"	100.00'	35.13' R1)
C8	(90°30'21"	66.00'	104.26' R1)
C9	(10°17'49"	100.00	17.97' R1)

COURSE DATA			COURSE DATA		
#	BEARING	DISTANCE	#	BEARING	DISTANCE
L1	(N 29°55'04" W	63.38' R1)	L19	(N 76°44'45" E	28.00' R3)
L2	(N 77°33'53" E RAD	101.00' R1)	L20	(N 76°24'48" E	28.00' R3)
L3	(N 74°52'28" E RAD	99.76' R1)	L21	(N 29°57'05" E	20.67' R3)
L4	(N 70°56'52" E	56.00' R2)	L22	(N 73°29'22" E	34.38' R3)
L5	(N 62°35'25" W	20.67' R2)	L23	(N 88°48'51" W	14.00' R3)
L6	(N 16°07'42" W	56.00' R2)	L24	(N 01°28'15" E	60.00' R1)
L7	(N 30°20'00" E	20.67' R2)	L25	(N 88°30'49" E	25.00' R1)
L8	(N 42°59'00" E	54.77' R2)	L26	(N 88°30'49" E	86.33' R1)
L9	(N 71°51'17" E	52.57' R2)	L27	(N 88°31'39" W	109.66' R1)
L10	(N 67°34'33" E	52.75' R2)	L28	(N 88°31'11" W	10.00' R1)
L11	(N 63°17'16" E	52.75' R2)	L29	(N 00°13'14" E	20.00' R1)
L12	(N 59°53'58" E	49.07' R2)	L30	(N 01°28'49" E	111.38' R1)
L13	(N 79°27'25" E	87.62' R2)	L31	N 67°29'37" E	40.99'
L14	(N 06°09'41" W	42.84' R2)		(N 67°29'58" E	40.99' R1)
L15	(N 30°23'56" W RAD	67.70' R2)	L32	(N 22°00'02" W	40.99' R1)
L16	(N 59°36'04" E	7.72' R3)	L33	(N 32°17'51" W	34.30' R1)
L17	(N 73°29'22" E	45.77' R3)	L34	(N 57°42'09" E	103.00' R1)
L18	(N 59°52'56" W	21.81' R3)	L35	(N 88°31'11" W	25.77' R1)

SURVEYOR'S NOTES

● — INDICATES FOUND 1" I.P., L.S. 8554, FLUSH, TO BE SET PER R1–TRACT NO. 37389–1, M.B 485/68–75, R2–TRACT NO. 37389–5 M.B. 485/95–103, OR R3–TRACT NO. 37389–4, M.B._____, AS SHOWN.

⊙ — INDICATES FOUND SPK. & WASHER, LS 8554, FLUSH, PER (R1), (R2) OR (R3), UNLESS OTHERWISE NOTED.

1" IRON PIPE, TAGGED L.S. 8554 FLUSH IN DIRT OR SPIKE & WASHER, STAMPED L.S. 8554 FLUSH IN ASPHALT, OR LEAD, TACK AND TAG, L.S. 8554, FLUSH IN CONCRETE OR TOP OF WALL, TO BE SET AT ALL REAR LOT CORNERS, CENTERLINE INTERSECTIONS, AND POINTS OF CONTROL, UNLESS OTHERWISE NOTED.

NAIL AND TAG, LS 8554 TO BE SET IN TOP OF CURB AT THE PROLONGATION OF SIDE LOT LINES IN LIEU OF FRONT LOT CORNERS, UNLESS OTHERWISE NOTED.

(R1) – INDICATES REC. & MEAS. DATA PER TRACT NO. 37389–1, M.B. 485/68–75
(R2) – INDICATES REC. & MEAS. DATA PER TRACT NO. 37389–4, M.B. _____
(R3) – INDICATES REC. & MEAS. DATA PER TRACT NO. 37389–5, M.B. 485/95–103
(R4) – INDICATES REC. & MEAS. DATA PER TRACT NO. 35966, M.B. 473/94–107

THIS TRACT MAP CONTAINS 84 NUMBERED LOTS AND 8 LETTERED LOTS.

THIS TRACT MAP CONTAINS 18.69 ACRES GROSS.

TRACT No. 37389-5
M.B. 485/95-103

TRACT No. 37389-4
M.B. _____

PLUMWOOD LANE

LARKSPUR ROAD

ACC. AS S'LY BDRY., TR. 37389–5, M.B. 485/95–103.

FD. 3/4" I.P., NO TAG DN. 1.0' PER M.B. 429/84–103

GILMAN STREET

FD. N&T LS 4547, FLUSH IN SIDEWALK, PER M.B. 429/84–103

ACC. AS S'LY BDRY., TR. 37389–4, M.B. _____

FD. 1" I.P. LS 4547, DN. 0.5', PER M.B. 429/84–103

KING STREET

ACC. AS E'LY BDRY., TR. 37389–1, M.B. 485/68–75.

HIGHLAND ESTATES
M.B. 38/80-81

FD. 1" I.P. LS 4547, FLUSH, PER M.B. 429/84–103

HOFFER STREET

APEX STREET
(N 1°28'49" E 764.48' R1)

ACC. AS W'LY BDRY., TR. 37389–1, M.B. 485/68–75.

TRACT No. 37389-1
M.B. 485/68-75
LOT H

FD. 1" I.P. LS 4547, DN. 1.0' PER M.B. 429/84–103

FD. 1" I.P. LS 4547, DN. 0.3' PER M.B. 429/84–103

FD. SPK.&W, LS 8554, FLUSH, ACC. AS ℄ INT. PER M.B. 485/68–75. & C.R. 240443.

ACC. AS S'LY TR. BDRY., TR. 37389–1, M.B. 485/68–75.

FD. 1" I.P. LS 4547, DN. 1.0' PER M.B. 429/84–103

FD. 1" I.P. LS 4547, DN. 0.3' PER M.B. 429/84–103

SEE DETAIL "A" ABOVE

WILSON STREET

APEX STREET

FD. 2 1/2" BRASS DISK. MARKED AS SHOWN, IN 1" I.P., FLUSH, ACC. AS S. 1/4 COR., SEC. 1, T.3S., R.1W. PER C.R. 240443.

LS8554 1 12 T3S R1W

DETAIL "A"
N.T.S.

BASIS OF BEARINGS SEE SHEET 2 EASEMENT NOTES SEE SHEET 2

I:\89408\MAPPING\TR 37389-6 MAP SHTS 1-16-2025

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DARYL J. CHRISTIAN, L.S. 8554 MDS CONSULTING DECEMBER, 2024

SCALE: 1" = 100'

100 50 0 100 200 300

GRAPHIC SCALE

SHEET INDEX MAP

(X) INDICATES SHEET NUMBER

TRACT No. 37389-4
M.B._____

TRACT No. 37389-5
M.B. 485/95-103

APEX STREET

PLUMWOOD LANE

LOT "C"

PINEDROP CIRCLE

LOT "E"

MAHOGANY STREET

LOT "B"

ECHO DRIVE

LOT "D"

HOFFER STREET

LOT "A"

LOT "F"

LOT "G"

LOT "H"

HIGHLAND ESTATES
M.B. 38/80-81

TRACT No. 37389-1
M.B. 485/68-75

LOT H

WILSON STREET

BASIS OF BEARINGS SEE SHEET 2

EASEMENT NOTES SEE SHEET 4

I:\89408\MAPPING\TR 37389-6 MAP SHTS 1-16-2025

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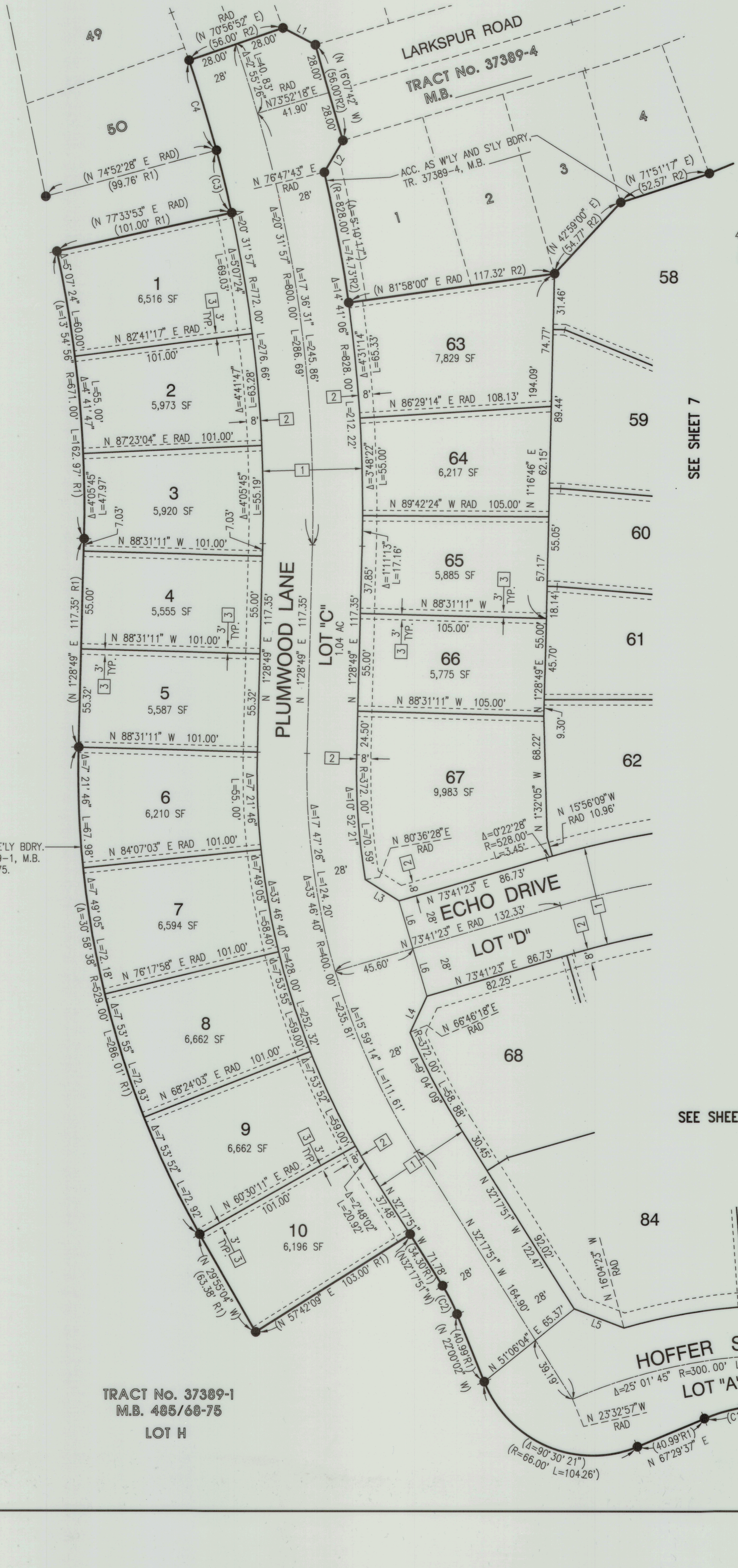

CURVE DATA			
#	DELTA	RADIUS	LENGTH
C1	(20°07'43"	100.00'	35.13' R1)
C2	(10°17'49"	100.00'	17.97' R1)
C3	(02°41'25"	772.00'	36.25' R1)
C4	03°55'36"	772.00'	52.91'

COURSE DATA		
#	BEARING	DISTANCE
L1	(N 62°35'25" W	20.67' R2)
L2	(N 30°20'00" E	20.67' R2)
L3	N 57°51'05" W	22.45'
L4	N 25°13'51" E	22.45'
L5	N 69°11'07" W	30.01'
L6	N 16°18'37" W	28.00'

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DARYL J. CHRISTIAN, L.S. 8554 MDS CONSULTING DECEMBER, 2024

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#	DELTA	RADIUS	LENGTH
C1	(20°07'43"	100.00'	35.13'R1)
C2	(10°17'49"	100.00'	17.97'R1)
C3	01°15'37"	2000.00'	43.99'
C4	01°15'37"	2028.00'	44.61'
C5	00°17'09"	1972.00'	9.84'
C6	02°26'14"	272.00'	11.57'
C7	01°28'32"	328.00'	8.45'
C8	03°51'29"	272.00'	18.32'

COURSE DATA		
#	BEARING	DISTANCE
L1	N 68°42'51" W	29.68'
L2	N 25°13'51" E	22.45'
L3	N 44°17'32" W	21.39'
L4	N 46°28'51" E	21.21'
L5	N 88°31'09" W	5.00'
L6	N 01°28'49" E	10.60'
L7	N 43°31'11" W	11.31'
L8	N 69°11'07" W	30.01'
L9	N 25°13'51" E	22.45'
L10	N 44°17'32" W	21.39'
L11	N 88°31'09" W	28.00'
L12	N 16°18'37" W	28.00'
L13	N 00°13'14" E	28.00'
L14	N 89°46'46" W	0.28'
L15	N 88°31'11" W	5.00'

COURSE DATA		
#	BEARING	DISTANCE
L16	N 41°49'45" E	20.36'
L17	N 89°06'01" E	28.00'
L18	N 00°53'59" W	0.97'

SCALE: 1" = 40'

40 20 0 40 80 120

GRAPHIC SCALE

SEE SHEET 5

PLUMWOOD LANE

LOT "C" 1.04 AC.

LOT "A" 0.82 AC

HOFFER STREET

LOT H 0.10 AC.

LOT G 0.02 AC.

LOT "D" 0.77 AC.

LOT "B" 1.21 AC.

ECHO DRIVE

PINEDROP CIRCLE

MAHOGANY STREET

ACC. AS S'LY BDRY., TR. 37389-1, M.B. 485/68-75.

FD. 1" I.P. LS 4547, DN 0.3' PER M.B. 429/84-103.

FD. 1" I.P. LS 4547, DN 1.0' PER M.B. 429/84-103.

FD. 1" I.P. LS 4547, DN 1.0' PER M.B. 429/84-103.

ACC. AS E'LY BDRY., TR. 37389-1, M.B. 485/68-75.

HIGHLAND ESTATES M.B. 38/80-81

SEE SHEET 7

SEE SHEET 8

SEE SHEET 8

I:\89408\MAPPING\TR 37389-6 MAP SHTS 1-16-2025

IN THE CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

TRACT NO. 37389-6

BEING A SUBDIVISION OF A PORTION OF REMAINDER LOT 2, OF TRACT NO. 37389-1 AS SHOWN BY MAP ON FILE IN BOOK 485, PAGES 68 THROUGH 75, INCLUSIVE, OF MAPS IN THE OFFICE OF THE COUNTY RECORDER OF THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, LYING WITHIN SECTION 1, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SAN BERNARDINO MERIDIAN.

DARYL J. CHRISTIAN, L.S. 8554 MDS CONSULTING DECEMBER, 2024

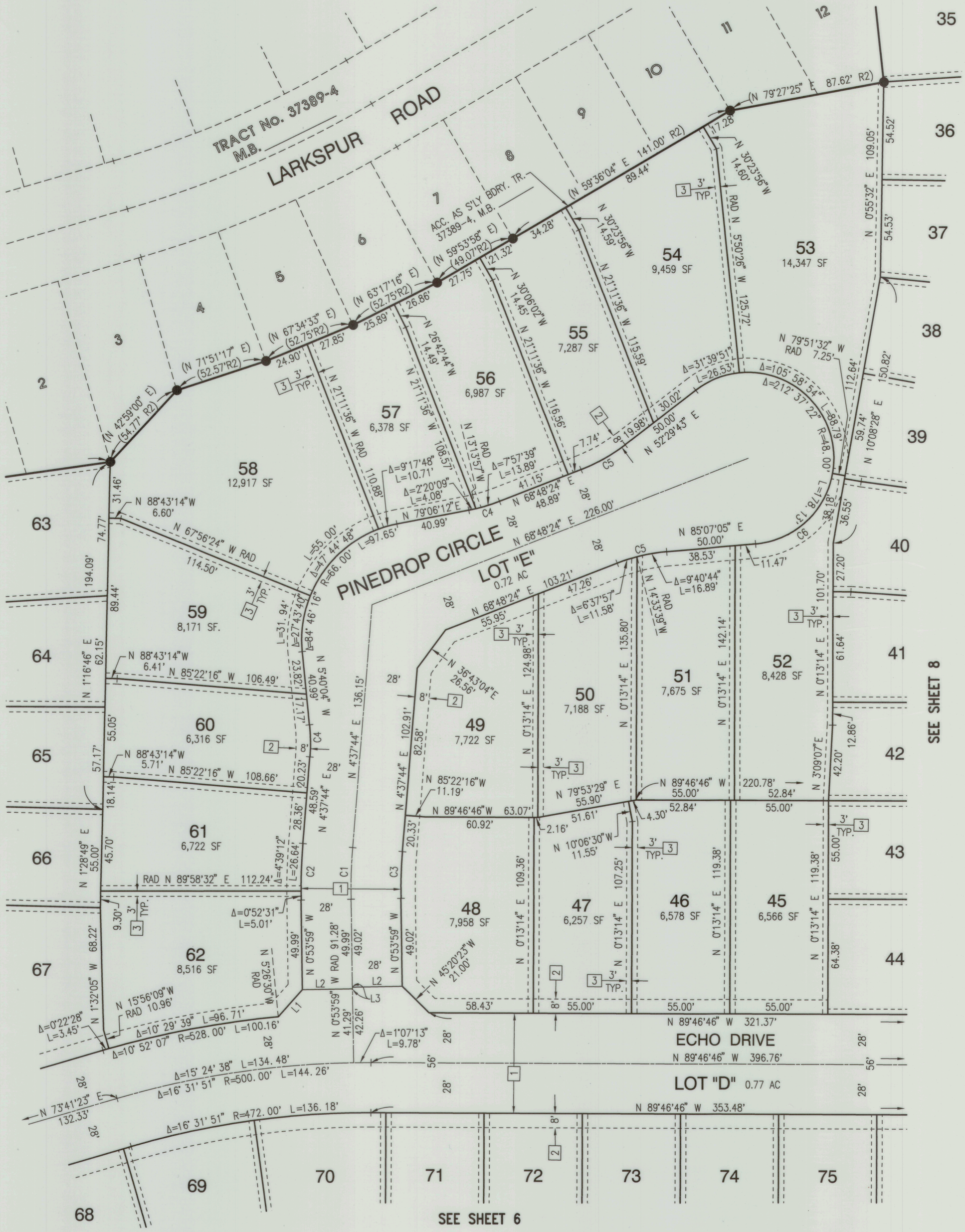
SCALE: 1" = 40'

40 20 0 40 80 120

GRAPHIC SCALE

CURVE DATA			
#	DELTA	RADIUS	LENGTH
C1	05°31'43"	300.00'	28.95'
C2	05°31'43"	328.00'	31.65'
C3	05°31'43"	272.00'	26.25'
C4	10°17'48"	100.00'	17.97'
C5	16°18'41"	100.00'	28.47'
C6	74°58'37"	48.00'	62.81'

COURSE DATA		
#	BEARING	DISTANCE
L1	N 41°49'45" E	20.36'
L2	N 89°06'01" E	28.00'
L3	N 00°53'59" W	0.97'



I:\89408\MAPPING\TR 37389-6 MAP SHTS 1-16-2025

IN THE CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

TRACT NO. 37389-6

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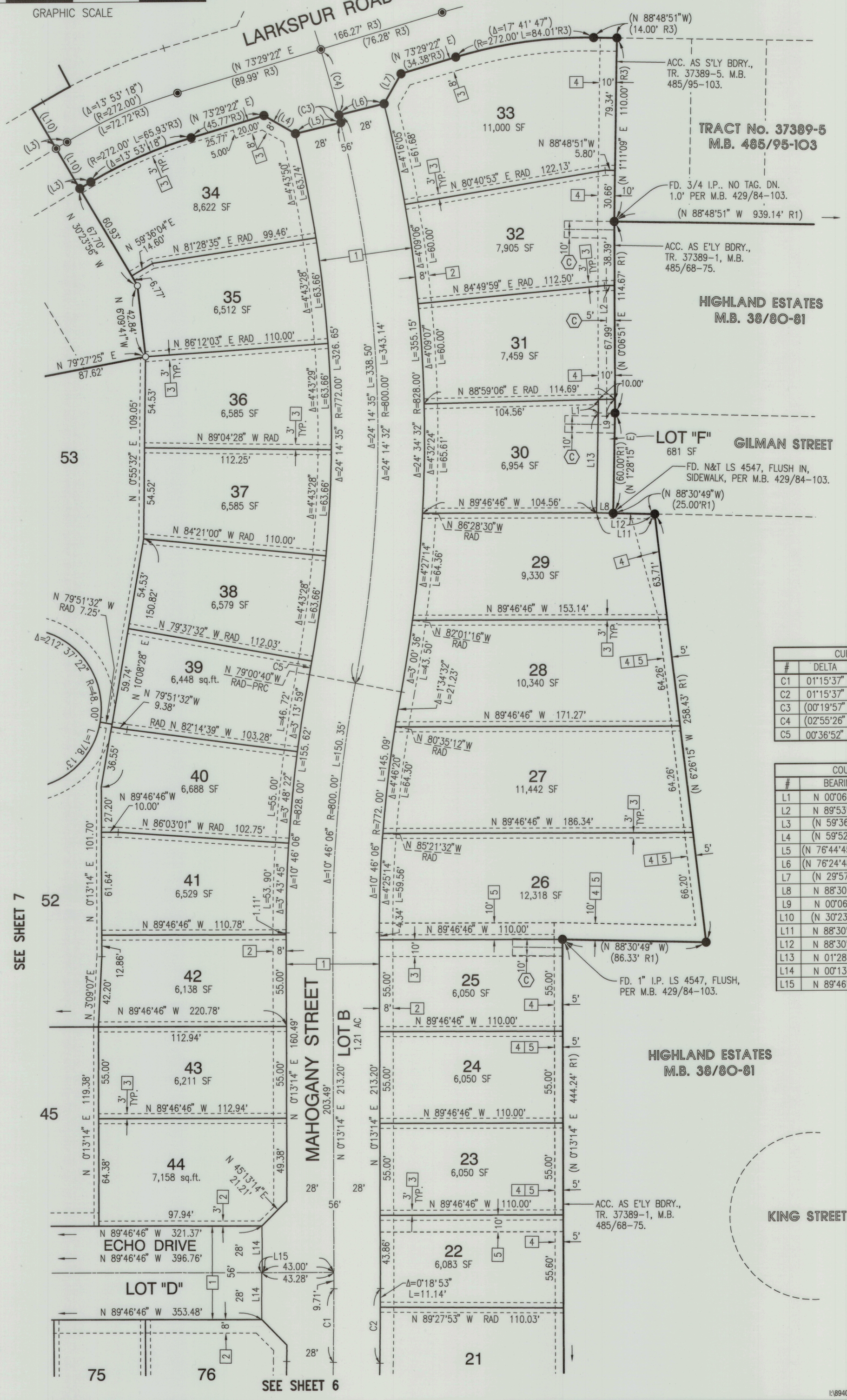
DARYL J. CHRISTIAN, L.S. 8554 — MDS CONSULTING — DECEMBER, 2024

SCALE: 1" = 40'

40 20 0 40 80 120

GRAPHIC SCALE



CURVE DATA			
#	DELTA	RADIUS	LENGTH
C1	01°15'37"	2000.00'	43.99'
C2	01°15'37"	2028.00'	44.61'
C3	(00°19'57"	800.00'	4.64' R3)
C4	(02°55'26"	600.00'	40.83' R3)
C5	00°36'52"	772.00'	8.27'

COURSE DATA		
#	BEARING	DISTANCE
L1	N 00°06'51" E	7.97'
L2	N 89°53'09" W	6.00'
L3	(N 59°36'04" E	7.72' R3)
L4	(N 59°52'56" W	21.81' R3)
L5	(N 76°44'45" E RAD	28.00' R3)
L6	(N 76°24'48" E RAD	28.00' R3)
L7	(N 29°57'05" E	20.67' R3)
L8	N 88°30'49" W	10.00'
L9	N 00°06'51" E	8.29'
L10	(N 30°23'56" W	28.00' R3)
L11	N 88°30'49" W	35.00'
L12	N 88°30'49" W	14.64'
L13	N 01°28'15" E	59.88'
L14	N 00°13'14" E	28.00'
L15	N 89°46'46" W	0.28'

I:\89408\MAPPING\TR 37389-6 MAP SHTS 1-16-2025

CITY OF BANNING

SUBDIVISION IMPROVEMENT AGREEMENT

* * * * * * SUBDIVISION REFERENCE DATA * * * * * *

[X] FINAL TRACT MAP NO. 37389-6 ("Final Map" herein)

[ ] PARCEL MAP NO. _____("Parcel Map" herein)

NAME OR TRACT NUMBER OF SUBDIVISION ("Subdivision" herein):	ATWELL – PA-9A
NAME AND ADDRESS OF SUBDIVIDER(S):	TRI POINTE HOMES, IE-SD 1250 CORONA POINTE CT, #600 CORONA, CA 92879
CITY COUNCIL RESOLUTION OF APPROVAL NO.	_____ ("Resolution of Approval" herein)

DATE(S) THAT IMPROVEMENT PLANS WERE APPROVED BY THE CITY ENGINEER: see below

IMPROVEMENT/PLAN NO.:	Sewer Improvement Plan	
	Street Improvement Plan	
	Water Improvement Plan	
	Monumentation Improvement Plan	
ESTIMATED TOTAL COSTS:	IMPROVEMENTS	$2,171,843.03
	GRADING	$_____
	MONUMENTATION	$27,638.51
	TOTAL:	$2,199,481.54

FORM OF IMPROVEMENT SECURITY:

[ ] AAA Corporate surety bonds

[ ] Deposit of money

NAME AND ADDRESS OF CORPORATE SURETY (if applicable):

The Continental Insurance Company
(Name of Corporate Entity)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

SURETY BOND NUMBERS (if applicable):

Sewer Imp: Bond No. 30239065

Street Imp: Bond No. 30239063

Water Imp: Bond No. 30239064

Monumentation Imp: Bond No. 30239066

EFFECTIVE DATE OF AGREEMENT:

_____
(to be inserted by City)

COMPLETION PERIOD: All improvements of Tract _____ ~~(including the complete water and sewer system in _____ Street) with the exception of the roadway (street) improvements on _____ Street~~, shall be completed within two years from the Effective Date of the Agreement. _____ ~~Street roadway (street) construction (so that _____ Street is a continuous route from _____ to _____) shall be constructed prior to the Certificate of Occupancy for development of lots ____ and ____ of Tract _____.~~

* *

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SUBDIVISION IMPROVEMENT AGREEMENT

THIS SUBDIVISION IMPROVEMENT AGREEMENT ("Agreement") is made and entered into by and between the City of Banning, a municipal corporation ("City"), and the Subdivider whose name and address is set forth above in the Subdivision Reference Data.

RECITALS

A. Subdivider has presented to the City for approval and recordation a Final Map, identified above in the Subdivision Reference Data, of a proposed subdivision pursuant to the Subdivision Map Act of the State of California and the City's ordinances and regulations as such ordinances and regulations are vested under the development agreement recorded in the official records of the County of Riverside on July 17, 2012 as Document No. 2012-0332888 ("Development Agreement") relating to the filing, approval and recordation of subdivision maps (collectively referred to herein as the "Subdivision Laws").

B. A tentative map of the Subdivision was previously approved by City, subject to the Subdivision Laws and to the City's standard requirements as vested under the Development Agreement and conditions of approval contained in the City Council's Resolution of Approval, a copy of which is on file in the Office of the City Clerk and which is incorporated herein by this reference.

C. The Subdivision Laws establish, as a condition precedent to the approval of a Final Map, that the Subdivider comply with the City Council's Resolution of Approval and either (i) complete, in compliance with applicable City standards, all of the improvements and land development work required by the Subdivision Laws and the City Council's Resolution of Approval; or (ii) enter into a secured agreement with the City to complete the improvements and land development work within a period of time specified by the City.

D. In consideration of approval of the Final Map for the Subdivision by the City Council, Subdivider desires to enter into this Agreement whereby Subdivider promises to install and complete, at its sole expense, except as otherwise provided in a credit/reimbursement agreement as provided for in the Development Agreement, all public improvement work required by the City as set forth on the Improvement Plans (as defined below) for the proposed Subdivision. Subdivider has secured this Agreement by improvement security required by the Subdivision Laws and approved by the City. In any conflict between the terms in this Agreement and the Development Agreement, the Development Agreement shall be the controlling document.

E. Improvement Plans, and related specifications, numbered as designated above in the Subdivision Reference Data, for the construction, installation and completion of the Improvements identified in Schedule A hereto, have been prepared by the Subdivider, approved by the City Engineer, and are on file in the office of the City Engineer. Said Improvement Plans, and related specifications, subsequently modified by the mutual written agreement of the parties, are hereby referred to as the "Improvement Plans" and are incorporated herein by this reference.

Any improvement to be constructed pursuant to the Improvement Plan is hereby referred to individually as an "**Improvement**" and collectively as the "**Improvements**".

NOW, THEREFORE, in consideration of the approval and recordation by the City Council of the Final Map of the Subdivision, Subdivider and City agree as follows:

1. SUBDIVIDER'S OBLIGATION TO CONSTRUCT IMPROVEMENTS

A. Subdivider shall, at its sole expense, unless otherwise provided in a credit/reimbursement agreement as provided for in the Development Agreement, and in compliance with the provisions of the Subdivision Laws, the Improvement Plans, conditions of approval of the Tentative Map, and all applicable City standards and fees, and in a good and workmanlike fashion, furnish, construct, install and guarantee (as set forth in Section 3) the Improvements, Grading, and Monumentation described on the tentative map and in the City Council's Resolution of Approval relating thereto (collectively, the "Improvements").

B. To the extent necessary to construct the Improvements, as determined by the City Engineer, the Subdivider shall acquire and dedicate, or pay the reasonable, documented cost of acquisition by City of, all rights-of-way, easements and other interests in real property for the construction or installation of the Improvements, free and clear of all liens and encumbrances. If the Subdivider is unable to acquire such rights-of-way, easements and other interests in real property by negotiation, then Subdivider shall, within 120 days of Final Map approval, enter into a condemnation agreement with City pursuant to Government Code Section 66462.5, by which the City will commence the process for the acquisition of the rights-of-way, easements or other real property.

C. Subject to any time extensions granted in accordance with Section 4, Subdivider shall complete all Improvements within its respective "Completion Period" specified in the Subdivision Reference Data; provided, however, that if the City Engineer reasonably determines in good faith that accelerated construction of the Improvements is essential in order to protect the public health, welfare and safety, the City Engineer shall give Subdivider not less than fifteen (15) business days' prior written notice to commence or accelerate installation and construction of such Improvements, or any portion thereof. The notice shall be in writing, and shall describe the work to be done by Subdivider, the time within which the work will commence, the period within which the work will be completed and identify the reasons that such early commencement is essential in order to protect the public health, welfare and safety. All or any portions of said Improvements may be required to be constructed or completed at a specified time, providing the foregoing criteria is met. If the Subdivider objects to the commencement or acceleration of the Improvements as specified by the City Engineer, Subdivider may appeal the decision of the City Engineer to the City Council. Any such appeal shall be filed with the City Clerk within 10 days after receipt by Subdivider of the written notice from the City Engineer.

D. If the Improvements to be constructed by Subdivider include monumentation, such monumentation shall be installed not later than thirty (30) days after the City's acceptance of all other Improvements pursuant to Section 2. As used herein,

"monumentation" shall mean the setting of survey monuments and tie points in accordance with the Subdivision Laws, and the delivery to the City Engineer of tie notes for said points.

E. Subdivider shall , at its sole expense, unless otherwise provided in a credit/reimbursement agreement as provided for in the Development Agreement, replace or repair all public improvements, public utility facilities, and surveying or subdivision monuments which are destroyed or damaged as a result of any work performed by Subdivider under this Agreement during or after the Completion Period. Any such replacement or repair shall be subject to the approval of the City Engineer.

F. In addition to, and separate from, the indemnity obligations contained in Section 9 of this Agreement, and without limiting the City's remedies under general construction defect law, Subdivider shall be responsible for the care, repair and maintenance of the applicable portion of the Improvements until the latter of the following time periods: (i) the Improvements or applicable portion thereof is accepted in writing by the City; or (ii) the expiration of the required one-year guarantee and warranty period as specified herein; or (iii) the expiration of any applicable period of time requiring the care, repair and maintenance of the applicable Improvement specified in the Development Agreement (not including the term of any Development Agreement). Neither City, nor its officers, agents and employees, shall have any liability for any accident, loss or damage to the Improvements and that may result from the construction of the Improvements prior to their completion and written acceptance by the City

G. In addition to, and separate from: (1) the indemnity obligations contained in Section 7 of this Agreement, (2) the care, repair and maintenance provisions under paragraph E of this Section 1 of this Agreement; and (3) the warranty and guarantee provisions of Section 3 of this Agreement, Subdivider shall repair and correct, or be liable to the City for any cost to repair and correct, any defect in the construction of the Improvements that is identified by City within in accordance with general construction defect law ten (10) years after City's acceptance of the Improvement, provided the City provides written notice to Subdivider of the existence of the defect within that the time period under law, and the defect is caused directly or indirectly by the design, construction, functionality, installation, assembly or workmanship of Subdivider. Nothing contained in this paragraph is intended to limit or otherwise waive any right or cause of action under applicable construction defect law that City may assert against Subdivider.

H. Subdivider shall, at its sole expense, unless otherwise provided in a credit/reimbursement agreement as provided for in the Development Agreement, obtain all necessary permits and licenses for the construction and installation of the Improvements, give all necessary notices, and pay all applicable fees required by City ordinance or resolution and all taxes required by law.

I. Not less than seven (7) days prior to commencement of work on the Improvements, Subdivider shall give written notice to the City Engineer of the date fixed for such commencement of work in order that the City Engineer shall have adequate time to schedule all necessary inspections.

J. SUBDIVIDER shall pay all applicable City fees and costs stipulated in the latest fee resolution as adopted by the City Council from time to time as required for the development of the SUBDIVISION including but not limited to the following:

1. Building Permit Fees --- to be paid at the time of building permit issuance;

2. Final Map Plan Check Fees --- to be paid at time of submittal of final map for plan check and resubmittal of revised final map for plan check;

3. Final Map Moratorium Fees --- to be paid from cash deposit established at time of filing final map;

4. Plan Check and Review Fees --- to be paid from cash deposit established at time of filing improvement plans for plan check;

5. Encroachment Permit Fees --- to be paid at time of application for encroachment permit;

6. Inspection Fees --- to be paid from cash deposit established at time of construction permit issuance; and

7. Grading Permit Fee --- to be paid from cash deposit established at time of grading permit issuance.

K. Subdivider shall provide City with final Record Drawings of all plans developed for the Subdivision, showing all changes and as built conditions as specified in the Tentative Tract Map Conditions of Approval, and shall provide electronic image files of those final Record Drawings consistent with electronic image file size and type specifications of the City prior to the acceptance of improvements and release of bonds or other security.

2. INSPECTION OF WORK AND FINAL ACCEPTANCE

A. Subdivider shall at all times maintain proper facilities and safe access for inspection of the Improvements by the City Engineer and other City personnel and inspection consultants.

B. Upon completion of the work on all or any category of the Improvements, the Subdivider may request a final inspection by the City Engineer. Within forty-five (45) days of receipt of the written letter request, the City Engineer shall inspect the Improvements and provide written notice to Subdivider of the list of items which have been found to be incomplete and the list of items which have been found to be complete. If the City Engineer determines that all or any specified category of the Improvements have been completed in accordance with this Agreement and in compliance with the Improvement Plans and all applicable City standards, then the City Engineer shall acknowledge that determination in a report to the City Council. If the Improvements that are completed are to be dedicated to or owned by the City (Improvements within City right of way and property for public use), the City Engineer's determination shall be

submitted to the City Council for final acceptance by the City, unless such power to accept has been delegated by the City Council to the City Engineer or some other officer of the City, in which case the final acceptance shall be subject to the approval of that specified official. If the Improvements that are completed are to be dedicated to or owned by a public entity other than the City, the Subdivider's written request shall be submitted to the applicable public entity or other owner, for final acceptance. Subdivider shall bear all costs of inspection and determination of completeness in accordance with City's formally adopted and applicable fees and rates.

C. Acceptance of all or any specified category of the Improvements by the City Council shall be made upon recommendation and certification of the City Engineer following inspection of said Improvements pursuant to subparagraph B above. The City Council shall act upon the City Engineer's recommendation that such public Improvements have been completed unless such power to accept has been delegated by the City Council to the City Engineer or some other officer of the City, in which case the final acceptance shall be subject to the approval of that specified official. Acceptance by the City or by the governing body of the entity that is to accept dedication or ownership of the public improvements shall not constitute a waiver by the City or such other public entity of any defects in the public Improvements.

3. GUARANTEE AND WARRANTY OF THE IMPROVEMENTS

A. If, within a period of one year following acceptance by the City of the applicable Improvements specified in Schedule A, any Improvements or part of any Improvements specified in Section A furnished, installed or constructed by the Subdivider, or any of the work performed under this Agreement by Subdivider, fails to comply with any requirements of this Agreement, or the Subdivision Laws, or the Improvement Plans and related specifications, the Subdivider shall, without delay and without cost to the City, repair, replace or reconstruct any defective or otherwise unsatisfactory part or parts of the Improvements. Subdivider's obligations hereunder shall include the repair, replacement or reconstruction of all irrigation systems and all trees, shrubs, ground cover and landscaping for such one year.

B. Should the Subdivider fail or refuse to act promptly or in accordance with subparagraph A above, or should the exigencies of the situation require repair, replacement, or reconstruction to be undertaken before the Subdivider can be notified and can perform the necessary work, then the City may, in its discretion, make the necessary repairs or replacements or perform the necessary reconstruction and draw upon the Subdivider's improvement security to reimburse itself for the costs incurred. If the Subdivider's improvement security does not cover the total cost of such repair, replacement, or reconstruction, the Subdivider shall reimburse the City for any excess costs incurred.

C. The security furnished for the faithful performance of the Subdivider's obligation to construct and install the Improvements described herein shall include the Subdivider's liability and obligation hereunder to provide the one-year guarantee and warranty of the Improvements.

4. TIME EXTENSIONS

A. Upon a showing by the Subdivider of good cause therefor, the duration of the Completion Period for the Improvements (or any of them) may be extended by the City Engineer in writing. As used herein, "good cause" may include, without limitation, delay resulting from, arising out of or relating to an act of the City; acts of God or force majeure, strikes, boycotts or similar job actions by employees or labor organizations which prevent the conduct of the work; findings made by a governmental entity that the site of a particular Improvement is of archeological significance or requires further permitting and approval; and/or actions or failure to act of native American monitor(s); and, the order of any court.

B. A time extension may be granted without notice to any surety or sureties of the Subdivider and shall not affect the validity of this Agreement nor release the surety or sureties on any bond given as an improvement security pursuant to this Agreement.

C. As a condition of any time extension provided for herein, the City Engineer, may require the Subdivider to furnish new or modified improvement security guaranteeing performance of this Agreement, as extended, in an increased amount as necessary to compensate for any projected increase in the Estimated Total Cost of Improvements, as determined by the City Engineer.

5. IMPROVEMENT SECURITY

A. Prior to City's execution of this Agreement, Subdivider shall provide as security to the City:

1. For Performance and Guarantee: Security in an amount equal to one hundred percent (100%) of the Estimated Total Cost of the Improvements, excluding Grading, as set forth above in the Subdivision Reference Data. The security shall be issued by a bonding company licensed to issue bonds in the State of California and having a Best rating of AAA or better. With this security, the form of which shall be subject to City Attorney's prior approval, the Subdivider assures faithful performance under this Agreement and guarantees the Improvements for one year after the completion and acceptance of the applicable portion of such Improvements, against any defective workmanship or materials or any unsatisfactory performance, pursuant to Section 3 hereof.

2. For Payment: Security in an amount equal to one hundred percent (100%) of the Estimated Total Cost of the Improvements, excluding Grading, as set forth above in the Subdivision Reference Data. The security shall be issued by a bonding company licensed to issue bonds in the State of California and having a Best rating of AAA or better. With this security, the form of which shall be subject to City Attorney's prior approval, the Subdivider guarantees payment to contractors, subcontractors, and persons renting equipment or furnishing labor or materials to them or to the Subdivider.

B. If the improvement security is a corporate surety bond and, in the opinion of the City, any surety or sureties thereon become insufficient, because (i) the surety becomes

insolvent; (ii) the surety's bond rating is downgraded; (iii) the surety declares bankruptcy; or (iv) the surety is no longer deemed to be an admitted surety in California by the California Department of Insurance, or (v) the form of the surety or the amount is found by City to be in error or materially insufficient, the Subdivider shall renew or replace any such surety bond with good and sufficient surety or sureties within thirty (30) days after receiving from City written demand therefor.

C. The amount of security for performance, payment and warranty obligations provided by this section shall not include the cost of monumentation, as required by Government Code Section 66497 so long as a separate cash deposit or security acceptable to the City Engineer for the estimated cost of monumentation has been submitted to the City.

D. Improvement security consisting of corporate surety bonds, in a form accepted by the City Attorney, shall be filed with the City Engineer and then kept on file with the City Clerk. If a corporate surety bond is replaced by another approved bond, the replacement shall be submitted to the City Engineer and, upon filing with the City Clerk, shall be deemed to have been made a part of and incorporated into this Agreement. Upon submission to the City Engineer and then filing with the City Clerk of a replacement bond, the former improvement security shall be released following written approval of the City Engineer.

E. Modifications of the Improvement Plans and related specifications, and modifications of the Improvements, not exceeding ten percent (10%) of the original Estimated Total Cost of the Improvements, shall not relieve or release any improvement security furnished by Subdivider pursuant to this Agreement. If any such modifications exceed ten percent (10%) of the Estimated Total Cost of the Improvements, Subdivider shall furnish additional improvement security for performance and guarantee, and for payment, as required by subparagraph A above, for one hundred percent (100%) of the revised Estimated Total Cost of the Improvements.

F. Subject to any time extensions granted in accordance with Section 4 herein, the Subdivider shall be in default if the Subdivider has not completed all improvements within two years from the Execution Date of the Agreement and has not repaired any defects in the completed Improvements within the one-year guarantee and warranty period.

Alternatively, in the event of a default by the Subdivider pursuant to Section 10, and after written notice to Subdivider and reasonable opportunity to cure, City, at its sole option, shall have the right, without limiting any other rights and/or remedies available to City at law or in equity, to draw upon or utilize the improvement security furnished herewith to construct and install the Improvements itself. If City exercises this right, the release of any unused portion of such improvement security shall be in accordance with the procedures outlined in Section 6 herein, including any retention necessary for the one-year guarantee period.

6. REDUCTION OR RELEASE OF IMPROVEMENT SECURITY

A. All public Improvements (Improvements that are to be owned or dedicated to the City or other public entity as distinguished from those owned by a private community

association) shall be first completed, deemed completed by the City Engineer and then accepted as complete by the City prior to release of sureties. All private Improvements (Improvements that are to be owned by a private community association and not dedicated or owned by the City or other public entity) shall be first completed and then accepted as complete in writing by the City Engineer.

B. Partial releases or reductions in the Subdivider's improvement (performance) security may be authorized prior to the City's acceptance of all Improvements required hereunder, as follows:

1. At the time that the Subdivider believes that the obligation to perform the work for which security was required is complete, the Subdivider may notify the City in writing of the completed work, including a list of work completed. Upon receipt of the written notice, the City shall review and comment or approve the completion of the required work within forty-five (45) days. If the City does not agree that all work has been completed in accordance with the plans and specifications for the Improvements, it shall supply a list of all remaining work to be completed within this 45-day period.

2. Within forty-five (45) days of receipt of the list of remaining work from the local agency, the Subdivider may then provide cost estimates for all remaining work for review and approval by the City. Upon receipt of the cost estimates, the City shall then have forty-five (45) days to review, comment, and approve, modify, or disapprove those cost estimates. The City shall not be required to engage in this process of partial release more than once between the start of work and completion and acceptance of all work; however, nothing in this section prohibits the City from allowing for multiple and phased partial releases as it otherwise deems appropriate.

3. If the City approves the cost estimate, the City shall release all performance security except for security in an amount up to two hundred percent (200%) of the cost estimate of the remaining work. The process allowing for a partial release of performance security shall occur when the cost estimate of the remaining work does not exceed twenty percent (20%) of the total original performance security unless the City allows for a release at an earlier time. Substitute bonds or other security may be used as a replacement for the performance security, subject to the approval of the City. If substitute bonds or other security is used as a replacement for the performance security released, the release shall not be effective unless and until the City receives and approves that form of replacement security. A reduction in the performance security, authorized under this section, is not, and shall not be deemed to be, an acceptance by the City of the completed improvements in and of itself, and the risk of loss or damage to the Improvements and the obligation to maintain the Improvements shall remain the sole responsibility of the Subdivider until the applicable required public Improvements have been accepted by the City in writing and all other required improvements have been fully completed in accordance with the plans and specifications for the improvements.

4. The Subdivider shall complete the works of Improvement until all remaining items are accepted by the City.

5. Upon the completion of the Improvements, the Subdivider, or his or her assigns, shall be notified in writing by the City within forty-five (45) days.

6. Within sixty (60) days of the issuance of the notification by the City Engineer, any remaining performance security, except ten percent (10%) of the original amount of the security to guarantee and warrant the Improvements for the one-year guarantee and warranty period, shall be released within sixty (60) days of the issuance of the written statement of completion.

C. Security securing the payment to the contractor, his or her subcontractors and to persons furnishing labor, materials or equipment shall, after passage of the time within which claims of lien are required to be recorded pursuant to Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code and after acceptance of the work, be reduced to an amount equal to the total claimed by all stop notice claimants for whom stop notices have been filed with the City, and if no claims have been filed, the security shall be released in full.

D. The partial release provisions of this Section 6 shall not apply to any required guarantee and warranty period required by Section 66499.9 for the guarantee or warranty nor to the amount of the security deemed necessary by the local agency for the guarantee and warranty period nor to costs and reasonable expenses and fees, including reasonable attorneys' fees. Security furnished to guarantee and warrant the Improvements against any defective work or labor done or defective materials furnished, shall be released within thirty (30) days after the completion of the one-year period following completion and acceptance of all Improvements.

E. If Subdivider's obligations relating to any Improvements are subject to the approval of another governmental agency, the City shall not release the improvement (performance) security therefor until the obligations are performed to the satisfaction of such other governmental agency. Such agency shall have sixty (60) days after receipt of written notice from the Subdivider of the Subdivider's performance of the obligation to register its satisfaction or dissatisfaction. If at the end of that period it has not registered its satisfaction or dissatisfaction, it shall be conclusively deemed that the Subdivider's performance of the obligation was done to its satisfaction, and such improvement security shall be promptly released.

F. In the event the time periods for action by the City specified in this Section conflict with a shorter or longer time period for such actions as provided in Government Code Section 66499.7, the time periods in Government Code Section 66499.7 shall control.

7. INDEMNIFICATION OF CITY BY SUBDIVIDER

A. Neither the City, nor its officers, agents and employees, shall be liable or responsible for any accident, injury, loss or damage to either property or person attributable to or arising out of the defective design, construction, functionality, installation assembly or improper

maintenance including, without limitation, the use of defective methods, materials or workmanship (collectively "Subdivider's Faults") of the Improvements by Subdivider, its officers, employees and agents. Subdivider shall indemnify, hold harmless and defend the City, its officers, agents and employees, from and against any and all losses, claims, costs, expenses, liabilities, damages, actions, causes of action and judgments, including attorneys' fees, arising directly or indirectly out of or attributable to Subdivider's Faults.

B. Subdivider's obligations under this Section 7 are not conditioned or dependent upon whether the City, or its officers, agents and employees, prepared, supplied or reviewed any Improvement Plans or related specifications in connection with the Subdivision or the Improvements, or has insurance or other indemnification covering any of these matters.

C. Subdivider's obligation to indemnify, hold harmless and defend the City under this Section 7 shall extend to injuries to persons and damages to or alleged taking of property resulting from the Subdivider's Faults, and the Improvements required herein, and shall likewise extend to claims asserted by adjacent property owners based upon the diversion of waters caused by the Subdivider's defective design or defective construction of public drainage systems, streets, and other public facilities or improvements. Except for a City Directive as defined below, the City's acceptance of the Improvements shall not constitute an assumption by the City of any responsibility or liability for any damage or alleged taking of property referenced herein. City shall not be responsible or liable for the design or construction of the Subdivision or the Improvements constructed or installed pursuant to the approved Improvement Plans or the Final Map, regardless of any act or omission by the City in approving the Improvement Plans or the Final Map, unless the particular Improvement design was required by the City over the written objection of the Subdivider, which objection stated that the Improvement design was potentially dangerous or defective and set forth an alternative design (a "City Directive"). After City's acceptance of the Improvements, the Subdivider shall remain obligated to correct or eliminate all dangerous conditions created by defects in design, construction or Subdivider's Faults (other than those required by a City Directive); provided, however, that Subdivider shall not be responsible for routine maintenance as specified in Section 1(F) of this Agreement. Subdivider's indemnity obligations hereunder shall remain in effect for ten (10) years following acceptance of the respective Improvement(s) by the City Council. Subdivider acknowledges and agrees that Subdivider shall be responsible and liable for the Subdivider's Faults with respect to the Improvements and other work done pursuant to this Agreement, unless same is due to a City Directive. City shall not be liable for any acts or omissions in approving, reviewing, checking, correcting or modifying any Improvement Plans or related specifications, or in inspecting, reviewing or approving any work or construction of Improvements, unless same is due to a City Directive. The Subdivider's improvement security shall not be required to secure the Subdivider's obligations under this subparagraph C beyond the one-year guarantee and warranty period, unless the City Engineer provides notice to Subdivider prior to the expiration of the one-year period of the existence of, or continued existence of, defects in the improvements, in which case the portion of the improvement security to guarantee and warranty the improvements against defective work shall not be released and shall remain in place until the City Engineer provides written confirmation that the defects have been cured and corrected. The indemnity shall be effective retroactively to the earliest recordation date of the Final Map.

D. Subdivider shall pay and satisfy any judgment, award or decree that may be rendered against City, its officers, officials, employees, agents, representatives and volunteers (collectively hereinafter "City and City Personnel") to the extent of the indemnity provided above, in any such suit, action, or other legal proceeding, provided City gives Subdivider prompt written notice of such claim and allows Subdivider to undertake the defense thereof, and provided further that City cooperates in any such suit, action, or other legal proceeding, but shall retain its right to reject a settlement that the City deems, in its sole and absolute discretion, to be contrary to the interests of the City.

E. Subdivider's obligation to indemnify shall not be restricted to Insurance proceeds, if any, received by the City and City Personnel.

F. Subdivider, on behalf of itself and all parties claiming under or through it, hereby waives all rights of subrogation and contribution against City and City Personnel to the extent of the indemnity above provided.

8. INSURANCE

The following coverages will be provided by Subdivider and maintained on behalf of City and in accordance with the requirements set forth herein. If Subdivider performs construction activities through a general contractor, some or all of these insurance requirements for the period of construction may be satisfied by the general contractor's insurance coverages. In such case, Subdivider shall maintain during this same construction period, and after the construction period, the coverages shown below as "Insurance After Construction." In addition, Subdivider may elect to obtain, for all or any portion of the Project, an "Owner-Controlled Wrap Up" insurance policy in satisfaction of the insurance requirements for general contractors and subcontractors provided it satisfies all of the insurance requirements below for general contractors and subcontractors. Throughout these specifications, the word "Subdivider" refers to the Party responsible to provide the coverages as specified and, depending on context, may refer either to Subdivider or to a separate General Contractor.

A. Insurance During Construction. Subdivider shall provide the following insurance during construction of the Improvements. Insurance requirements may be met through insurance provided by Subdivider's General Contractor:

1. Commercial General Liability Insurance. Commercial General Liability Insurance (primary) shall be provided on ISO-CGL Form No. CG 00 01 or equivalent coverage, including provisions for defense of additional insureds. Policy limits shall be no less than two million dollars ($2,000,000) per occurrence for all coverages and five million dollars ($5,000,000) general aggregate. City and its officers, employees and agents shall be added as additional insureds using ISO Form CG 20 10 11 85 or other revision of the CG 20 10 form if available from the insurer and reasonably acceptable to the City, not limiting coverage for the additional insured to "ongoing operations" or in any way excluding coverage for completed operations. Coverage shall apply on a primary non-contributing basis in relation to any other insurance or self-insurance, primary or excess, available to City or any officer, employee or agent of City.

Coverage shall not be limited to the vicarious liability or supervisory role of any additional insured. Coverage shall contain no contractors' limitation or other endorsement limiting the scope of coverage for liability arising from pollution, explosion, collapse, or underground property damage.

2. Umbrella Liability Insurance. Umbrella Liability Insurance (or, at Subdivider's election, Excess Liability Insurance) (over primary) shall apply to bodily injury/property damage, personal injury/advertising injury, at a minimum. Coverage shall be at least as broad as any underlying coverage. Coverage shall be provided on a "pay on behalf" basis. There shall be no cross liability exclusion and no contractor's limitation endorsement. Policy limits shall be not less than five million dollars ($5,000,000) per occurrence and in the aggregate, including any limits required in the underlying policies. The policy shall have a starting date no later than and an ending date no earlier than those of the underlying coverages. The Named Insured (Subdivider or General Contractor as appropriate) may determine the layering of primary and excess liability insurance provided that if such layering differs from that described here, the actual coverage program meets the minimum total required limits and complies with all other requirements listed here.

3. Business Auto Coverage. Business Auto Coverage shall be written on ISO Business Auto Coverage Form CA 00 01 or the equivalent, including symbol (1) (any Auto). If Subdivider (or Contractor) does not own any vehicles, this requirement may be satisfied by a non-owned vehicle endorsement to the general and umbrella liability policies. Limits shall be no less than one million dollars ($1,000,000) per accident. This policy shall be scheduled as underlying insurance to the umbrella policy required above for a total limit of no less than five million dollars ($5,000,000) each accident.

4. Workers' Compensation/Employer's Liability. Workers' Compensation/Employer's Liability shall provide workers' compensation statutory benefits as required by law. Employer's liability limits shall be no less than one million dollars ($1,000,000) per accident or disease. Employer's liability coverage shall be scheduled under the umbrella or excess liability policy described above. This policy shall be endorsed to waive any right of subrogation with respect to City, its officers, employees or agents.

5. Builder's Risk Insurance. Builder's Risk Insurance covering all real and personal property for "all risks" of loss or "comprehensive perils" coverage including but not limited to the perils of earth movement, including earthquake (if required by Subdivider's lender or if available at commercially reasonable rates) and flood for all Improvements.

B. Insurance After Construction. Upon completion of construction of the Improvements, and for the required one-year guarantee and warranty period for Improvements and the required 10-year indemnification period, Subdivider at Subdivider's expense shall maintain or cause to be maintained the following insurance:

1. Commercial Property Insurance. Commercial Property Insurance covering the Improvements. Coverage shall be at least as broad as the Insurance Services Offices broad causes of loss form CP 10 20, and reasonably approved of in writing by the City. Coverage shall be sufficient to insure 100% of the replacement value and there shall be no coinsurance provisions. The policy shall include an inflation guard endorsement, 100% rents coverage, contents coverage, coverage for personal property of others, ordinance or law and increased cost of construction coverage. Subdivider also agrees to provide builder's all-risk insurance using an inland marine form during the period of any major alteration or improvement, using the broadest form available.

The insurance coverage for the peril of earthquake required for this project is subject to availability on the open market at commercially reasonable premium cost, as determined by mutual agreement between Subdivider and City. If such earthquake insurance coverage should, after diligent effort by Subdivider, be unobtainable at such mutually determined commercially reasonable premium cost, then Subdivider shall obtain the maximum insurance reasonably obtainable at commercially reasonable premium cost (if any) and give notice to City of the extent of Subdivider's inability to obtain, in full, the required insurance, and in such event, Subdivider's obligation to procure and maintain such insurance may be excused, subject to City's verification of inability to obtain the required insurance. Subdivider and City agree that a premium cost of earthquake insurance coverage of up to 150% of the premium cost paid by Subdivider for such coverage on the Effective Date (to be adjusted over time based on the Consumer Price Index,) shall constitute a commercially reasonable premium cost. Non-availability at commercially reasonable premium cost must be documented by a letter from Subdivider's insurance broker or agent indicating a good faith effort to place the required insurance and showing, at a minimum, the names of the insurance carriers and the declinations or quotations received from each.

2. Commercial General Liability Insurance. Commercial General Liability Insurance (primary) shall be provided on ISO-CGL form No. CG 00 01 or equivalent coverage, including provisions for defense of additional insureds. Policy limits shall be no less than two million dollars ($2,000,000) per occurrence for all coverages and five million dollars ($5,000,000) general aggregate. City and its officers, employees and agents shall be added as additional insureds using ISO form CG 20 10 or equivalent if available from the insurer and reasonably acceptable to the City. Coverage shall apply on a primary non-contributing basis in relation to any other insurance or self-insurance, primary or excess, available to City or any officer, employee or agent of City until the warranty period specified in this Agreement expires.

3. Umbrella Liability Insurance. Umbrella Liability Insurance (or, at Subdivider's election, Excess Liability Insurance) (over primary) shall apply to bodily injury/property damage, personal injury/advertising injury, at a minimum. Coverage shall be at least as broad as any underlying coverage. Coverage shall be provided on a "pay on behalf" basis. There shall be no cross liability exclusion. Policy limits shall be not less than five million dollars ($5,000,000) per occurrence and in the aggregate, including any limits required in the underlying policies. The policy shall have a starting

date no later than and an ending date no earlier than those of the underlying coverages. Subdivider may determine the layering of primary and excess liability insurance provided that if such layering differs from that described here, the actual coverage program meets the minimum total required limits.

4. Workers Compensation Insurance. Workers' Compensation/Employer's Liability shall provide workers' compensation statutory benefits as required by law. Employer's liability limits shall be no less than one million dollars per accident or disease. Employer's liability coverage shall be scheduled under any umbrella or excess liability policy described above. Unless otherwise agreed, this policy shall be endorsed to waive any right of subrogation as respects City, its employees or agents.

5. Business Auto Coverage. Business Auto Coverage for vehicles owned, operated or maintained in any way connected with the project, shall be written on ISO Business Auto Coverage form CA 00 01 or the equivalent, including symbol (1) (any Auto). If Subdivider (or Contractor) does not own any vehicles, this requirement may be satisfied by a non-owned vehicle endorsement to the general and umbrella liability policies. Limits shall be no less than one million dollars ($1,000,000) per accident. This policy shall be scheduled as underlying insurance to the umbrella or excess liability policy required above for a total limit of no less than five million dollars ($5,000,000) each accident.

C. Provisions Pertaining to Insurance Provided by Subdivider

1. All insurance coverage and limits provided pursuant to this Agreement shall apply to the full extent of the policies involved, available or applicable. Nothing contained in this Agreement or any other agreement relating to City or its operations limits the application of such insurance coverage.

2. Requirements of specific coverage features or limits contained in this Section are not intended as a limitation on coverage, limits or other requirements, or a waiver of any coverage normally provided by any insurance. Specific reference to a given coverage feature is for purposes of clarification only and is not intended by any Party to be all inclusive, or to the exclusion of other coverage, or a waiver of any type.

3. All general or auto liability insurance coverage provided pursuant to this Agreement, or any other agreements pertaining to the performance of this Agreement, shall not prohibit Subdivider, and Subdivider's employees, or agents, from waiving the right of subrogation prior to a loss. Subdivider waives its right of subrogation against City.

4. None of the policies required herein shall be in compliance with these requirements if they include any limiting endorsement that has not been first submitted to City and approved in writing by the City.

5. Unless otherwise approved by City, Subdivider's insurance and insurance provided by any contractor or subcontractor relating to the construction of the Improvements shall be written by insurers authorized to do business in the State of California and with a minimum "Best's" Insurance Guide rating of at least "A-:VII." Self-insurance will not comply with these insurance specifications unless expressly approved in writing by the City.

6. In the event any policy of insurance required under this Agreement does not comply with these requirements and Subdivider does not cure the non-compliance within thirty (30) days after written notice from City (or Subdivider does not provide reasonable evidence of such cure within such period), or if the insurance is canceled and not replaced, City has the right but not the duty to obtain the insurance it deems necessary and any reasonable premium paid by City will be promptly reimbursed by Subdivider.

7. Subdivider agrees to provide evidence of the insurance required herein, satisfactory to City, consisting of certificate(s) of insurance evidencing all of the coverages required and an additional insured endorsement to Subdivider's general liability and umbrella liability policies using ISO Form CG 20 10 11 85. Certificate(s) are to reflect that the insurer will provide 30 days' notice of any cancellation of coverage and policies are to have a "cancellation endorsement" to the same effect. Subdivider agrees to provide copies of any endorsements modifying coverage in any way upon request from City.

8. Subdivider shall provide proof that policies of insurance required herein expiring during the term of this Agreement have been renewed or replaced with other policies providing at least the same coverage.

9. Any actual or alleged failure on the part of City or any other additional insured under these requirements to obtain proof of insurance required under this Agreement in no way waives any right or remedy of City or any additional insured, in this or any other regard.

10. Subdivider agrees to require all subcontractors or other parties (but not including a general contractor) hired for this project to construct the Improvements to purchase and maintain insurance for general liability (minimum limit $1,000,000 per occurrence), automobile liability ($1,000,000 per accident) and workers' compensation (statutory benefits). Prior to the issuance of the Certificate of Completion for each Phase, Subdivider shall, upon request by City, provide the City with copies of all insurance policies, certificates and endorsements related to such Phase.

11. Subdivider agrees to monitor and review all coverage required by this Section and assumes all responsibility for ensuring that such coverage is provided as required here. Subdivider agrees to obtain certificates evidencing such coverage. Subdivider agrees that upon request, all agreements with subcontractors or others with whom Subdivider contracts with on behalf of City, and all certificates of insurance

obtained in compliance with this paragraph will be submitted to City for review upon request by City. Failure of City to request copies of such documents will not impose any liability on City, or its employees.

12. Subdivider agrees to require that no contract used by any general contractor or subcontractor in connection with construction of the Improvements, or contracts Subdivider enters into on behalf of City, will reserve the right to charge back to City the cost of insurance required by this Agreement.

13. Where appropriate (such as in the case of automobile insurance coverages), coverage will not be limited to the specific location designated as the Property.

14. Subdivider agrees to provide notice to City of any claim or loss against Subdivider that includes City as a defendant promptly after Subdivider receives written notice or obtains knowledge thereof. City assumes no obligation or liability by such notice, but has the right (but not the duty) to monitor the handling of any such claim or claims if they are likely to involve City. City agrees to provide similar notice to Subdivider of any such claims it is notified of respecting the Property.

15. Subdivider agrees not to attempt to avoid its defense and indemnity obligations to City, and its officers, employees, agents by using as a defense Subdivider's statutory immunity under workers' compensation and similar statutes.

16. Subdivider agrees to ensure that coverage provided to meet these requirements is applicable separately to each insured and that there will be no cross liability exclusions that preclude coverage for suits between Subdivider and City or between City and any other insured or Named Insured under the policy, or between City and any Party associated with City or its employees.

17. If Subdivider or any contractor or subcontractor is a Limited Liability Company, general liability coverage must apply so that the Limited Liability Company and its Managers, Members, Affiliates, and their employees are insureds.

18. Subdivider shall require General Contractor to maintain commercial general liability, and if necessary, commercial umbrella liability insurance with a limit of not less than $15,000,000 for each occurrence, until the warranty period specified in this Agreement expires.

19. Subdivider agrees to obtain and provide to City evidence of professional liability coverage for Architects, Engineers or other design professionals working on the Improvements. The limit of liability required is subject to City approval, but in no event to be less than $1,000,000 per claim and in the aggregate, and Subdivider shall use reasonable efforts to require and cause such professionals to maintain coverage with respect to each occurrence for at least three years following substantial completion of the work and, in the event Subdivider is unable to do so, Subdivider shall promptly inform the City of the scope of such efforts and the reasons that it was unable to do so. If

Subdivider requests that the City approve a lower limit for any particular design professional Subdivider seeks to employ on the Improvements, City will evaluate each such request based on City's perception of liability exposure associated with the work that would be performed by that design professional.

20. To the extent a particular coverage or policy form or specification is not reasonably available from Subdivider's insurer or would result in an additional premium that is extraordinary or unreasonably disproportionate to the premium for the policy as a whole, then Subdivider shall provide substantially similar coverage reasonably acceptable to City for which the cost is not extraordinary or unreasonably disproportionate.

9. OWNERSHIP OF THE IMPROVEMENTS

A. Ownership of all or any category of the Improvements constructed and installed by the Subdivider pursuant to this Agreement and shown on the Map to be dedicated to the public shall vest, as applicable, in the City (or other specified governmental agency) upon acceptance of said Improvements by the City. The acceptance of the Improvements shall either be shown by a certificate on the Final Map or by subsequent resolution accepting the Improvements adopted by the City pursuant to Government Code Section 66477.2 and recorded with the County Recorder or by other writing.

B. The Subdivider shall at all times prior to the acceptance of the Improvements by the City, give good and adequate warning to the public of each and every dangerous and defective condition caused by the construction of the Improvements and shall take all steps reasonably necessary to protect the public from such dangerous or defective conditions. The Subdivider agrees and understands that until acceptance of the Improvements by the City in writing, each Improvement and Improvement area that is offered for dedication shall be under the charge of the Subdivider, and the Subdivider may close all or a portion of any street or area whenever necessary to protect the public during the construction of the Improvements.

10. PREPARATION AND RECORDATION OF CC&RS.

A. The Subdivider shall establish a Homeowners Association for the residential areas of the Final Map owned by Subdivider, and to pay all costs associated with the creation of the associations.

B. The Subdivider shall prepare and record Covenants, Conditions, and Restrictions (CC&Rs) which obligate each homeowners association to provide for maintenance of the shared facilities, improvements, and landscaping within the boundaries of the associations in perpetuity in accordance with the Development Agreement and conditions of approval. The CC&Rs shall describe the homeowners association and the City's responsibilities and rights, and shall be subject to the approval of the City prior to recordation.

C. The Subdivider shall implement applicable provisions of the Mitigation Monitoring and Reporting Program.

11. DEFAULT AND BREACH BY THE SUBDIVIDER AND REMEDIES OF THE CITY

A. Upon the occurrence of any of the following events, the Subdivider shall be deemed to be in default under this Agreement:

1. Subject to any time extensions granted in accordance with Section 4, failure to complete construction and installation of the Improvements or any of them by the completion date set forth above in the Subdivision Reference Data;

2. Failure to promptly correct or cure any defect in the Improvements or any of them (other than a City Directive) during the one-year guarantee and warranty period as required by Section 3.A or failure to commence correction or cure of any such defect or failure to diligently prosecute same to completion, in each instance following receipt by Subdivider of written notice that such defect exists;

3. Subject to any time extensions granted in accordance with Section 4, failure to perform substantial construction work of the Improvements or any of them, after commencement of work on same, for a period of thirty (30) days after Subdivider's receipt of written notice thereof from the City;

4. Insolvency, appointment of a receiver, or the filing of any petition in bankruptcy, whether voluntary or involuntary, and such is not cured or discharged within a period of thirty (30) days;

5. Commencement of a foreclosure action against the Subdivision or any portion thereof, or any conveyance by the Subdivider in lieu or in avoidance of foreclosure, within thirty (30) days after receipt by Subdivider of written notice thereof from the City; or

6. Failure to perform any other obligations in accordance with the terms and provisions of this Agreement within thirty (30) days after receipt by Subdivider of written notice thereof from the City.

B. City reserves to itself all remedies available to it at law or in equity for any breach of Subdivider's obligations under this Agreement. City shall have the right, without limitation of other rights or remedies, after written notice to Subdivider and a reasonable opportunity for Subdivider to cure any such alleged default, to draw upon or utilize any improvement security furnished hereunder to complete the Improvements or otherwise mitigate City's damages in the event of Subdivider's default.

C. Following Subdivider's receipt of written notice of alleged default and failure by Subdivider to promptly commence the cure of any alleged default and to diligently prosecute such cure to completion, the City may serve written notice of any such default upon the surety on any corporate surety bond furnished as improvement security hereunder, and request that said surety take over and complete the Improvements herein specified. If such surety, within thirty (30) days after service of such notice of default, does not give the City

written notice of its intention to perform this Agreement, or does not commence such performance within thirty (30) days after notice to the City of such intention to perform, the City may take over the work and prosecute the same to completion, by contract or by any other method the City deems advisable, for the account and at the expense of the Subdivider and its surety.

D. Subdivider acknowledges that the Estimated Total Costs and Improvement Security amounts set forth herein may not reflect the actual cost of construction or installation of the Improvements, and, consequently, City's damages for Subdivider's default shall be measured by the actual cost of completing the required Improvements. If the damages incurred by the City in taking over and completing the Improvements exceeds the principal amount of the improvement security, then the Subdivider shall reimburse the City in the amount of such excess damages.

E. Following Subdivider's receipt of written notice of alleged default and failure by Subdivider to promptly commence the cure of any alleged default and to diligently prosecute such cure to completion, City may, without liability for so doing, take possession of, and utilize in completing the Improvements, such materials, appliances, plant and other property belonging to Subdivider as may be on the site of the work and necessary for the performance of the work. Subdivider hereby consents to such entry by the City and its representatives, including contractors, following written notice to Subdivider upon the real property in the Subdivision owned by Subdivider and necessary for City to enter or access under this Agreement, in the event the City elects to maintain or complete the work on the Improvements following Subdivider's default.

F. Subdivider acknowledges and agrees that approval of the Final Map for the Subdivision conferred substantial rights upon the Subdivider, including the right to sell, lease or finance lots within the Subdivision, and that such approval constitutes the final act necessary to permit the division of land within the Subdivision. As a result, City will be damaged to the extent of the cost of construction or installation of the Improvements upon Subdivider's failure to perform its obligations under this Agreement, which failure is not promptly remedied by sureties or by Subdivider.

G. The City's failure to take an enforcement action with respect to a default, or to declare a default or breach, shall not be construed as a waiver of that default or breach or any subsequent default or breach of the Subdivider.

H. If City sues to compel Subdivider's performance of this Agreement, or to recover damages or costs incurred in completing or maintaining the work on the Improvements, and is the prevailing party, Subdivider agrees to pay all reasonable attorneys' fees and other costs and expenses of litigation incurred by the City in connection therewith, even if Subdivider subsequently resumes and completes the work.

12. RELATIONSHIP OF THE PARTIES

Neither Subdivider, nor any of Subdivider's contractors, employees or agents, are or shall be deemed to be, agents of the City in connection with the performance of Subdivider's obligations under this Agreement.

13. ASSIGNMENT

A. Subdivider shall not assign this Agreement, or any portion thereof without the prior written consent of the City in accordance with the Development Agreement. Any attempted or purported assignment in violation of this subparagraph A shall be null and void and shall have no force or effect.

B. The sale or other disposition of the Subdivision shall not relieve Subdivider of its obligations hereunder. If Subdivider intends to sell the Subdivision, or any portion thereof (except for the sale of individual lots with homes to individual purchasers), to any other person or entity, the Subdivider may request an assignment or novation of this Agreement and a substitution of improvement security. Upon the City's approval of the assignment or novation and substitution of improvement security, the Subdivider may request a release or reduction of the improvement security furnished pursuant to this Agreement.

14. NOTICES

All notices required or provided for in this Agreement shall be in writing and delivered in person or by mail, postage prepaid, and addressed as follows:

If to the City:	Art Vela Director of Public Works/City Engineer City of Banning 99 E. Ramsey Drive Banning, California 92220
If to the Subdivider:	To the address set forth above in the Subdivision Reference Data, or to such other address as may subsequently be designated in written notice to the City.

Notice shall be effective on the date that it is delivered in person, or, if mailed, three (3) days after the date of deposit in the United States Mail.

15. ENTIRE AGREEMENT

This Agreement constitutes the entire agreement of the parties with respect to its subject matter. All modifications, amendments, or waivers of any terms of this Agreement shall be in writing and signed by the duly authorized representatives of the parties. In the case of the City, the duly authorized representative, unless otherwise specified herein, shall be the City Engineer.

16. SEVERABILITY

The provisions of this Agreement are severable. If any portion of this Agreement is held invalid by a court of competent jurisdiction, the remainder of the Agreement shall remain in full force and effect.

17. INCORPORATION OF SUBDIVISION REFERENCE DATA AND RECITALS

The Subdivision Reference Data and the Recitals are incorporated into this Agreement.

18. GOVERNING LAW

This Agreement shall be governed by the laws of the State of California.

19. EFFECTIVE DATE OF THE AGREEMENT

This Agreement shall be and become effective as of the date that it is executed by a duly authorized officer or employee of the City, it being the intention of the parties that the Subdivider shall first execute this Agreement and thereafter submit it to the City. The City shall insert the effective date in the Subdivision Reference Data in all counterparts of this Agreement and shall transmit a fully executed counterpart to the Subdivider.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their respective officers, thereunto duly authorized, as of the dates set forth below their respective signatures.

[Note: All signatures must be acknowledged by a notary public and the acknowledgement must be attached. If signed by a Corporation, the signatures of two Corporate officers are required, unless a resolution of the Corporation's Board of Directors is provided indicating that the signature of the one signatory is sufficient to bind the Corporation.]

SUBDIVIDER

By: _____
Print Name: Michael C. Taylor
Title: Division President

Date: 1.29.25

CITY

CITY OF BANNING

_____
MAYOR

ATTEST:

_____ (SEAL)

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ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES NOTARY PUBLIC - CALIFORNIA COMMISSION # 2466323 RIVERSIDE COUNTY My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

CITY CLERK

Approved as to form:

_____

CITY ATTORNEY

11303-0014\2299407v5.doc

[This page for acknowledgments.]

IN THE CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

TRACT NO. 37389

BEING A SUBDIVISION OF REMAINDER LOT 1, OF TRACT NO. 37389-1, AS SHOWN BY MAP ON FILE IN BOOK 485, PAGES 68 THROUGH 75, INCLUSIVE, OF MAPS IN THE OFFICE OF THE COUNTY RECORDER OF THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, LYING WITHIN SECTION 1, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SAN BERNARDINO MERIDIAN.

DARYL J. CHRISTIAN, L.S. 8554 MDS CONSULTING DECEMBER, 2024

THIS SUBDIVISION CONTAINS

NUMBERED LOTS: 85
LETTERED LOTS: 9
GROSS AREA: 13.44 ACRES

RECORDER'S STATEMENT

FILED THIS _____ DAY OF_____ , 20 __
AT_____M. IN BOOK _____ OF MAPS,
AT PAGES _____ AT THE REQUEST OF THE CLERK OF THE CITY OF BANNING

NO. _____

FEE _____

PETER ALDANA, COUNTY ASSESSOR - CLERK - RECORDER

BY: _____ DEPUTY

SUBDIVISION GUARANTEE BY:
FIRST AMERICAN TITLE INSURANCE COMPANY

OWNER'S STATEMENT

WE HEREBY STATE THAT WE ARE THE OWNERS OF THE LAND INCLUDED WITHIN THE SUBDIVISION SHOWN HEREON, THAT WE ARE THE ONLY PERSONS WHOSE CONSENT IS NECESSARY TO PASS A CLEAR TITLE TO SAID LAND, THAT WE CONSENT TO THE MAKING AND RECORDING OF THIS SUBDIVISION AS SHOWN WITHIN THE DISTINCTIVE BORDER LINE.

THE REAL PROPERTY DESCRIBED BELOW IS DEDICATED AS AN EASEMENT FOR PUBLIC PURPOSES:

1. WE HEREBY DEDICATE TO THE CITY OF BANNING LOTS "A" THROUGH "F", INCLUSIVE, FOR STREET AND PUBLIC UTILITY PURPOSES.
2. WE HEREBY DEDICATE TO THE CITY OF BANNING A NON-EXCLUSIVE USE EASEMENT LYING ADJACENT TO LOTS "A" THROUGH "F", INCLUSIVE, AS SHOWN HEREON. THE DEDICATION IS FOR PUBLIC UTILITY PURPOSES.
3. WE HEREBY DEDICATE TO THE CITY OF BANNING THE 3.0 FOOT WIDE NON-EXCLUSIVE USE EASEMENTS LYING ADJACENT TO THE SIDE LINES OF LOTS 1-85, INCLUSIVE, AS SHOWN HEREON. THE DEDICATION IS FOR PUBLIC UTILITY PURPOSES.

WE ALSO HEREBY RESERVE FOR THE SOLE BENEFIT OF OURSELVES, OUR SUCCESSORS, ASSIGNEES AND LOT OWNERS WITHIN THIS TRACT MAP:

1. LOTS "G", "H" AND "I", FOR OPEN SPACE, LANDSCAPING AND MAINTENANCE PURPOSES.

TRI POINTE HOMES IE-SD, INC., A CALIFORNIA CORPORATION, FORMERLY KNOWN AS PARDEE HOMES, A CALIFORNIA CORPORATION

NAME: MICHAEL C. TAYLOR
TITLE: DIVISION PRESIDENT

NOTARY ACKNOWLEDGMENT

A NOTARY PUBLIC OR OTHER OFFICER COMPLETING THIS CERTIFICATE VERIFIES ONLY THE IDENTITY OF THE INDIVIDUAL WHO SIGNED THE DOCUMENT TO WHICH THIS CERTIFICATE IS ATTACHED, AND NOT THE TRUTHFULNESS, ACCURACY, OR VALIDITY OF THAT DOCUMENT.

STATE OF California)
) SS
COUNTY OF Riverside)

ON 1·29 2025 BEFORE ME, Edelmira Gonzales A NOTARY PUBLIC,

PERSONALLY APPEARED Michael C. Taylor
WHO PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE, TO BE THE PERSON(S) WHOSE NAME(S) IS/ARE SUBSCRIBED TO THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE/SHE/THEY EXECUTED THE SAME IN HIS/HER/THEIR AUTHORIZED CAPACITY(IES), AND THAT BY HIS/HER/THEIR SIGNATURE(S) ON THE INSTRUMENT THE PERSON(S), OR THE ENTITY UPON BEHALF OF WHICH THE PERSON(S) ACTED, EXECUTED THE INSTRUMENT.

I CERTIFY UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA THAT THE FOREGOING PARAGRAPH IS TRUE AND CORRECT.

WITNESS MY HAND

Edelmira Gonzales
SIGNATURE

Edelmira Gonzales
PRINT NAME

MY PRINCIPAL PLACE OF BUSINESS IS IN Riverside COUNTY

MY COMMISSION EXPIRES 10-22-27

My Commission# 2466323

TAX COLLECTOR'S CERTIFICATE

I HEREBY CERTIFY THAT ACCORDING TO THE RECORDS OF THIS OFFICE, AS OF THIS DATE, THERE ARE NO LIENS AGAINST THE PROPERTY SHOWN ON THE WITHIN MAP FOR UNPAID STATE, COUNTY, MUNICIPAL OR LOCAL TAXES OR SPECIAL ASSESSMENTS COLLECTED AS TAXES, EXCEPT TAXES OR SPECIAL ASSESSMENTS COLLECTED AS TAXES NOW A LIEN, BUT NOT YET PAYABLE, WHICH ARE ESTIMATED TO BE $ 7,800.00 .

DATED: JANUARY 29 , 2025 .
MATTHEW JENNINGS, TREASURER-TAX COLLECTOR

BY: _____ , DEPUTY

TAX BOND CERTIFICATE

I HEREBY CERTIFY THAT A BOND IN THE SUM OF $ 7,800.00 HAS BEEN EXECUTED AND FILED WITH THE BOARD OF SUPERVISORS OF THE COUNTY OF RIVERSIDE, CALIFORNIA, CONDITIONED UPON THE PAYMENT OF ALL TAXES, STATE, COUNTY, MUNICIPAL OR LOCAL, AND ALL SPECIAL ASSESSMENTS COLLECTED AS TAXES, WHICH AT THE TIME OF FILING OF THIS MAP WITH THE COUNTY RECORDER ARE A LIEN AGAINST SAID PROPERTY BUT NOT YET PAYABLE AND SAID BOND HAS BEEN DULY APPROVED BY SAID BOARD OF SUPERVISORS.

DATED: JANUARY 29 , 2025 .

CASH OR SURETY TAX BOND
MATTHEW JENNINGS, TREASURER-TAX COLLECTOR
COUNTY TAX COLLECTOR

BY: _____ , DEPUTY

SIGNATURE OMISSIONS: SEE SHEET 2

EASEMENT NOTES: SEE SHEET 4

SURVEYOR'S STATEMENT

THIS MAP WAS PREPARED BY ME OR UNDER MY DIRECTION AND IS BASED UPON A FIELD SURVEY IN CONFORMANCE WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCE AT THE REQUEST OF TRI POINTE HOMES IN DECEMBER, 2020. I HEREBY STATE THAT ALL MONUMENTS ARE OF THE CHARACTER AND OCCUPY THE POSITIONS INDICATED, OR THAT THEY WILL BE SET IN ACCORDANCE WITH THE TERMS OF THE MONUMENT AGREEMENT FOR THE MAP AND THAT THE MONUMENTS ARE, OR WILL BE, SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED, AND THAT THIS FINAL MAP SUBSTANTIALLY CONFORMS TO THE CONDITIONALLY APPROVED TENTATIVE MAP. THIS SURVEY IS TRUE AND COMPLETE AS SHOWN.

DATE: 1-16 , 2025 .

DARYL J. CHRISTIAN L.S. 8554

PROFESSIONAL LAND SURVEYOR · DARYL J. CHRISTIAN · LS 8554 · STATE OF CALIFORNIA

CITY ENGINEER'S STATEMENT

I HEREBY STATE THAT I HAVE EXAMINED THE WITHIN MAP, THAT THE SUBDIVISION SHOWN THEREON IS SUBSTANTIALLY THE SAME AS IT APPEARED ON THE TENTATIVE MAP OF TRACT NO. 37389 WHICH WAS APPROVED BY THE CITY OF BANNING CITY COUNCIL ON JUNE 22, 2021, AND ANY APPROVED ALTERATIONS THEREOF; THAT ALL PROVISIONS OF THE SUBDIVISION MAP ACT (DIVISION 2 OF TITLE 7 OF THE CALIFORNIA GOVERNMENT CODE) AND CHAPTER 22 OF THE BANNING MUNICIPAL CODE APPLICABLE AT THE TIME OF THE APPROVAL OF THE TENTATIVE MAP HAVE BEEN COMPLIED WITH.

DATE: _____ , 20___ .

NATHAN C. SMITH, RCE 74754
CITY ENGINEER, CITY OF BANNING

REGISTERED PROFESSIONAL ENGINEER · NATHAN C. SMITH · No. 74754 · CIVIL · STATE OF CALIFORNIA

CITY SURVEYOR'S STATEMENT

I HEREBY STATE THAT I HAVE EXAMINED THIS MAP AND THAT SAID MAP IS TECHNICALLY CORRECT.

DATE: 2-3 , 2025 .

BY: ROBERT C. OLLERTON, PLS 7731
ENGINEERING RESOURCES OF SOUTHERN CALIFORNIA

PROFESSIONAL LAND SURVEYOR · ROBERT C. OLLERTON · 7731 · STATE OF CALIFORNIA

COMMUNITY DEVELOPMENT DIRECTOR'S STATEMENT

THE TENTATIVE MAP WAS APPROVED BY THE CITY COUNCIL ON JUNE 22, 2021.

DATED: _____

DAVID A. NEWELL
COMMUNITY DEVELOPMENT DIRECTOR

CITY ACCEPTANCE CERTIFICATE

I, _____ CITY CLERK AND EX-OFFICIO CLERK OF THE CITY COUNCIL OF THE CITY OF BANNING, STATE OF CALIFORNIA, DO HEREBY CERTIFY THAT THE SAID CITY COUNCIL AT ITS REGULAR MEETING HELD ON THE _____ DAY OF _____ , 20 ___ , DULY APPROVED THE WITHIN SUBDIVISION, AND ACCEPTED ON BEHALF OF THE PUBLIC AS OFFERED FOR DEDICATION:

1. LOTS "A" THROUGH "F", INCLUSIVE, FOR STREET AND PUBLIC UTILITY PURPOSES, SUBJECT TO IMPROVEMENT.
2. THE NON-EXCLUSIVE USE EASEMENTS LYING ADJACENT TO LOTS "A" THROUGH "F", INCLUSIVE, AS SHOWN HEREON, FOR PUBLIC UTILITY PURPOSES.
3. THE 3.0 FOOT WIDE NON-EXCLUSIVE USE EASEMENTS LYING ADJACENT TO THE SIDE LINES OF LOTS 1 THROUGH 85, INCLUSIVE, FOR PUBLIC UTILITY PURPOSES.

DATED: _____

BY: _____
CITY CLERK

TRACT NO. 37389

BEING A SUBDIVISION OF REMAINDER LOT 1, OF TRACT NO. 37389-1, AS SHOWN BY MAP ON FILE IN BOOK 485, PAGES 68 THROUGH 75, INCLUSIVE, OF MAPS IN THE OFFICE OF THE COUNTY RECORDER OF THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, LYING WITHIN SECTION 1, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SAN BERNARDINO MERIDIAN.

DARYL J. CHRISTIAN, L.S. 8554 MDS CONSULTING DECEMBER, 2024

EASEMENT NOTES:

A EASEMENT FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES IN FAVOR OF SOUTHERN SIERRAS POWER COMPANY, RECORDED DECEMBER 1, 1919 IN BOOK , PAGE 40, OF PATENTS. LOCATION CANNOT BE DETERMINED FROM RECORD INFORMATION.

B RIGHT OF WAY FOR DITCHES AND CANALS IN FAVOR THE UNITED STATES OF AMERICA, RECORDED DECEMBER 1, 1919 IN BOOK 8, PAGE 40, OF PATENTS. LOCATION CANNOT BE DETERMINED FROM RECORD INFORMATION.

[1] INDICATES VARIABLE WIDTH NON-EXCLUSIVE EASEMENTS OVER LOTS "A" THROUGH "F", INCLUSIVE, FOR STREET AND PUBLIC UTILITY PURPOSES, DEDICATED TO THE CITY OF BANNING, AS SHOWN HEREON.

[2] INDICATES NON-EXCLUSIVE USE EASEMENTS, LYING ADJACENT TO LOTS "A" THROUGH "F", INCLUSIVE, DEDICATED TO THE CITY OF BANNING FOR PUBLIC UTILITY PURPOSES, AS SHOWN HEREON.

[3] INDICATES 3.0 FOOT WIDE NON-EXCLUSIVE USE EASEMENTS, LYING ADJACENT TO THE SIDE LINES OF LOTS 1 THROUGH 85, INCLUSIVE, DEDICATED TO THE CITY OF BANNING FOR PUBLIC UTILITY PURPOSES, AS SHOWN HEREON.

SIGNATURE OMISSIONS:

PURSUANT TO SECTION 66436(a)(3) OF THE SUBDIVISION MAP ACT, THE SIGNATURES OF THE FOLLOWING OWNERS OF EASEMENTS AND/OR OTHER INTERESTS HAVE BEEN OMITTED, AS THEIR INTERESTS CANNOT RIPEN INTO FEE.

SOUTHERN SIERRAS POWER COMPANY, HOLDER OF AN EASEMENT FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES, RECORDED DECEMBER 1, 1919 IN BOOK 8, PAGE 40 OF PATENTS.

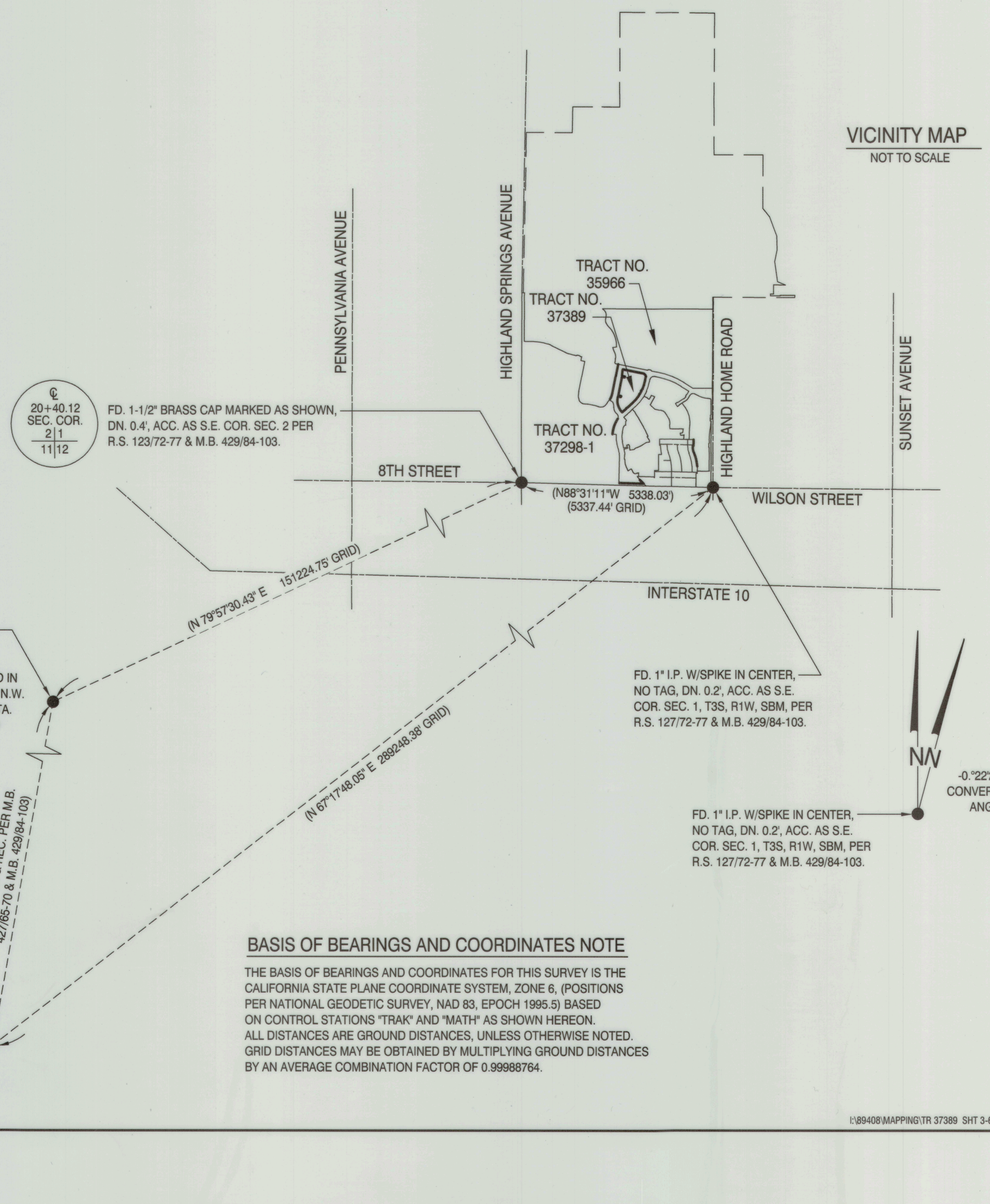
UNITED STATES OF AMERICA, HOLDER OF A RIGHT OF WAY FOR DITCHES AND CANALS AS RESERVED IN THE PATENT RECORDED DECEMBER 1, 1919 IN BOOK 8, PAGE 40 OF PATENTS.

SOILS REPORT:

PURSUANT TO SECTION 66490 OF THE SUBDIVISION MAP ACT, A PRELIMINARY SOILS REPORT, PREPARED BY GEOCON WEST, INC., PROJECT NO. T2305-22-13, DATED JANUARY 25, 2021, IS ON FILE WITH THE CITY OF BANNING, ENGINEERING DEPARTMENT.

VICINITY MAP

NOT TO SCALE



BASIS OF BEARINGS AND COORDINATES NOTE

THE BASIS OF BEARINGS AND COORDINATES FOR THIS SURVEY IS THE CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 6, (POSITIONS PER NATIONAL GEODETIC SURVEY, NAD 83, EPOCH 1995.5) BASED ON CONTROL STATIONS "TRAK" AND "MATH" AS SHOWN HEREON. ALL DISTANCES ARE GROUND DISTANCES, UNLESS OTHERWISE NOTED. GRID DISTANCES MAY BE OBTAINED BY MULTIPLYING GROUND DISTANCES BY AN AVERAGE COMBINATION FACTOR OF 0.99988764.

IN THE CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

TRACT NO. 37389

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DARYL J. CHRISTIAN, L.S. 8554 MDS CONSULTING DECEMBER, 2024

BOUNDARY SURVEY

SCALE: 1" = 100'

100 50 0 100 200 300

GRAPHIC SCALE

SURVEYOR'S NOTES

● — INDICATES FOUND 1" I.P., L.S. 8554, FLUSH, TO BE SET PER TRACT NO. 37389-1, M.B. 485/68-75, UNLESS OTHERWISE NOTED.

⊙ — INDICATES FOUND SPIKE & WASHER, L.S. 8554, FLUSH, PER TRACT NO. 37389-1, M.B. 485/68-75, UNLESS OTHERWISE NOTED.

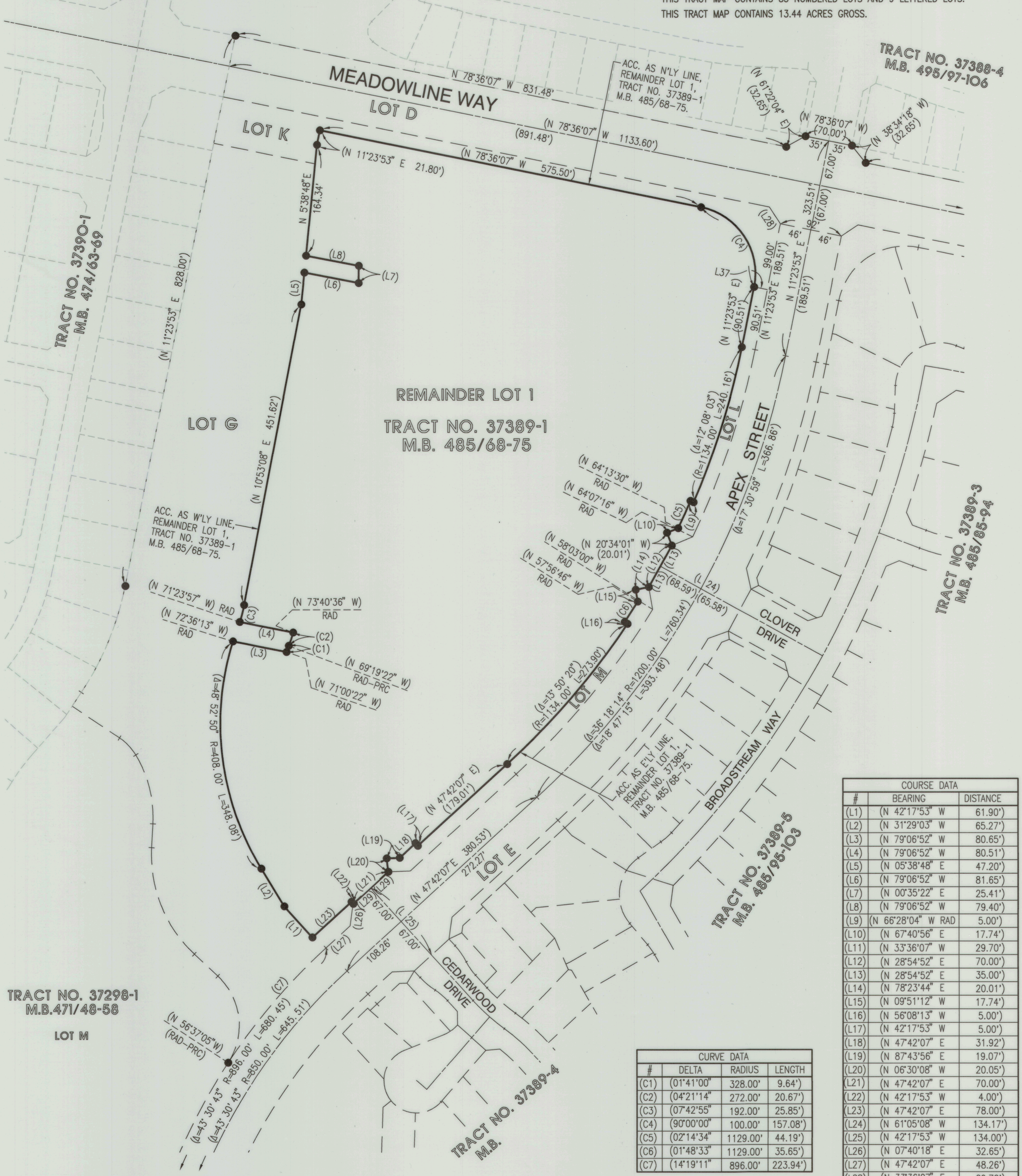
1" IRON PIPE, TAGGED L.S. 8554 FLUSH IN DIRT OR SPIKE & WASHER, STAMPED L.S. 8554 FLUSH IN ASPHALT, OR LEAD, TACK AND TAG, L.S. 8554, FLUSH IN CONCRETE OR TOP OF WALL, TO BE SET AT ALL REAR LOT CORNERS, CENTERLINE INTERSECTIONS, AND POINTS OF CONTROL, UNLESS OTHERWISE NOTED.

NAIL AND TAG, LS 8554 TO BE SET IN TOP OF CURB AT THE PROLONGATION OF SIDE LOT LINES IN LIEU OF FRONT LOT CORNERS, UNLESS OTHERWISE NOTED.

( ) — INDICATES RECORD DATA PER TRACT NO. 37389-1, M.B. 485/68-75

THIS TRACT MAP CONTAINS 85 NUMBERED LOTS AND 9 LETTERED LOTS.

THIS TRACT MAP CONTAINS 13.44 ACRES GROSS.



CURVE DATA			
#	DELTA	RADIUS	LENGTH
(C1)	(01°41'00"	328.00'	9.64')
(C2)	(04°21'14"	272.00'	20.67')
(C3)	(07°42'55"	192.00'	25.85')
(C4)	(90°00'00"	100.00'	157.08')
(C5)	(02°14'34"	1129.00'	44.19')
(C6)	(01°48'33"	1129.00'	35.65')
(C7)	(14°19'11"	896.00'	223.94')

COURSE DATA		
#	BEARING	DISTANCE
(L1)	(N 42°17'53" W	61.90')
(L2)	(N 31°29'03" W	65.27')
(L3)	(N 79°06'52" W	80.65')
(L4)	(N 79°06'52" W	80.51')
(L5)	(N 05°38'48" E	47.20')
(L6)	(N 79°06'52" W	81.65')
(L7)	(N 00°35'22" E	25.41')
(L8)	(N 79°06'52" W	79.40')
(L9)	(N 66°28'04" W RAD	5.00')
(L10)	(N 67°40'56" E	17.74')
(L11)	(N 33°36'07" W	29.70')
(L12)	(N 28°54'52" E	70.00')
(L13)	(N 28°54'52" E	35.00')
(L14)	(N 78°23'44" E	20.01')
(L15)	(N 09°51'12" W	17.74')
(L16)	(N 56°08'13" W	5.00')
(L17)	(N 42°17'53" W	5.00')
(L18)	(N 47°42'07" E	31.92')
(L19)	(N 87°43'56" E	19.07')
(L20)	(N 06°30'08" W	20.05')
(L21)	(N 47°42'07" E	70.00')
(L22)	(N 42°17'53" W	4.00')
(L23)	(N 47°42'07" E	78.00')
(L24)	(N 61°05'08" W	134.17')
(L25)	(N 42°17'53" W	134.00')
(L26)	(N 07°40'18" E	32.65')
(L27)	(N 47°42'07" E	48.26')
(L28)	(N 33°36'07" E	29.70')
(L29)	(N 47°42'07" E	35.00')

IN THE CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

TRACT NO. 37389

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DARYL J. CHRISTIAN, L.S. 8554 MDS CONSULTING DECEMBER, 2024

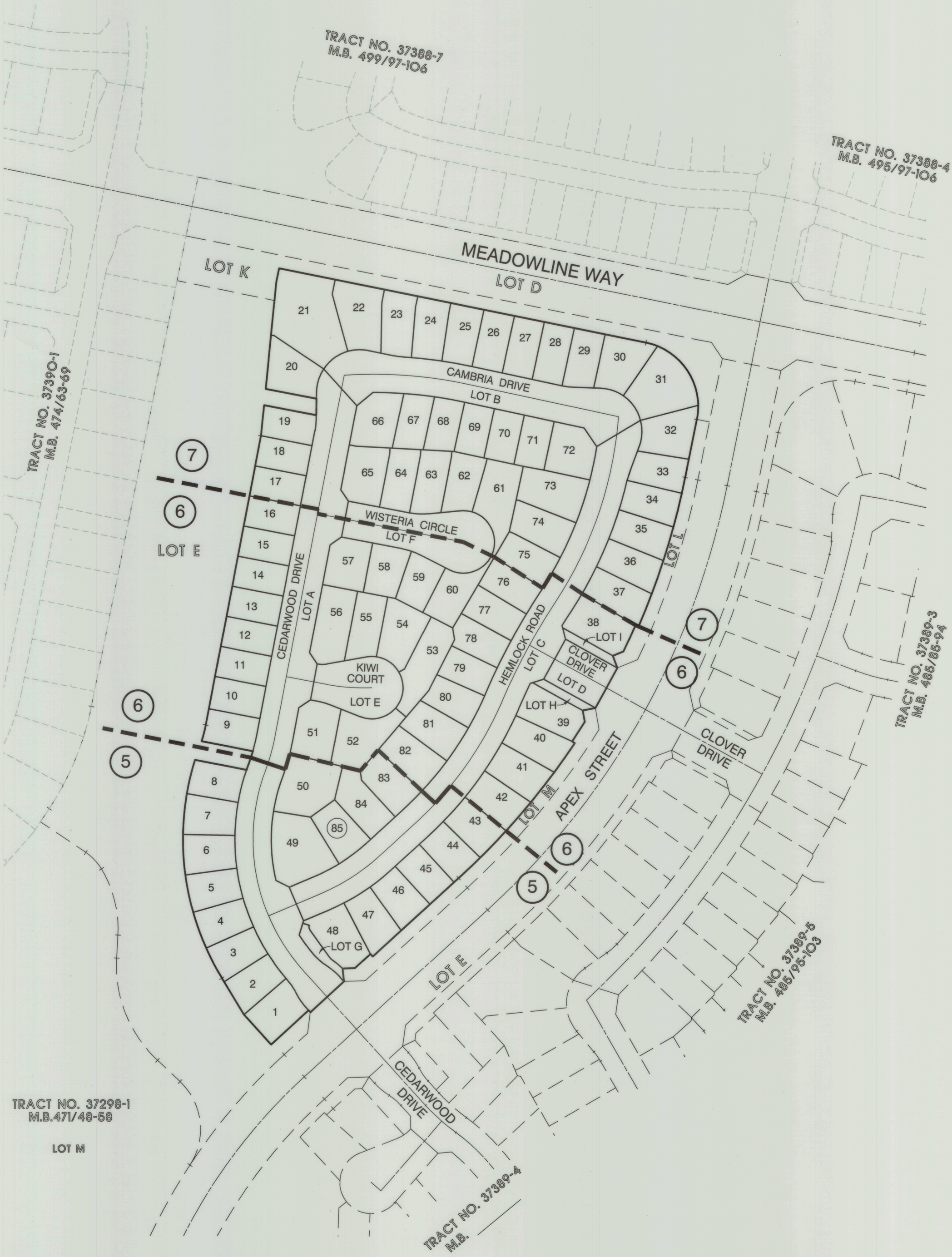
SCALE: 1" = 100'

100 50 0 100 200 300

GRAPHIC SCALE

SHEET INDEX MAP

(X) INDICATES SHEET NUMBER



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IN THE CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

SHEET 5 OF 7 SHEETS

TRACT NO. 37389

BEING A SUBDIVISION OF REMAINDER LOT 1, OF TRACT NO. 37389-1, AS SHOWN BY MAP ON FILE IN BOOK 485, PAGES 68 THROUGH 75, INCLUSIVE, OF MAPS IN THE OFFICE OF THE COUNTY RECORDER OF THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, LYING WITHIN SECTION 1, TOWNSHIP 3 SOUTH, RANGE 1 WEST, SAN BERNARDINO MERIDIAN.

DARYL J. CHRISTIAN, L.S. 8554 MDS CONSULTING DECEMBER, 2024

SCALE: 1" = 40'

40 20 0 40 80 120

GRAPHIC SCALE

TRACT NO. 37389-1
M.B. 485/68-75

LOT G

ACC. AS W'LY LINE REMAINDER LOT 1, TRACT NO. 37389-1 M.B. 485/68-75

CEDAR WOOD DRIVE

LOT A

LOT G
0.03 AC

LOT C

HEMLOCK ROAD

APEX STREET

CEDARWOOD DRIVE

TRACT NO. 37389-4
M.B. _____

ACC. AS E'LY LINE REMAINDER LOT 1, TRACT NO. 37389-1 M.B. 485/68-75

SEE SHEET 6

SEE SHEET 6

CURVE DATA			
#	DELTA	RADIUS	LENGTH
(C1)	(01°41'00"	328.00'	9.64')
(C2)	(04°21'14"	272.00'	20.67')
(C3)	(07°42'55"	192.00'	25.85')
C6	15°16'30"	110.00'	29.33'
C7	14°15'45"	90.00'	22.40'
C8	00°42'47"	328.00'	4.08'
C16	07°33'03"	272.00'	35.85'
C17	17°10'32"	90.00'	26.98'
C18	15°04'08"	110.00'	28.93'
C19	04°15'41"	328.00'	24.40'
C20	52°26'12"	8.00'	7.32'
C21	19°26'52"	20.00'	6.79'
C22	9°11'43"	122.00'	19.58'

COURSE DATA		
#	BEARING	DISTANCE
(L9)	(N 42°17'53" W	5.00')
(L10)	(N 47°42'07" E	31.92')
(L11)	(N 87°43'56" E	19.07')
(L12)	(N 06°30'08" W	20.05')
L13	N 42°17'53" W	4.00'
L14	N 42°17'53" W	8.15'
L15	N 42°17'53" W	4.15'
L22	N 17°10'31" E	22.92'
L23	N 17°10'31" E	18.85'
L24	N 17°10'31" E	4.07'
L25	RAD N 72°49'29" W	10.06'
L26	N 63°11'34" W	22.92'

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IN THE CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

TRACT NO. 37389

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DARYL J. CHRISTIAN, L.S. 8554 — MDS CONSULTING — DECEMBER, 2024

SCALE: 1" = 40'

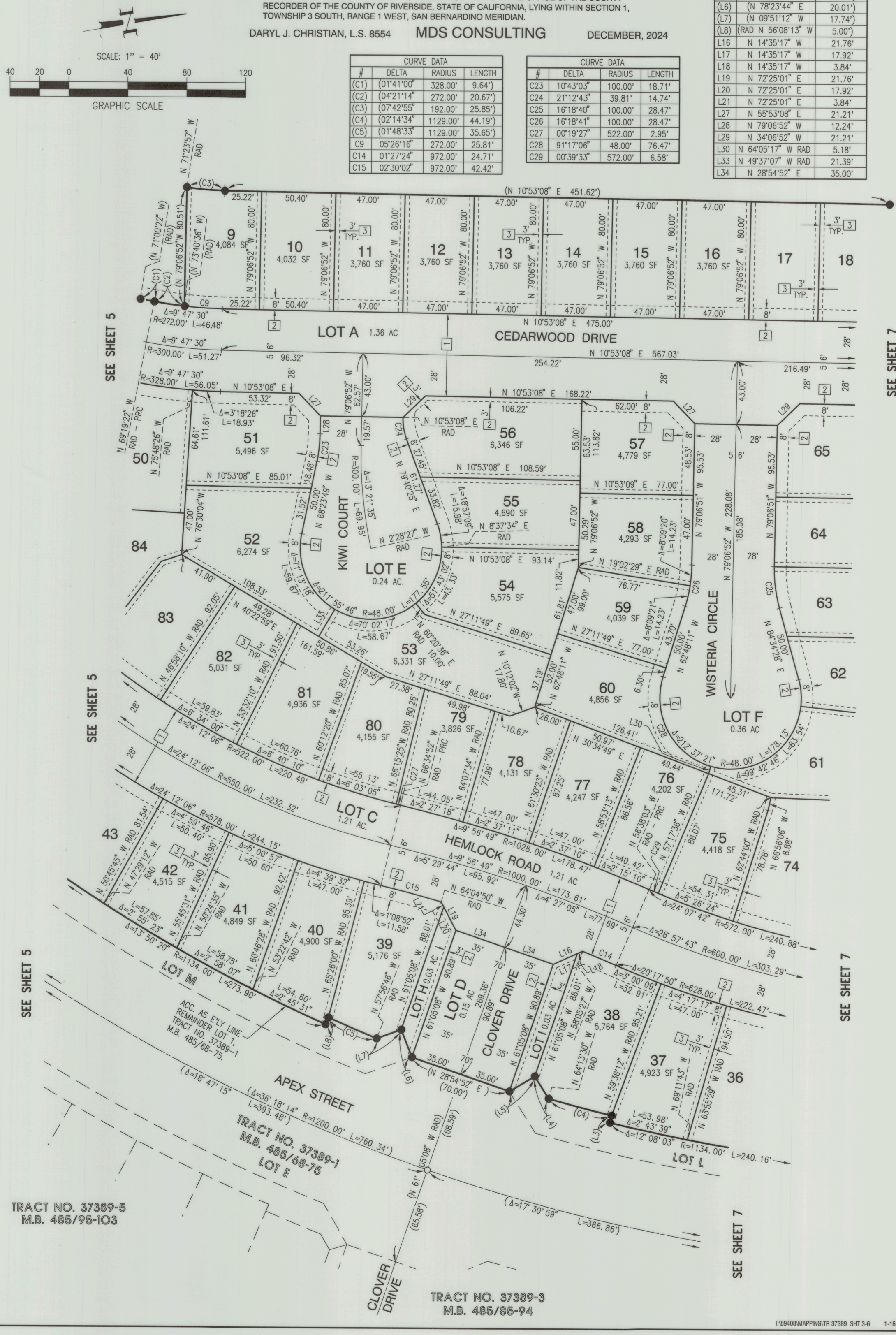
40 20 0 40 80 120

GRAPHIC SCALE

CURVE DATA			
#	DELTA	RADIUS	LENGTH
(C1)	(01°41'00"	328.00'	9.64')
(C2)	(04°21'14"	272.00'	20.67')
(C3)	(07°42'55"	192.00'	25.85')
(C4)	(02°14'34"	1129.00'	44.19')
(C5)	(01°48'33"	1129.00'	35.65')
C9	05°26'16"	272.00'	25.81'
C14	01°27'24"	972.00'	24.71'
C15	02°30'02"	972.00'	42.42'

CURVE DATA			
#	DELTA	RADIUS	LENGTH
C23	10°43'03"	100.00'	18.71'
C24	21°12'43"	39.81'	14.74'
C25	16°18'40"	100.00'	28.47'
C26	16°18'41"	100.00'	28.47'
C27	00°19'27"	522.00'	2.95'
C28	91°17'06"	48.00'	76.47'
C29	00°39'33"	572.00'	6.58'

COURSE DATA		
#	BEARING	DISTANCE
(L3)	(RAD N 66°28'04" W	5.00')
(L4)	(N 67°40'56" E	17.74')
(L5)	(N 20°34'01" W	20.01')
(L6)	(N 78°23'44" E	20.01')
(L7)	(N 09°51'12" W	17.74')
(L8)	(RAD N 56°08'13" W	5.00')
L16	N 14°35'17" W	21.76'
L17	N 14°35'17" W	17.92'
L18	N 14°35'17" W	3.84'
L19	N 72°25'01" E	21.76'
L20	N 72°25'01" E	17.92'
L21	N 72°25'01" E	3.84'
L27	N 55°53'08" E	21.21'
L28	N 79°06'52" W	12.24'
L29	N 34°06'52" W	21.21'
L30	N 64°05'17" W RAD	5.18'
L33	N 49°37'07" W RAD	21.39'
L34	N 28°54'52" E	35.00'



I:\89408\MAPPING\TR 37389 SHT 3-6 1-16-2025

IN THE CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

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DARYL J. CHRISTIAN, L.S. 8554 — MDS CONSULTING — DECEMBER, 2024

SCALE: 1" = 40'

40 20 0 40 80 120

GRAPHIC SCALE

CURVE DATA			
#	DELTA	RADIUS	LENGTH
C10	10°17'46"	100.00'	17.97'
C11	07°44'52"	100.00'	13.52'
C12	10°17'49"	100.00'	17.97'
C13	07°22'21"	100.00'	12.87'
C25	16°18'40"	100.00'	28.47'
C26	16°18'41"	100.00'	28.47'

COURSE DATA		
#	BEARING	DISTANCE
(L1)	(N 00°35'22" E	25.41')
(L2)	(N 11°23'53" E	21.80')
(L3)	(RAD N 66°28'04" W	5.00')
L27	N 55°53'08" E	21.21'
L29	N 34°06'52" W	21.21'
L30	RAD N 64°05'17" W	5.18'
L31	N 79°43'29" W	32.12'
L32	N 50°26'00" E	31.84'
L35	N 84°21'12" W	4.80'

SEE SHEET 6

TRACT NO. 37389-1
M.B. 485/68-75
LOT G

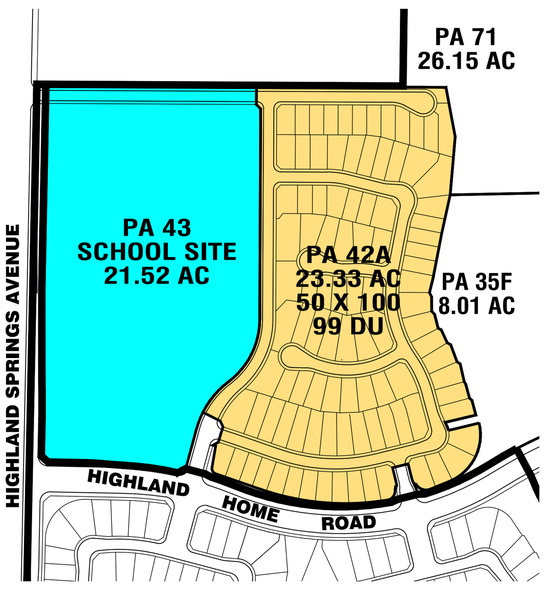
ACC. AS W'LY LINE REMAINDER LOT 1, TRACT NO. 37389-1 M.B. 485/68-75.

(N 10°53'08" E 451.62')
(N 5°38'48" E 47.20')
(N 5°38'48" E 164.34')
82.52'
81.82'
(L2)
20'
L35
9 2'
46'
46'

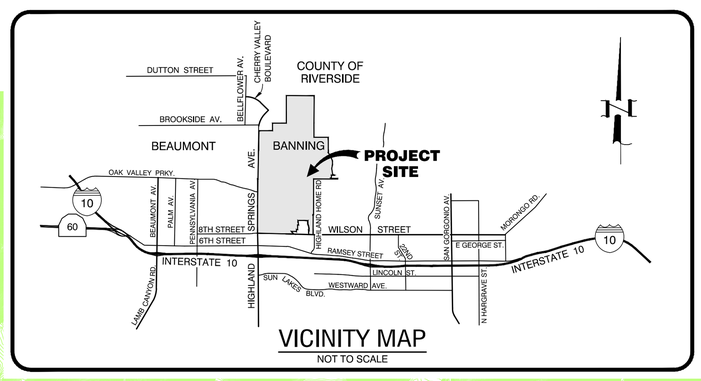
15 — 3,760 SF
16 — 3,760 SF
17 — 3,760 SF
18 — 3,760 SF
19 — 3,839 SF
20 — 5,385 SF
21 — 12,244 SF
22 — 6,713 SF
23 — 4,858 SF
24 — 4,590 SF
25 — 4,448 SF
26 — 4,254 SF
27 — 4,222 SF
28 — 4,247 SF
29 — 4,251 SF
30 — 5,456 SF
31 — 7,847 SF
57
58
59
60
61 — 6,332 SF
62 — 4,533 SF
63 — 4,634 SF
64 — 4,496 SF
65 — 5,482 SF
66 — 5,408 SF
67 — 3,966 SF
68 — 3,769 SF
69 — 3,619 SF
70 — 3,619 SF
71 — 3,603 SF
72 — 5,199SF
73 — 6,213 SF
74 — 5,005 SF
75
76
77
32 — 5,318 SF
33 — 4,210 SF
34 — 4,360 SF
35 — 4,467 SF
36 — 4,655 SF
37
38

47.00' 47.00' 47.00' 47.00' 47.00' 8' 23.38'
N 10°53'08" E 475.00'
N 79°06'52" W 80.00'
3' TYP.
5.85'
(N 79°06'52" W 81.65')
(N 79°06'52" W 79.40')
9.73'
L=38.18'
Δ=33°08'30"
Δ=100°45'09"
L=47.00'
Δ=40°48'05"
R=66.00'
N 56°16'08" W RAD
91.73'
N 11°23'53" E 22.86'
N 15°28'03" W RAD
90.71'
88.06'
77.26'
52.30'
51.92'
(L1)
40.99'
N 0°35'22" E
C10
28'
CEDARWOOD DRIVE
N 10°53'08" E 567.03'
254.22'
216.49'
5 6'
LOT A 1.36 AC
N 10°53'08" E 131.14'
70.16'
60.98'
8'
L27
L29
L32
43.00'
N 42°02'55" W 76.22'
N 3°37'31" W RAD
N 0°57'42" E 78.05'
N 78°39'29" W 40.99'
20.65'
20.34'
C11
Δ=1°04'02"
L=13.56'
N 3°35'39" E RAD - PRC
N 4°39'41" E RAD 77.74'
N 11°23'53" E 19.88'
N 11°23'53" E 16.78'
N 11°23'53" E 14.29'
RAD N 8°21'38" E 75.79'
N 0°01'08" W RAD
N 89°57'37" W 55.26'
51.88'
N 79°06'52" W 10.91'
N 10°53'09" E 83.36'
N 12°03'34" E 85.36'
L=47.71'
Δ=4°04'03"
L=141.66'
L=191.62'
N 3°02'27" E 8.96'
N 4°02'55" E RAD
N 10°53'09" E 90.23'
N 12°03'34" E 82.84'
L=47.27'
Δ=4°01'49"
R=672.00'
Δ=15°41'05"
R=700.00'
L=107.56'
Δ=3°41'57"
L=47.00'
R=728.00'
Δ=8°27'55"
N 3°02'27" E 8.57'
N 3°02'27" E 8.17'
N 8°04'44" E RAD
N 10°53'09" E 87.55'
N 12°03'34" E 77.00'
L=46.69'
Δ=3°58'50"
Δ=12°04'42"
N 84°34'28" E 50.00'
N 62°48'11" W 50.00'
WISTERIA CIRCLE
LOT F 0.36 AC
Δ=212°37'29"
R=48.00'
L=178.13'
L=83.54'
N 16°11'57" E RAD
76.96'
N 12°03'34" E 8.20'
N 30°34'49" E
45.31'
171.72'
N 12°03'34" E 102.61'
49.83'
52.78'
N 56°38'03" W RAD - PRC
N 62°44'00" W RAD
78.78'
N 66°56'06" W 8.88'
N 68°34'02" W RAD 93.98'
N 77°56'26" W 4.40'
L=58.24'
Δ=5°50'02"
Δ=24°07'42"
R=572.00'
L=69.50'
Δ=6°57'42"
L=240.88'
HEMLOCK ROAD
Δ=28°57'43"
R=600.00'
L=303.29'
LOT C 1.21 AC
Δ=20°17'50"
R=628.00'
L=222.47'
Δ=4°17'17"
L=47.00'
N 76°55'53" W RAD - PRC
N 20°26'28" E 40.99'
C13
33.33'
Δ=0°08'33"
L=1.56'
Δ=108°40'44"
R=66.00'
Δ=35°00'59"
L=40.34'
7.66'
N 15°25'30" E RAD 91.54'
N 22°05'17" E RAD
N 34°37'25" E RAD 92.55'
Δ=10°41'24"
L=18.66'
63.95'
N 88°57'05" E RAD
Δ=66°51'48"
L=116.70'
R=100.00'
L=157.08')
Δ=90°00'00"
(Δ=12°08'03"
R=1134.00'
L=240.16')
(LJ)
20'
LOT L
LOT K
ACC. AS E'LY LINE REMAINDER LOT 1, TRACT NO. 37389-1 M.B. 485/68-75.
ACC. AS N'LY LINE REMAINDER LOT 1, TRACT NO. 37389-1 M.B. 485/68-75.
APEX STREET
LOT E
TRACT NO. 37389-1
M.B. 485/68-75
(Δ=36°18'14" R=1200.00' L=760.34')
(Δ=17°30'59" L=366.86')
(189.51')
(N 11°23'53" E 323.51')
(67.00')
(67.00')
(242.12')
(891.48')
(N 78°36'07" W 1133.60')
MEADOWLINE WAY
CAMBRIA DRIVE
LOT B 0.65 AC
(N 78°36'07" W 575.50')
(N 11°23'53" E 90.51')
N 59°06'52" E 78.32'
N 85°35'46" W RAD
N 34°21'05" W 34.47'
N 80°45'45" W RAD
N 75°31'44" W RAD
N 77°56'26" W 72.16'
N 77°56'26" W 188.35'
N 77°56'26" W 236.67'
N 77°56'26" W 47.00'
N 12°03'34" E 76.00'
14.90'
L31
N 12°03'34" E 90.64'
N 12°03'34" E 89.01'
N 12°03'34" E 89.56'
N 12°03'34" E 90.10'
N 12°03'34" E 84.06'
N 12°03'34" E 77.74'
N 12°03'34" E 16.78'
N 12°03'34" E 14.29'
N 12°03'34" E RAD 75.79'
N 34°37'25" E RAD 92.55'
N 22°05'17" E RAD
N 88°14'15" W 40.99'
30.95'
10.04'
C12
48.33'
63.95'
47.65'
47.65'
141.65'
47.00'
47.00'
47.00

ATWELL



PA 42A & 43
ALTERNATE SITE PLAN



VICINITY MAP
NOT TO SCALE

COUNTY OF RIVERSIDE
CITY OF BANNING
PA 73
44.35 AC
EARTHQUAKE FAULT SETBACK
PA 34
132.55 AC
SMITH CREEK
HIGHLAND SPRINGS GOLF RESORT
SAN BERNARDINO NATIONAL FOREST
POTABLE WATER RESERVOIR
LIMITS OF DWELLING UNITS LINE
DETENTION BASIN
PA 72
(OPTIONAL FIRE STATION SITE)
1.73 AC
POTABLE WATER RESERVOIR
PA 69
5.17 AC
DETENTION BASIN
POTABLE WATER RESERVOIR
DETENTION BASIN
SUB-STATION
WATER QUALITY BASIN
FUTURE RESIDENTIAL
WATER QUALITY BASIN
GILMAN STREET
MOUNTAIN AIR ESTATES
HIGHLAND ESTATES
HOFFER STREET
KINGSWELL AVE.
THOMPSON AVE.
PA 28
0.51 AC
(OPTIONAL PARK SITE)
PA 74
17.77 AC
PA 38
19.62 AC
SCE CORRIDOR
PA 37
15.38 AC
PA 36
10.27 AC
PA 34
SMITH CREEK DETENTION BASIN
PA 59
21.70 AC
55 X 100
98 DU
PA 52B
5.16 AC
60 X 100
19 DU
PA 66
15.56 AC
PA 64
PA 71
26.00 AC
EARTHQUAKE FAULT SETBACK
PA 64
11.76 AC
PA 65
4.61 AC
PA 43
21.34 AC
55 X 100
97 DU
PA 42A
21.86 AC
50 X 100
102 DU
PA 35F
8.90 AC
PA 57
22.04 AC
60 X 100
82 DU
PA 58
22.69
50 X 100
103 DU
PA 52A
27.36 AC
50 X 100
108 DU
PA 75
6.21 AC
PA 56A
15.74 AC
55 X 100
68 DU
PA 55B
(& 56B)
21.61 AC
50 X 100
91 DU
PA 54 (& 55A)
30.73 AC
45 X 100
147 DU
PA 39
4.27 AC
PA 67
2.42 AC
PA 68
13.12 AC
PA 41 (&42B)
29.67 AC
50 X 100
142 DU
PA 44A
22.38 AC
55 X 100
101 DU
PA 35E
26.84 AC
PA 35E
PA 62
1.91 AC
PA 63
8.12 AC
PA 47A
14.51 AC
50 X 100
69 DU
PA 48A
18.61 AC
60 X 100
74 DU
PA 53 (&49B)
24.00 AC
45 X 100
122 DU
PA 51
19.70 AC
45 X 100
94 DU
PA 40 (&44B)
32.69 AC
60 X 100
135 DU
PA 45 (& 47B)
35.09 AC
45 X 100
198 DU
PA 35D
10.64 AC
PA 46
26.93 AC
55 X 100
118 DU
PA 47C
18.80 AC
45 X 100
94 DU
PA 31
0.50 AC
PA 49A
17.77 AC
MDR
142 DU
PA 50A
24.69 AC
50 X 100
111 DU
PA 8A (& 8B)
26.21 AC
47 X 100
137 DU
PA 25
PA 24
2.20 AC
PA 7 (& 50B)
27.21 AC
60 X 100
112 DU
6.67 AC
PA 15A
15.04 AC
44 X 74
117 DU
PA 35B
13.98 AC
PA 16B
15.55 AC
55 X 100
72 DU
PA 16A (&48B)
20.32 AC
PA 21A
2.00 AC
PA 27
0.87 AC
PA 14
25.67 AC
47 X 75
165 DU
PA 15B
16.29 AC
50 X 100
78 DU
PA 32
0.57 AC
PA 17
12.87 AC
PA 1A
19.21 AC
55 X 100
86 DU
PA 6 (& 2B)
22.60 AC
55 X 100
106 DU
PA 13 (& 5B)
13.04 AC
47 X 75
85 DU
PA 10
(& 9C)
23.35 AC
60 X 100
94 DU
PA 2A
20.40 AC
45 X 100
120 DU
PA 23
13.55 AC
PA 1B
12.65 AC
60 X 100
57 DU
PA 22
2.14 AC
PA 35A
10.14 AC
PA 29
2.01 AC
PA 5A
19.13 AC
45 X 100
100 DU
PA 30
0.64 AC
PA 12
12.12 AC
47 X 75
79 DU
PA 11
24.63 AC
44 X 74
174 DU
PA 3
16.49 AC
47 X 75
109 DU
PA 20
20.00 AC
PA 26
0.91 AC
PA 4 (& 9B)
13.28 AC
44 X 70
107 DU
PA 9A
18.68 AC
55 X 100
84 DU
PA 19
9.98 AC
PA 18
23.00 AC
PA 35A
PA 35D
APEX STREET
CREEKSIDE AVENUE
LANDMARK WAY
MEADOWLINE WAY
ATWELL DRIVE
"F" STREET
HIGHLAND HOME ROAD
4A
4B
3A
3B
2A
2B
1A
1B
BROOKSIDE AVENUE
NORTH SUNDANCE
COUGAR WAY
ALTIS
DISCOVERY WAY
OAK VALLEY PARKWAY
SUNDANCE
SUNDANCE DRIVE
STARLIGHT AVENUE
SUNDANCE CORPORATE CENTER
8TH STREET
WILSON STREET
SAN GORGONIO MEMORIAL HOSPITAL
SEE ALTERNATE SITE PLAN ABOVE FOR PA 42A & 43
CITY OF BANNING
CITY OF BEAUMONT
HIGHLAND SPRINGS AVENUE
SMITH CREEK CHANNEL
EXISTING RESIDENTIAL
PERSHING CHANNEL

Final Map 37388-8

Final Map 37388

Final Map 37388-7

Final Maps 37388-1, -2, -3, -4, -5, and -6 Previously Recorded Maps

LAND-USE SUMMARY			
PLANNING AREA	ACREAGE	PRODUCT TYPE	UNITS
3	16.49	47 X 75	109
12	12.12	47 X 75	79
13 (& 5B)	13.04	47 X 75	85
14	25.67	47 X 75	165
SUBTOTAL	67.32		438
4 (& 9B)	13.28	44 X 70 (AVE. W=43.5')	107
11	24.63	44 X 74 (AVE. W=43.5')	174
15A	15.04	44 X 74 (AVE. W=43.5')	117
SUBTOTAL	52.95		398
49A	17.77	MDR	142
SUBTOTAL	17.77		142
2A	20.40	45 X 100	120
5A	19.13	45 X 100	100
16A (& 48B)	20.32	45 X 100	98
45 (& 47B)	35.09	45 X 100	198
47C	18.80	45 X 100	94
51	19.70	45 X 100	94
53 (& 49B)	24.00	45 X 100	122
54 (& 55A)	30.73	45 X 100	147
SUBTOTAL	188.17		973
8A (& 8B)	26.21	47 X 100	137
SUBTOTAL	26.21		137
15B	16.29	50 X 100	78
41 (& 42B)	29.67	50 X 100	142
42A	21.86	50 X 100	102
47A	14.51	50 X 100	69
50A	24.69	50 X 100	111
52A	27.36	50 X 100	108
55B (& 56B)	21.61	50 X 100	91
58	22.68	50 X 100	103
SUBTOTAL	178.67		804
1A	19.21	55 X 100	86
6 (& 2B)	22.60	55 X 100	106
9A	18.68	55 X 100	84
16B	16.55	55 X 100	72
43	21.34	55 X 100	97
44A	22.38	55 X 100	101
46	26.93	55 X 100	118
56A	15.74	55 X 100	68
59	21.70	55 X 100	98
SUBTOTAL	185.13		830
1B	12.65	60 X 100	57
7 (& 50B)	27.21	60 X 100	112
10 (& 9C)	23.35	60 X 100	94
40 (& 44B)	32.69	60 X 100	135
48A	18.61	60 X 100	74
52B	5.16	60 X 100	19
57	22.04	60 X 100	82
SUBTOTAL	141.71		573
GRAND TOTAL	857.93		4,295
OPEN SPACE	440.52		
PARKS	82.30		
COMMERCIAL	35.87		
SCHOOL SITES	33.12		
BACKBONE ROW	73.62		
TOTAL AREA	1523.36		

DWELLING UNIT SUMMARY	
PHASE	DWELLING UNITS
1A	479
1B	355
2A	616
2B	530
3A	576
3B	619
4A	430
4B	690
TOTAL	4,295

LEGEND:

- PHASE BOUNDARY
- PLANNING AREA BOUNDARY
- 3A — PHASE NUMBER
- M — MODEL LOTS

NOTE:

PA 49A MDR PLANNING AREA SITE PLANS TBD. ESTIMATED DWELLING UNIT TOTALS SHOWN FOR EACH. POTABLE WATER RESERVOIR SIZES SUBJECT TO CHANGE.

GRAPHIC SCALE
250 0 125 250 500 100
(IN FEET)
1 inch = 250 ft.

DATE:	NO.	REVISIONS

PREPARED FOR:

tri pointe HOMES
1250 Corona Pointe Court
Suite 600
Corona, CA 92879
(951) 428-4400

PREPARED BY:

MDS CONSULTING
5 PETERS CANYON ROAD
SUITE 305
IRVINE, CA 92606
(949) 251-8821
WWW.MDSCONSULTING.NET
PLANNERS ENGINEERS SURVEYORS

ATWELL
PRELIMINARY COMPOSITE SITE PLAN

DATE PREPARED: JANUARY 15, 2024

CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

SHEET 1 OF 1

MDS Proj. Data: I:\89400\PLANNING\Exhibits\Site Plans
Created: 01.15.2024 09:34:47 AM Author: MDS
Last Edit: 01.15.2024 10:09:06 AM By: Station178
MDS File: 89400 ATWELL EXH-COMP SITE.dwg
Plot Scale: 1" = 1' Dwg Scale: 1" = 120'
Plot Date: 01.15.2024 4:22:48 PM By: station178

RESOLUTION 2021-59

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BANNING, CALIFORNIA, MAKING AN ENVIRONMENTAL DETERMINATION UNDER CEQA AND APPROVE TENTATIVE TRACT MAP NO. 37389, A SUBDIVISION OF APPROXIMATELY 152.47 GROSS ACRES OF VACANT LAND FOR PURPOSES OF CREATING 616 SINGLE FAMILY LOTS, 2 LOTS FOR PARKS, ONE LOT FOR A POTENTIAL WELL SITE OR PARK, 30 OPEN SPACE LETTERED LOTS (INCLUDING RECREATION AND DRAINAGE), PRIVATE COMMON DRIVES AND PUBLIC STREETS, ON REAL PROPERTY LOCATED NORTH OF WILSON STREET AND EAST OF HIGHLAND SPRINGS AVENUE WITHIN THE SOUTHWESTERLY PORTION OF THE BUTTERFIELD SPECIFIC PLAN (APNS: 408-120-024, 408-120-038, 408-120-040, AND PORTIONS OF 408-120-018, 408-120-042)

WHEREAS, an application for Tentative Tract Map No. 37389, attached hereto as Exhibit "A," to subdivide approximately 152.47 gross acres of vacant real property into residential, park, and open space lots, along with private common drives and public streets (the "Project"), has been duly filed by:

Project Applicant:	Tri Pointe Homes 1250 Corona Pointe Court, #600 Corona, CA 92879
Property Owner:	Tri Pointe Homes 1250 Corona Pointe Court, #600 Corona, CA 92879
Parcel Address:	North of Wilson Street, east of Highland Springs Avenue
APNs:	408-120-024, 408-120-038, 408-120-040, and portions of 408-120-018, 408-120-042
Lot Area:	Approximately 152.47 gross acres;

WHEREAS, pursuant to Title 16 of the Banning Municipal Code, the Planning Commission has the authority to review and make recommendations to the City Council concerning Tentative Tract Map 37389;

WHEREAS, on June 2, 2021, the Planning Commission held a duly noticed public hearing at which interested persons had an opportunity to testify in support of, or opposition to, proposed Tentative Tract Map 37389. Following the receipt of public testimony, the Planning Commission closed the public hearing. Following a discussion of the Project, the Planning Commission voted to recommend that the City Council approve proposed Tentative Tract Map 37389 by adopting Planning Commission Resolution 2021-06; and

WHEREAS, the Community Development Department has evaluated the Project's potential effects on the environment as required under the California Environmental Quality Act ("CEQA") (Cal. Pub. Res. Code, § 21000 *et seq.*) and determined that potential impacts associated with proposed Tentative Tract Map No. 37389 were adequately analyzed under the previously approved Final Environmental Impact Report for the Butterfield Specific Plan project (SCH No. 2007091149) and that pursuant to CEQA Guidelines Section 15162 no further environmental analysis is required;

WHEREAS, in accordance with Government Coce Sections 66451.3, 65090 and 65091, on June 11, 2021 the City gave public notice, by advertisement in the Record Gazette Newspaper, and by mailing to the owner of the subject real property, the owner's duly authorized agent, the Project applicant, and property owners within 300 feet of the Project site, of a public hearing concerning the Project; and

WHEREAS, in accordance with Banning Municipal Code Section 16.12.080, on June 22, 2019, the City Council held a public hearing at which time interested persons had an opportunity to testify in support of, or opposition to, the Project, and at which the City Council considered Tentative Tract Map 37389.

NOW THEREFORE, the City Council of the City of Banning does hereby resolve, determine, find, and order as follows:

SECTION 1: California Environmental Quality Act and Multiple Species Habitat Conservation Plan Findings. The City Council of the City of Banning makes the following environmental findings and determinations in connection with the approval of the Project:

A. Pursuant to the California Environmental Quality Act ("CEQA") (Cal. Pub. Res. Code, § 21000 *et seq.*), the State Guidelines (14 Cal. Code Regs. § 15000 *et seq.*), and the City's Local Guidelines, City staff has considered the potential environmental impacts of Tentative Tract Map No. 37389. City staff has also reviewed the previously certified Environmental Impact Report (EIR) for the Butterfield Specific Plan project (SCH No. 2007091149), including the impacts and mitigation measures identified therein, and reviewed the EIR in accordance with CEQA for the Project. Based on that review, the City of Banning Planning Division has determined that the Project and the circumstances under which the Project is undertaken do not involve substantial changes which will result in new significant environmental effects, and that the Project does not involve new information of substantial importance which shows that the Project will have significant effects not discussed in the prior EIR. All potential environmental impacts associated with the Butterfield Specific Plan and Tentative Tract Map No. 37389 are adequately addressed by the prior EIR.

B. The City Council has independently reviewed the Planning Division's determination, and based upon the whole record before it, the the Planning Division's determination, and its independent review and judgment, finds that that the Project is not subject to further environmental review pursuant to the Guidelines because: (1) the Project and the circumstances under

which the Project is undertaken do not involve substantial changes which will result in new significant environmental effects, and that the Project does not involve new information of substantial importance which shows that the Project will have significant effects not discussed in the prior EIR; and (2) all potential environmental impacts associated with Butterfield Specific Plan and the proposed Tentative Tract Map 37389 are adequately addressed by the prior EIR.

C. The custodian of records for the prior EIR, and all other materials that constitute the record of proceedings upon which the City Council's recommendation is based, is the Planning Division of the City of Banning. Those documents are available for public review in the Planning Division located at 99 E. Ramsey Street, Banning, California 92220.

D. Multiple Species Habitat Conservation Plan (MSHCP). The Project EIR's mitigation measures, including submittal of a Determination of Biologically Equivalent of Superior Preservation (DBESP), ensure consistency with the Western Riverside County MSHCP. These mitigation measures will be incorporated into future development approvals as required by the Project Mitigation Monitoring and Reporting Program to ensure consistency with the MSHCP.

SECTION 2: Findings for Recommendation of Approval of Tentative Tract Map 37389. The City Council of the City of Banning does hereby find and determine that Tentative Tract Map 37389 should be approved because:

A. Finding: Tentative Tact Map No. 37389 is consistent with the objectives, policies, general land uses, and programs specified in the City's General Plan and the Butterfield Specific Plan.

Findings of Fact:
The General Plan land use designation for the site is classified as Specific Plan; the Butterfield Specific Plan includes land use designations of Low Density Residential, Medium Density Residential, Open Space, and Parks uses within the proposed Project area. The proposed Tentative Tract Map No. 37389 is consistent with the City's General Plan in that as it will provide for a range of housing types, parks, and open space as envisioned by the General Plan's Land Use element and an efficient transportation system as envisioned by the General Plan's Circulation element. It is consistent with the Butterfield Specific Plan as it provides for land uses consistent with those designated for the Project area by the Specific Plan land use map. As such, the proposed Tentative Tract Map No. 37389 is consistent with the objectives, policies, general land uses, and programs specified in the City's General Plan and the Butterfield Specific Plan.

B. Finding: The design and improvement of the subdivision proposed under Tentative Tract Map No. 37389 is consistent with the City's General Plan and the Butterfield Specific Plan.

Findings of Fact:
The design and improvement of the proposed subdivision is consistent with the City's General Plan and the Butterfield Specific Plan in that it will provide for a range of housing to meet the needs of the City's residents, and an efficient transportation system as envisioned by the General Plan, and is designed to meet City standards, including providing satisfactory pedestrian and vehicular circulation, emergency vehicle access and on site improvements, such as streets, utilities, and drainage facilities consistent with the Specific Plan.

C. **Finding: The subject site is physically suitable for the type of development proposed under Tentative Tract Map No. 37389.**

Findings of Fact:
The Project site transitions from relatively flat land at the northeast corner of Highland Springs Avenue and Wilson Street to the foothills of the San Bernardino Mountains. Major access to the Project site is provided by Highland Springs Avenue and Wilson Street. Analysis of the Project site relative to the physical suitability of the site for development was included in previous approvals for the Butterfield Specific Plan and the site is physically suitable for the proposed development as allowed under the Butterfield Specific Plan.

D. **Finding: The site is physically suitable for the proposed density of development under Tentative Tract Map No. 37389.**

Findings of Fact:
The Project site transitions from relatively flat land at the northeast corner of Highland Springs Avenue and Wilson Street to the foothills of the San Bernardino Mountains. Major access to the site is provided by Highland Springs Avenue and Wilson Street. Analysis of the Project site relative to the physical suitability for density of development was included in the approvals for the Butterfield Specific Plan, and the proposed number of dwelling units is lower than that allowed under the Butterfield Specific Plan.

E. **Finding: The design of the subdivision and improvements proposed under Tentative Tract Map No. 37389 is not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.**

Findings of Fact:
Potential environment issues associated with the proposed Tentative Tract Map No. 37389 were analyzed in the previously certified Environmental Impact Report for the Butterfield Specific Plan project (SCH No. 2007091149), as amended by the Addendum approved by the City Council in February 2017. With the imposition of mitigation measures, the Project will not have a significant effect on biological resources. There have been no substantial changes in the Project, nor in the circumstances under which

the Project is undertaken, that will require major revisions of the prior certified EIR; nor is there new information that shows that the Project will have a significant environmental effect or an effect more severe than originally thought. Therefore, the proposed Tentative Tract Map No. 37389 is not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.

F. **Finding: The design of the subdivision and improvements proposed under Tentative Tract Map No. 37389 is not likely to cause serious health problems.**

Findings of Fact:
The proposed Tentative Tract Map No. 37389 is in conformance with the City's General Plan, Zoning Ordinance, and Subdivision Ordinance and the Butterfield Specific Plan, and the Project has been conditioned to comply with all applicable Specific Plan requirements and requirements of the City's ordinances, codes, and standards. In addition, the design and construction of improvements are conditioned to be in conformance with adopted City street and public works standards. The City's ordinances, codes, and standards have been created based on currently accepted standards and practices for the preservation of the public health, safety, and welfare.

G. **Finding: The design of the subdivision and improvements proposed under Tentative Tract Map No. 37389 will not conflict with easements, acquired by the public at large, for access through or use of, property within the proposed subdivision.**

Findings of Fact:
Tentative Tract Map No. 37389 does not conflict with any easements for access through or use of property within the proposed subdivision.

H. **Finding: The design of the proposed Tentative Tract Map No. 37389 provides, to the extent feasible, for future passive or natural heating or cooling opportunities in the subdivision.**

Findings of Fact:
Tentative Tract Map No. 37389 does not propose any design features that would conflict with future passive or natural heating or cooling opportunities.

SECTION 3: CITY COUNCIL ACTION - Approval of Tentative Tract Map 37389 with Conditions. Based on the foregoing the City Council of the City of Banning approves Tentative Tract Map 37389, attached hereto as Exhibit "A," a subdivision of approximately 152.47 gross acres into 616 single family lots, 2 lots for parks, one lot for a potential well site or park, 30 open space lots, common private drives and public streets on real property located north of Wilson Street and east of Highland Springs avenue within the southwesterly portion of the Butterfield Specific Plan (APNs: Portions of 408-120-024 408-120-038, 408-120-040, and portions of 408-120-018, 408-120-042), subject to the recommended Conditions of Approval attached as Exhibit "B".

PASSED, APPROVED, AND ADOPTED this 22nd day of June 2021.

Colleen Wallace, Mayor
City of Banning

ATTEST:

Caroline Patton, Deputy City Clerk
City of Banning

APPROVED AS TO FORM AND LEGAL CONTENT:

Kevin G. Ennis, City Attorney
Richards, Watson & Gershon

CERTIFICATION:

I, Caroline Patton, Deputy City Clerk of the City of Banning, California, do hereby certify that the foregoing Resolution 2021-59, was duly adopted by the City Council of the City of Banning, California, at a regular meeting thereof held on the 22nd day of June 2021 by the following vote, to wit:

AYES: Council Members Hamlin, Happe, Pingree, Sanchez, and Mayor Wallace.

NOES:

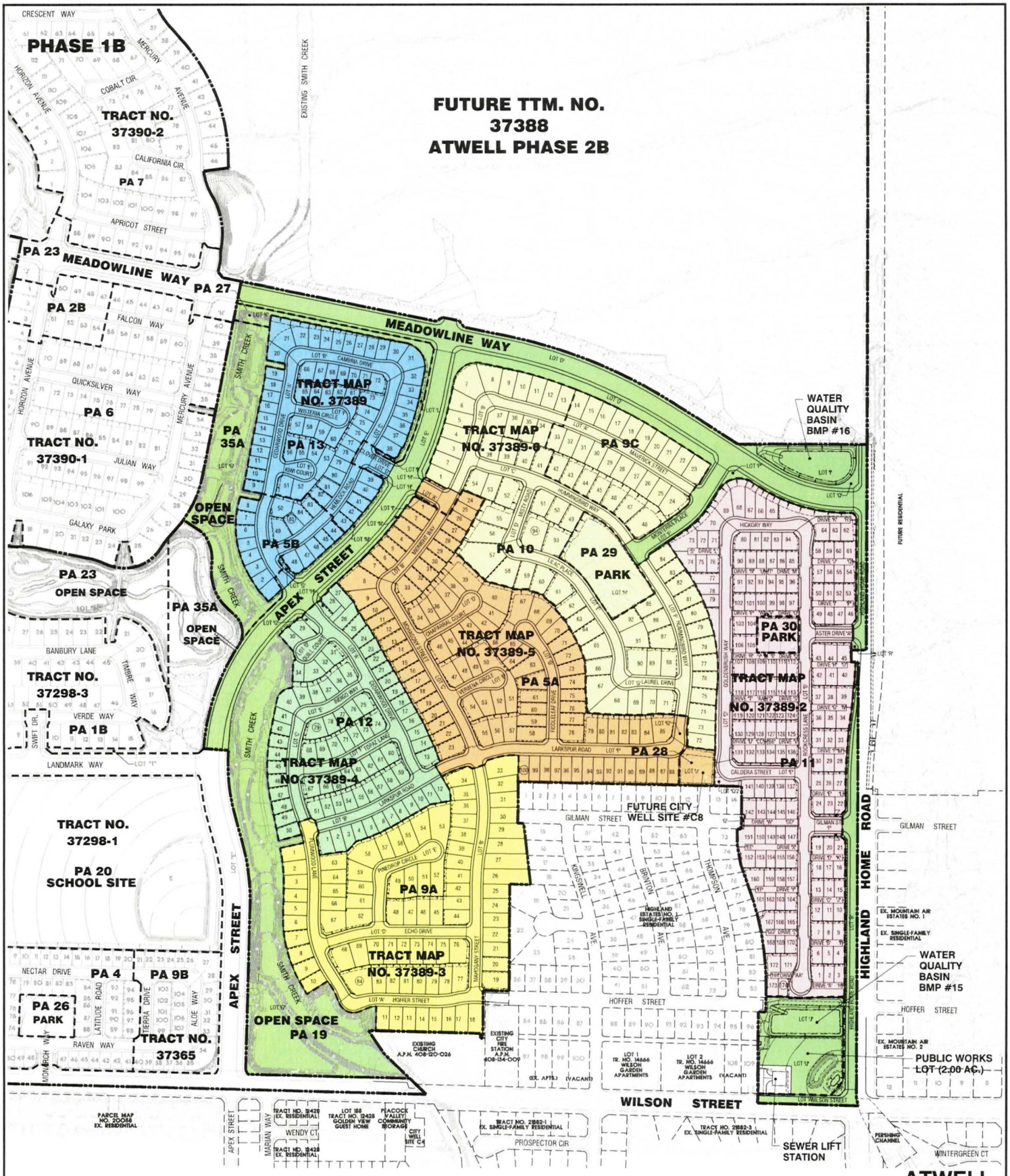
ABSENT:

ABSTAIN:

Caroline Patton, Deputy City Clerk
City of Banning, California

Exhibit "A"

Tentative Tract Map No. 37389



PREPARED FOR:

tri pointe HOMES

1750 Corona Pointe Court
Suite 600
Corona, CA 92879
(951) 428-4400

PREPARED BY:

MDS CONSULTING — MOREY SCHULTZ — PLANNERS ENGINEERS SURVEYORS

LEGEND:

- TRACT BOUNDARY
- PLANNING AREA BOUNDARY
- TRACT MAP NO. 37389-1 (INFRASTRUCTURE)
- TRACT MAP NO. 37389-2 (ARROYO)
- TRACT MAP NO. 37389-3 (LANDMARK)
- TRACT MAP NO. 37389-4 (CIENEGA)
- TRACT MAP NO. 37389-5 (CENTERSTONE)
- TRACT MAP NO. 37389-6 (HORIZON)
- TRACT MAP NO. 37389 (CIENEGA)

ATWELL
TRACT MAP NO. 37389-1, 37389-2, 37389-3, 37389-4, 37389-5, 37389-6 & 37389 TRACT PHASING EXHIBIT

DATE PREPARED: JANUARY 26, 2021

CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

SHEET 1 OF

MAP NO. 37389 - PHASING EXHIBIT

SHEET INDEX

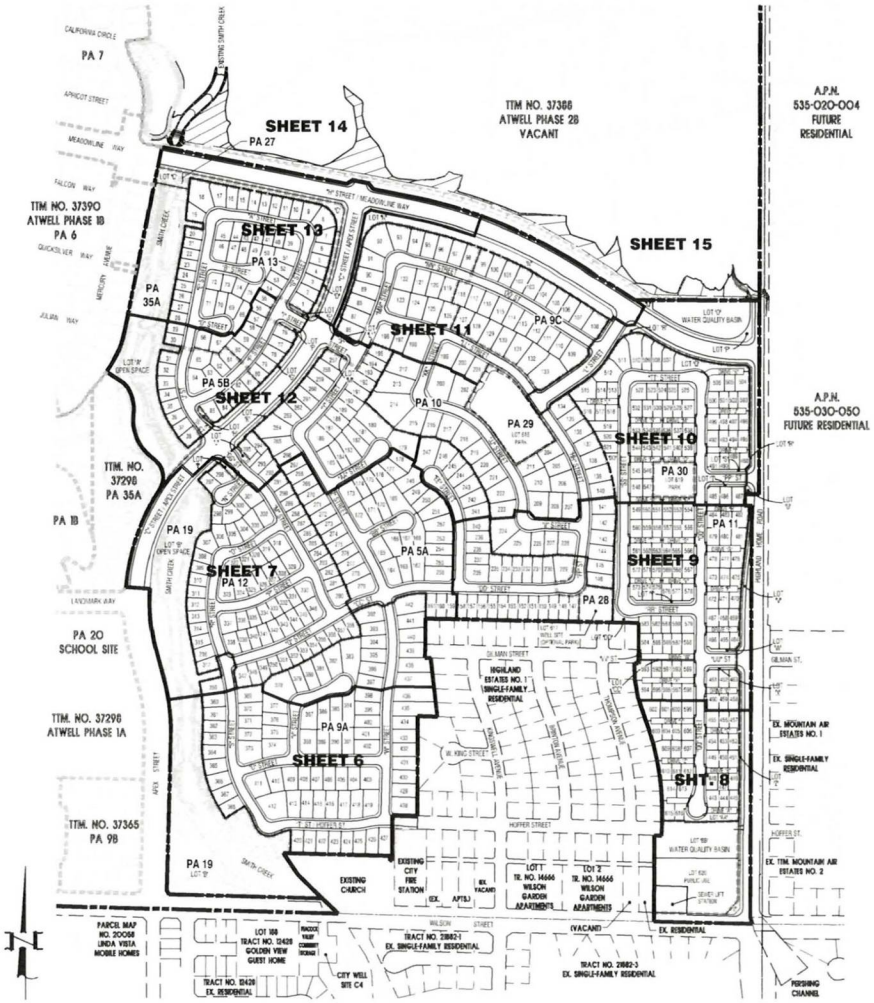
SHEET 1	TITLE SHEET / SHEET INDEX
SHEET 2	NOTES
SHEET 3	STREET SECTIONS
SHEETS 4 & 5	AREA SUMMARIES
SHEETS 6-15	MAP SHEETS
SHEETS 16 & 17	EASEMENT DISPOSITION MAPS

LOT INDEX

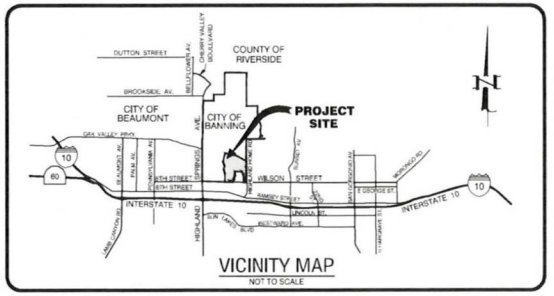
LOTS 31-38, 61-65 & 81-85	(PA 5B)	SHEETS 11-13
LOTS 1-30, 39-60, & 66-80	(PA 13)	SHEETS 11-13
LOTS 86-88, 115-126, 134-146 & 186-228	(PA 10)	SHEETS 9-11, 13
LOTS 99-114 & 127-133	(PA 9C)	SHEET 9-13
LOTS 147-185 & 229-279	(PA 5A)	SHEETS 7, 9-13
LOTS 289-358	(PA 12)	SHEETS 7, 12
LOTS 359-442	(PA 9A)	SHEETS 6-8
LOTS 443-616	(PA 11)	SHEET 8-11
LOT 620	(PUBLIC USE)	SHEET 8
LOT 'RRF'	(WATER QUALITY BASIN)	SHEET 8
LOT 'S'	(WATER QUALITY BASIN)	SHEET 10
LOT 617	(PA 28 / PARK)	SHEET 10
LOT 618	(PA 29 / PARK)	SHEETS 8
LOT 619	(PA 30 / PARK)	SHEETS 10
LOT 'K'	(PA 19 / OPEN SPACE)	SHEETS 6, 7
LOT 'P'	(PA 35A / OPEN SPACE)	SHEETS 12, 13

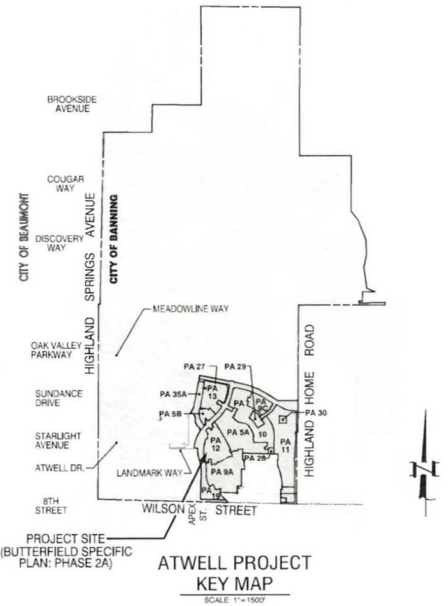
LEGEND

- TENTATIVE TRACT MAP BOUNDARY
- PLANNING AREA BOUNDARY
- SHEET MATCH LINE



SHEET INDEX MAP
SCALE: 1"=250'





ATWELL PROJECT
KEY MAP
SCALE: 1"=1500'

APPLICANT/DEVELOPER/OWNER

tri pointe HOMES
1250 Corona Pointe Court
Suite 600
Corona, CA 92879
(951) 428-4400

ENGINEER

MDS CONSULTING
MORSE
SCHOOL
PLANNERS ENGINEERS SURVEYORS

REGISTERED PROFESSIONAL ENGINEER
EDWARD J. LENTH
No. 052496
Exp. 12-31-22
CIVIL
STATE OF CALIFORNIA

5-11-21

EDWARD J. LENTH RCE 052496
EXP. DATE: DECEMBER 31, 2022

DATE:	NO.	REVISIONS

ATWELL

ATWELL
PHASE 2A / TENTATIVE TRACT NO. 37389
P.A.'s 5A, 5B, 9A, 9C, 10, 11, 12, 13, 19, 27, 28, 29, 30 & 35A
TENTATIVE TRACT MAP
CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

DATE PREPARED: MAY 11, 2021
SHEET 1 OF 17

PHASE 2A - TENTATIVE TRACT MAP

LEGEND

Symbol	Description
	TENTATIVE TRACT MAP BOUNDARY
	STREET CENTERLINE
	SIDEWALK
	DG TRAIL
	DAYLIGHT LINE
	PROPOSED CURB & GUTTER
	EXISTING CURB & GUTTER
2605.0	PROPOSED STREET AT CENTERLINE
	FLOWLINE
(2605.0)	PAD ELEVATION
100	LOT NUMBER
(616)	HIGHEST RESIDENTIAL LOT NUMBER
SD	PROPOSED STORM DRAIN
SS	PROPOSED SANITARY SEWER
DW	PROPOSED POTABLE WATER
RCW	PROPOSED NON-POTABLE WATER
EX SD	EXISTING STORM DRAIN
EX SS	EXISTING SANITARY SEWER
EX DW	EXISTING POTABLE WATER
T	EXISTING TELEPHONE
E	EXISTING ELECTRIC
CATV	EXISTING CATV
1.00%	PROPOSED STREET GRADE
G	EXISTING GAS LINE
	PROPOSED RETAINING WALL
2.0' RW	PROPOSED RETAINING WALL HEIGHT
	PLANNING AREA BOUNDARY
	PLANNING AREA DESIGNATION
	PROPOSED EASMENT (TYPE PER PLAN)

ABBREVIATIONS

Δ	DELTA
AC	ACREAGE
AVG.	AVERAGE
DU	DWELLING UNIT
DW	DOMESTIC WATER
EX.	EXISTING
FL	FLOWLINE
G	GAS
GB	GRADE BREAK
HP	HIGH POINT
L	LENGTH
LP	LOW POINT
MAX	MAXIMUM
MIN	MINIMUM
NO.	NUMBER
PA	PLANNING AREA
PI	POINT OF INTERSECTION
R	RADIUS
RCW	NON-POTABLE WATER
R/W	RIGHT OF WAY
RW	RETAINING WALL
SD	STORM DRAIN
SS	SANITARY SEWER
ST	STREET
SQ. FT.	SQUARE FEET
TC	TOP OF CURB

UTILITIES

WATER
CITY OF BANNING
99 EAST RAMSEY STREET
BANNING CA. 92220
(951) 922-3281

SEWER
CITY OF BANNING
99 EAST RAMSEY STREET
BANNING CA. 92220
(951) 922-3281

ELECTRIC
CITY OF BANNING
176 EAST LINCOLN STREET
BANNING CA. 92220
(951) 922-3260

GAS
SOUTHERN CALIFORNIA GAS COMPANY
1981 WEST LUGONIA AVENUE
REDLANDS CA. 92374
(909) 732-2187

TRASH
CITY OF BANNING
c/o WASTE MANAGEMENT
99 EAST RAMSEY STREET
BANNING CA. 92220
(951) 922-3130

TELEPHONE
FRONTIER COMMUNICATION
280 SOUTH LOCUST STREET
POMONA CA. 91766
(909) 337-0042

CABLE
SPECTRUM CABLE
7337 CENTRAL AVENUE
RIVERSIDE CA. 92504
(951) 329-5487

STORM DRAIN
CITY OF BANNING
99 EAST RAMSEY STREET
BANNING CA. 92220
(951) 922-3130

NOTES

1. PROPOSED PUBLIC WATER EASEMENT (SHEET 8).
2. PROPOSED PUBLIC SEWER EASEMENT (SHEET 8, 9).
3. PROPOSED PUBLIC STORM DRAIN EASEMENT (SHEETS 7 - 9).
4. PROPOSED PRIVATE ACCESS EASEMENT (SHEET 7, 12).
5. PROPOSED 5' TRAIL EASEMENT (SHEETS 6 - 13).
6. EXISTING OVERHEAD UTILITY POLE WITH GUY WIRE TO BE PROTECTED IN PLACE (SHEETS 7 - 9).
7. EXISTING GUY WIRE FOR OVERHEAD UTILITY POLE TO BE REMOVED OR RELOCATED (SHEETS 5 - 9).
8. EXISTING OVERHEAD UTILITY POLE TO BE PROTECT IN PLACE (SHEETS 5 - 9).
9. PROPOSED PUBLIC ACCESS EASEMENT (SHEET 7 & 8).
10. LIMITED USE AREA (SIGHT DISTANCE) (SHEET 7, 9, 10, 12, 13).
11. SIGHT DISTANCE LINE (SHEET 7, 9, 10, 12, 13).
12. JOIN SEWER PER TTM NO. 37293, PHASE 1A (SHEET 7 & 8).
13. PROPOSED PUBLIC STORM DRAIN INLET AT END OF EXISTING ALLEY (SHEET 7 & 8).
14. PROPOSED PUBLIC STORM DRAIN INLET AT END OF EXISTING STREET (SHEET 7 & 8).
15. PROPOSED RAISED MEDIAN (SHEETS 7 - 11).
16. JOIN EXISTING 8" SEWER (SHEET 5 & 6).
17. JOIN EXISTING WATER (SHEET 5, 6, 8 & 9).
18. EXISTING WATER MAIN TO BE REMOVED (SHEET 8).
19. EXISTING 30" TRANSMISSION GAS MAIN TO BE RELOCATED (SHEETS 10 - 12).
20. EXISTING 30" TRANSMISSION GAS MAIN TO BE PROTECTED IN PLACE (SHEET 9 & 10).
21. EXISTING OVERHEAD ELECTRIC PROTECT IN PLACE (SHEET 8).
22. PROPOSED SIDEWALK BETWEEN COMMON DRIVES (SHEET 9 & 10).
23. PROPOSED CATCH BASIN (SHEET 6).
24. PROPOSED CURB & GUTTER AND SIDEWALK. JOIN EXISTING (SHEET 6).
25. EXISTING CURB & GUTTER (SHEET 6).
26. PROPOSED STORM DRAIN AND OUTLET STRUCTURE (SHEET 6).
27. PROPOSED SMITH CREEK DROP STRUCTURE (SHEET 6, 7, 12, 13 & 14).
28. PROPOSED PUBLIC UTILITY EASEMENT (SHEETS 6 - 9).

FLOOD ZONE NOTE

THE SUBJECT PROPERTY IS DESIGNATED AS LYING WITHIN ZONES "A", "X" AND "AE" ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBERS 060246 0816G, MAP NUMBER 06065C 0810G DATED AUGUST 28 2008.

ZONE "A" BEING DEFINED AS "AREAS OF 100-YEAR FLOOD; BASE FLOOD ELEVATIONS AND FLOOD HAZARD FACTORS NOT DETERMINED".

ZONE "X" BEING DEFINED AS "AREAS TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN".

ZONE "AE" BEING DEFINED AS AREAS THAT HAVE A 1% PROBABILITY OF FLOODING EVERY YEAR AND BASE FLOOD ELEVATION ARE DETERMINED.

BASIS OF BEARINGS

THE BEARINGS FOR THIS SURVEY ARE BASED ON THE LINE BETWEEN STATIONS "TRAM" AND "MATH" (PORTIONS PER NATIONAL GEODETIC SURVEY, NAD 83 EPOCH 1995.5), AS SHOWN ON THE MAP FILED IN BOOK 102, PAGES 53 THROUGH 65 OF RECORDS OF SURVEY, IN THE OFFICE OF THE COUNTY RECORDER OF RIVERSIDE COUNTY, CALIFORNIA, BEING NORTH 52° 47' 02.84" EAST.

BENCHMARK

ELEVATIONS AS SHOWN HEREON ARE IN TERMS OF THE NATIONAL GEODETIC VERTICAL DATUM OF NAVD 88 BASED LOCALLY UPON THE FOLLOWING BENCH MARK: 3-1/4" STANDARD ALUMINUM MWD DISK, FLUSH, LOCATED IN BANNING, 0.6 MILES SOUTH ALONG HIGHLAND SPRINGS AVENUE FROM THE INTERSECTION OF HIGHLAND SPRINGS AVENUE AND THE SOUTHERN PACIFIC RAILROAD BRIDGE, 17.5 FEET EAST OF THE CENTERLINE OF HIGHLAND SPRINGS AVENUE AT THE NORTHWEST CORNER OF CATCH BASIN AT THE TOP OF CURB, 0.5 FEET EAST OF FACE OF CURBS.

LEGAL DESCRIPTION

PORTIONS OF LOTS 3 & 4, LOT 9 - 17, 20, 21, A-E, H-K, M-O & PORTIONS OF LOTS C & D OF TRACT MAP NO. 35966, FILED IN BOOK 473 OF MAPS, PAGES 94 THROUGH 107, INCLUSIVE IN THE OFFICE OF THE COUNTY RECORDER OF RIVERSIDE , CALIFORNIA.

ASSESSORS PARCEL NUMBERS

408-120-024, 408-120-038, 408-120-040 AND PORTION OF 408-120-018 & 408-120-042

OPEN SPACE AREA SUMMARY

LOTS	ACREAGE
LOT 'A'	5.91 AC
LOT 'B'	9.84 AC
LOT 'C'	0.65 AC
LOT 'D'	0.19 AC
LOT 'E'	0.03 AC
LOT 'F'	0.03 AC
LOT 'G'	0.27 AC
LOT 'H'	0.03 AC
LOT 'I'	0.05 AC
LOT 'J'	0.09 AC
LOT 'K'	0.22 AC
LOT 'L'	0.02 AC
LOT 'M'	0.02 AC
LOT 'N'	1.34 AC
LOT 'O'	1.25 AC
LOT 'P'	0.24 AC
LOT 'Q'	0.29 AC
LOT 'R'	0.30 AC
LOT 'S'	0.04 AC
LOT 'T'	0.04 AC
LOT 'U'	0.02 AC
LOT 'V'	0.15 AC
LOT 'W'	0.04 AC
LOT 'X'	0.03 AC
LOT 'Y'	0.06 AC
LOT 'Z'	0.28 AC
LOT 'AA'	0.17 AC
LOT 'BB'	1.33 AC
LOT 'CC'	0.02 AC
LOT 'DD'	0.35 AC
TOTAL ACREAGE	22.52 AC

LAND USE SUMMARY

LOTS	LAND USE	ACREAGE	PERCENT (%)
1-616	SINGLE-FAMILY RESIDENTIAL	80.46 AC	52.76%
617	WELL SITE (OPTIONAL PARK)	0.51 AC	0.33%
618 & 619	PARKS	2.65 AC	1.74%
620	PUBLIC USE	2.01 AC	1.32%
'A'-'DD'	OPEN SPACE	22.52 AC	14.76%
	HIGHLAND HOME ROAD	2.32 AC	1.53%
	WILSON STREET	0.43 AC	0.29%
	APEX ST	4.39 AC	2.88%
	MEADOWLINE WAY	5.98 AC	3.92%
	STREETS 'A', 'B', 'D'-'G', 'I'-'VV'	28.83 AC	18.91%
	COMMON DRIVES 'A'-'AA'	2.37 AC	1.56%
	GROSS ACREAGE	152.47 AC	100%

TENTATIVE TRACT NO. 37389

NUMBER OF LOTS: TOTAL	701
SINGLE FAMILY RESIDENTIAL	616
WELL SITE (OPTIONAL PARK)	1
PARKS	2
OPEN SPACE	30
PUBLIC USE	1
LOCAL STREETS	47
MODIFIED COLLECTOR STREETS	2
MODIFIED MAJOR HIGHWAY	2

GROSS ACREAGE: 152.47 AC
CONTROL INTERVAL: 1 FOOT
DATE: MAY 11, 2021

STREET AREA SUMMARY

STREET	ACREAGE
HIGHLAND HOME ROAD	2.32 AC
WILSON STREET	0.43 AC
"A" STREET	0.65 AC
"B" STREET	0.36 AC
"C" STREET - APEX STREET	4.39 AC
"D" STREET	0.24 AC
"E" STREET	0.80 AC
"F" STREET	0.54 AC
"G" STREET	0.43 AC
"H" STREET - MEADOWLINE WAY	5.93 AC
"I" STREET	0.31 AC
"J" STREET	0.47 AC
"K" STREET	0.29 AC
"L" STREET	0.96 AC
"M" STREET	1.02 AC
"N" STREET	0.26 AC
"O" STREET	0.43 AC
"P" STREET	0.50 AC
"Q" STREET	0.75 AC
"R" STREET	0.53 AC
"S" STREET	1.25 AC
"T" STREET - HOFFER STREET	0.82 AC
"U" STREET	0.77 AC
"V" STREET	0.72 AC
"W" STREET	1.21 AC
"X" STREET	0.32 AC
"Y" STREET	0.43 AC
"Z" STREET	1.25 AC
"AA" STREET	0.44 AC
"BB" STREET	0.35 AC
"CC" STREET	0.16 AC
"DD" STREET	1.31 AC
"EE" STREET	0.75 AC
"FF" STREET	0.15 AC
"GG" STREET	0.13 AC
"HH" STREET	1.91 AC
"II" STREET	0.29 AC
"JJ" STREET	1.12 AC
"KK" STREET	0.31 AC
"LL" STREET	0.37 AC
"MM" STREET	0.59 AC
"NN" STREET	0.43 AC
"OO" STREET	0.79 AC
"PP" STREET	0.20 AC
"QQ" STREET	2.83 AC
"RR" STREET	2.45 AC
"SS" STREET	1.29 AC
"TT" STREET	0.41 AC
"UU" STREET	2.19 AC
"VV" STREET - GILMAN STREET	0.02 AC
"WW" STREET - GILMAN STREET	0.01 AC
TOTAL ACREAGE	41.95 AC

GENERAL INFORMATION

1. EXISTING LAND USE: VACANT
2. EXISTING ZONING: BUTTERFIELD SPECIFIC PLAN
3. EXISTING GENERAL PLAN: BUTTERFIELD SPECIFIC PLAN
4. PROPOSED LAND USE:
   - SINGLE-FAMILY RESIDENTIAL
   - MEDIUM DENSITY RESIDENTIAL
   - PARKS
   - OPEN SPACE
   - PUBLIC USE
5. PROPOSED ZONING: BUTTERFIELD SPECIFIC PLAN
6. PROPOSED GENERAL PLAN: BUTTERFIELD SPECIFIC PLAN
7. ADJACENT LAND USES:
   - NORTH: VACANT FUTURE RESIDENTIAL
   - EAST: VACANT, FUTURE RESIDENTIAL & EXISTING RESIDENTIAL
   - SOUTH: MEDICAL/SINGLE-FAMILY RESIDENTIAL/MOBILE HOMES
   - WEST: VACANT/SINGLE-FAMILY RESIDENTIAL
8. PARK REQUIREMENTS TO BE MET BY THE DEDICATION AND CONSTRUCTION OF PARKS.
9. SCHOOL DISTRICTS:
   - ELEMENTARY: BEAUMONT UNIFIED SCHOOL DISTRICT
   - MIDDLE SCHOOL: BEAUMONT UNIFIED SCHOOL DISTRICT
   - HIGH SCHOOL: BEAUMONT UNIFIED SCHOOL DISTRICT
10. PAD ELEVATIONS SHOWN HEREON MAY BE ADJUSTED PLUS OR MINUS 3 FEET.
11. MULTIPLE FINAL MAPS MAY BE FILED PURSUANT TO SECTION 66456.1 OF THE CALIFORNIA GOVERNMENT CODE.
12. THIS TENTATIVE TRACT MAP IS WITHIN THE APPROVED BUTTERFIELD SPECIFIC PLAN.
13. ALL PROPOSED MANUFACTURED SLOPES SHALL BE A MAXIMUM OF 2:1, UNLESS OTHERWISE NOTED ON THE TENTATIVE E TRACT MAP.
14. PRELIMINARY EARTHWORK QUANTITIES (ADJUSTED):
    - CUT: 1,978,084 CY — FILL: 2,433,520 CY
    - IMPORT: 455,436 CY
15. GEOTECHNICAL SOILS INVESTIGATION REPORT WAS PREPARED BY GEOCON WEST, INC., DATED OCTOBER 9, 2017.
16. THERE ARE NO HABITABLE STRUCTURES WITHIN THE BOUNDARIES OF THIS TENTATIVE TRACT MAP.
17. ALL PROPOSED STREETS WITHIN THIS TENTATIVE TRACT ARE PUBLIC AND SHALL BE MAINTAINED BY THE CITY OF BANNING.
18. THE DEVELOPER/APPLICANT SHALL RESERVE THE RIGHT TO MERGE LOTS ON THE FINAL MAP.
19. THIS TENTATIVE TRACT MAP HAS BEEN DESIGNATED AS LYING WITHIN ZONES "A", "X" AND "AE" FIRM PANEL NUMBERS 060246 0816G, MAP NUMBER 06065C 0816G, DATED AUGUST 28, 2008.
20. THIS TENTATIVE TRACT MAP INCLUDES THE ENTIRE CONTIGUOUS OWNERSHIP OF LAND BEING SUBDIVIDED.
21. TOPOGRAPHIC SURVEY WAS FLOWN AND COMPILED BY DON READ CORPORATION, DATED MAY 10, 2017.
22. A PORTION OF THIS TENTATIVE TRACT MAP IS SUBJECT TO OVERFLOW, INUNDATION OR FLOOD HAZARD.
23. ACCESS SHALL BE RESTRICTED ON STREETS 'C' AND 'H' UNLESS OTHERWISE SHOWN ON PLANS.
24. FINAL DESIGN SHALL COMPLY WITH THE N.P.D.E.S. REQUIREMENTS OUTLINED BY THE CITY OF BANNING.
25. PROPOSED OPEN SPACE LOTS 'A'-'DD' SHALL BE PRIVATE AND MAINTAINED BY AN APPROVED H.O.A.
26. PROPOSED PARK LOTS 618 & 619 SHALL BE MAINTAINED BY AN APPROVED H.O.A.
27. ALL PROPOSED RESIDENTIAL LOTS SHALL MAINTAIN A MINIMUM GRADE FROM REAR OF THE LOT TO THE STREET IN ACCORDANCE WITH LATEST CALIFORNIA BUILDING CODE.
28. FIRE PROTECTION SHALL BE PROVIDED BY THE CITY OF BANNING.
29. ALL PROPOSED ON-SITE STORM DRAIN FACILITIES, SIZE AND LOCATION ARE PRELIMINARY AND SUBJECT TO FINAL HYDRAULIC CALCULATIONS ACCEPTABLE TO THE CITY OF BANNING.
30. ALL PROPOSED WATER QUALITY BASINS (BMP) SHALL BE MAINTAINED BY AN APPROVED H.O.A., UNLESS OTHERWISE SHOWN.
31. ALL PROPOSED ON-SITE STORM WATER DISCHARGE FROM THIS TENTATIVE TRACT MAP SHALL BE TREATED BY PERMANENT ON-SITE TREATMENT CONTROL BMPS FOR TRASH AND DEBRIS OF OFF-SITE AND ON-SITE PRIOR TO DISCHARGE TO ANY EXISTING OR PROPOSED DRAINAGE FACILITY.
32. ALL DIMENSIONS ON THIS TENTATIVE TRACT MAP ARE APPROXIMATE.
33. ALL LANDSCAPING WITHIN EACH INDIVIDUAL RESIDENTIAL LOT SHALL BE MAINTAINED BY THE HOMEOWNER.
34. REMOVAL AND REALIGNMENT OF THE EXISTING GAS LINE SHALL BE COORDINATED WITH SOUTHERN CALIFORNIA GAS COMPANY.
35. PLANNING AREA 35A OCCURS IN TTM NO. 37293 (5.20 ACRES OF PHASE 1A), TTM NO. 37330 (3.26 ACRES OF PHASE 1B), AND TTM NO. 37389 (5.01 OF PHASE 2A). THE TOTAL APPROXIMATE AREA PROPOSED FOR PLANNING AREA 35A IS 13.27 ACRES WHICH IS 17.19% BELOW THE APPROVED BUTTERFIELD SPECIFIC PLAN (2017) AREA OF 12.4 ACRES.
36. PROPOSED PUBLIC USE LOT 620 SHALL BE MAINTAINED BY THE CITY INCLUDING BIORETENTION BASIN BMP #14.
37. ALL PROPOSED COMMON DRIVES WITHIN THIS TENTATIVE TRACT MAP ARE PRIVATE AND SHALL BE MAINTAINED BY AN APPROVED HOMEOWNER'S ASSOCIATION.
38. PROPOSED WELL SITE LOT 617 SHALL BE OWNED AND MAINTAINED BY THE CITY OF BANNING. PROPOSED WELL SITE LOT 617 MAY ALSO BE USED AS AN OPTIONAL PARK SITE IN-LIEU OF A WELL SITE WHICH WOULD BE OWNED AND MAINTAINED BY AN APPROVED H.O.A.

DATE:	NO.	REVISIONS

PREPARED FOR:

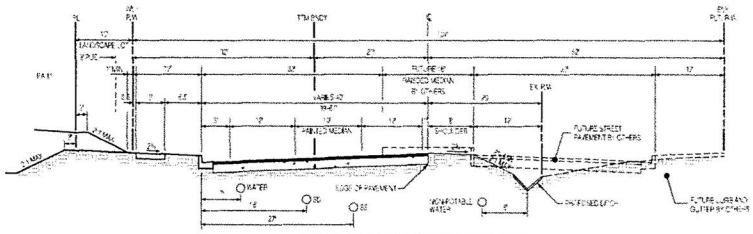
tri pointe HOMES
1250 Corona Pointe Court
Suite 600
Corona, CA 92879
(951) 428-4400

PREPARED BY:

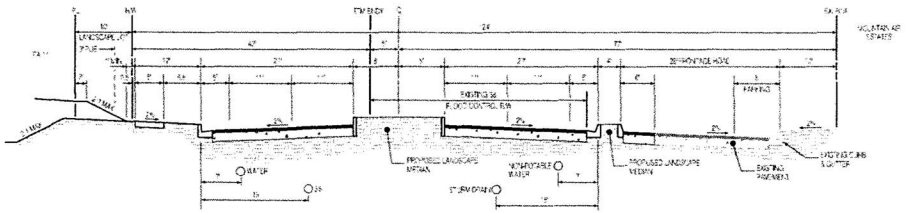
MDS CONSULTING — MORSE SCHULTZ
17320 Redhill Avenue, Suite 350, Irvine CA 92614, Voice 949/251-8821
PLANNERS ENGINEERS SURVEYORS

ATWELL
PHASE 2A / TENTATIVE TRACT NO. 37389
P.A.'s 5A, 5B, 9A, 9C, 10, 11, 12, 13, 19, 27, 28, 29, 30, 35A
TENTATIVE TRACT MAP
CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA
SHEET 2 OF 17

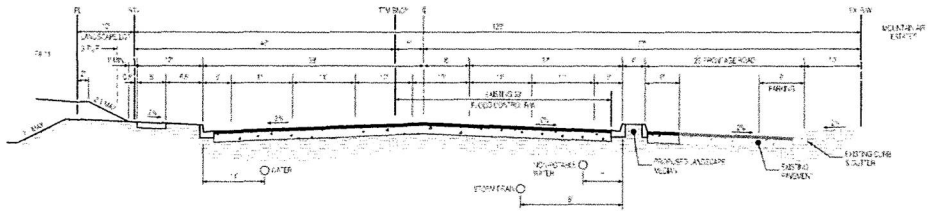
PHASE 2A - TENTATIVE TRACT MAP



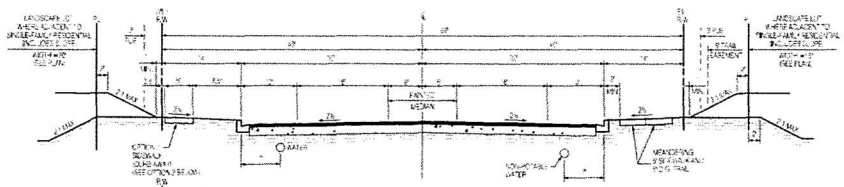
HIGHLAND HOME ROAD (PUBLIC)
(MODIFIED MAJOR HIGHWAY)
(NORTH OF GILMAN STREET)



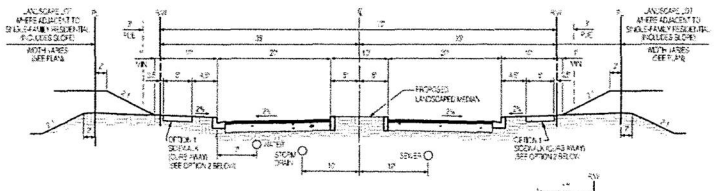
HIGHLAND HOME ROAD (PUBLIC)
(MODIFIED MAJOR HIGHWAY)
(GILMAN STREET TO HOFFER STREET)



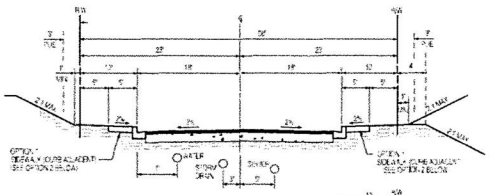
HIGHLAND HOME ROAD (PUBLIC)
(MODIFIED MAJOR HIGHWAY)
(HOFFER STREET TO WILSON STREET)



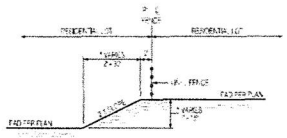
APEX STREET (PUBLIC)
(MODIFIED COLLECTOR STREET)



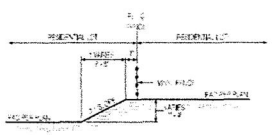
'I', 'K', 'L', 'GG', 'UU' AND 'X' STREETS (PUBLIC)
(NEIGHBORHOOD ENTRY)



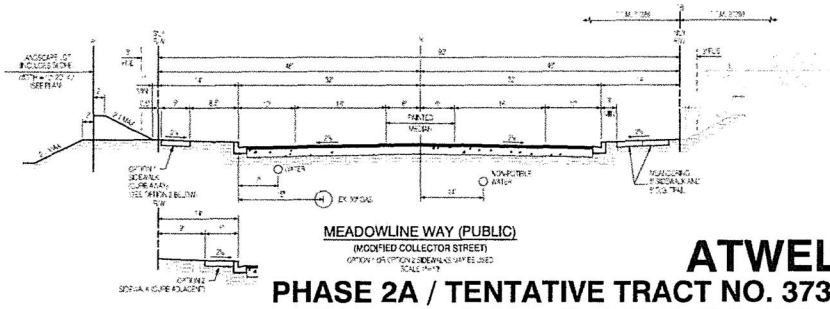
'A', 'B', 'D'-'G', 'I', 'J', 'M'-'Z', 'AA'-'FF', 'HH'-'OO',
'X'-'EE', STREETS & HOFFER STREET (PUBLIC)
(MODIFIED LOCAL RESIDENTIAL STREET)



TYPICAL REAR-YARD SLOPE SECTION



TYPICAL SIDE-YARD SLOPE SECTION



MEADOWLINE WAY (PUBLIC)
(MODIFIED COLLECTOR STREET)

DATE:	NO.	REVISIONS

PREPARED FOR:

tri pointe HOMES
1250 Corona Pointe Court
Suite 600
Corona CA 92879
(951) 428-4400

PREPARED BY:

MDS CONSULTING
MONTE D. SCHULTZ
PLANNERS ENGINEERS SURVEYORS

ATWELL

PHASE 2A / TENTATIVE TRACT NO. 37389

P.A.'s 5A, 5B, 9A, 9C, 10, 11, 12, 13, 19, 27, 28, 29, 30, 35A

STREET SECTIONS

CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

SHEET 3 OF 17

PHASE 2A - TENTATIVE TRACT MAP

RESIDENTIAL LOT SUMMARY

PLANNING AREA 5A (MDR)

LOT AREA SUMMARY
LOTS 147-195 & 229-279

LOT #	LOT AREA (SQ. FT.)	PAD AREA (SQ. FT)
147	5,150	4,853
148	5,165	4,802
149	5,118	4,733
150	4,959	4,519
151	4,950	4,482
152	4,950	4,498
153	4,950	4,513
154	4,950	4,529
155	4,950	4,574
156	4,950	4,676
157	4,950	4,691
158	4,950	4,674
159	4,950	4,663
160	4,950	4,728
161	4,950	4,753
162	6,974	5,695
163	6,334	5,384
164	7,833	6,272
165	6,745	5,572
166	6,905	6,905
167	5,214	5,214
168	7,611	7,611
169	10,642	8,224
170	5,712	4,889
171	6,476	5,431
172	7,147	5,815
173	7,462	6,181
174	4,545	4,545
175	5,155	5,155
176	5,662	5,662
177	6,187	6,187
178	6,317	6,317
179	12,424	10,717
180	13,699	8,684
181	5,999	4,690
182	7,270	6,036
183	7,134	5,961
184	5,619	4,759
185	7,476	5,355
186	8,508	6,645
187	5,352	4,970
188	5,380	4,978
189	5,380	5,380
190	5,352	4,970
191	5,380	4,978
192	5,214	4,873
193	4,700	4,700
194	4,700	4,700
195	5,555	5,555
229	9,922	8,017
230	6,186	5,429
231	5,400	4,621
232	5,400	4,610
233	5,400	4,651
234	5,450	4,716
235	7,109	5,201
236	7,601	6,321
237	5,010	5,010
238	5,511	4,873
239	5,378	5,378
240	6,087	5,728
241	6,566	6,195
242	6,737	6,371
243	6,635	6,267
244	6,340	6,226
245	6,027	6,027
246	7,992	6,815
247	12,286	8,956
248	8,073	6,704
249	5,861	5,861
250	6,378	6,378
251	8,355	7,771
252	8,470	7,475
253	6,631	5,389
254	6,153	5,155
255	6,257	5,740
256	7,942	6,773
257	5,914	5,390
258	6,003	5,354
259	6,101	5,367
260	6,124	5,319
261	6,097	5,222
262	6,026	5,123
263	6,614	5,672
264	12,747	10,863
265	7,968	7,178
266	5,683	5,045
267	5,819	5,053
268	5,802	4,848
269	5,821	4,820
270	5,839	4,791
271	5,770	4,763
272	5,681	4,779
273	5,689	4,781
274	5,712	4,726
275	5,746	4,745
276	5,744	4,722
277	6,033	5,075
278	6,478	5,365
279	8,706	6,605

PLANNING AREA 5B (MDR)

LOT AREA SUMMARY
LOTS 31-38
61-65 AND 81-85

LOT #	LOT AREA (SQ. FT.)	PAD AREA (SQ. FT)
31	4,212	4,212
32	4,560	4,256
33	4,506	4,256
34	4,219	4,219
35	4,219	4,219
36	4,219	4,219
37	4,330	4,330
38	4,935	4,935
61	4,773	3,936
62	5,100	4,351
63	4,489	4,211
64	8,277	5,596
65	7,124	5,822
81	4,170	3,951
82	3,863	3,710
83	4,382	4,130
84	4,616	4,616
85	5,629	5,525

PLANNING AREA 13 (MDR)

LOT AREA SUMMARY
LOTS 1 - 30, 39 - 60 & 66 - 80

LOT #	LOT AREA (SQ. FT.)	PAD AREA (SQ. FT)
1	5,764	5,764
2	4,923	4,923
3	4,655	4,655
4	4,467	4,467
5	4,360	4,360
6	4,205	4,205
7	5,318	5,318
8	7,847	7,847
9	5,456	5,268
10	4,251	4,051
11	4,247	3,963
12	4,222	3,848
13	4,254	3,756
14	4,448	3,779
15	4,590	3,794
16	4,858	3,928
17	6,713	5,070
18	12,238	10,252
19	5,392	5,392
20	3,839	3,839
21	3,760	3,760
22	3,760	3,760
23	3,760	3,760
24	3,760	3,760
25	3,760	3,760
26	3,760	3,760
27	3,760	3,760
28	3,760	3,760
29	4,032	3,760
30	4,084	3,764
39	5,199	4,571
40	3,603	3,603
41	3,619	3,619
42	3,619	3,619
43	3,769	3,769
44	3,966	3,966
45	5,458	4,807
46	5,482	4,637
47	4,436	4,098
48	4,634	4,256
49	4,533	4,100
50	6,332	5,933
51	6,213	5,044
52	5,005	4,351
53	4,416	4,013
54	4,202	3,709
55	4,247	3,708
56	4,131	3,769
57	3,826	3,826
58	4,155	4,155
59	4,936	4,224
60	5,031	4,261
66	5,496	4,568
67	6,274	6,274
68	8,331	5,862
69	5,575	4,647
70	4,690	4,165
71	6,346	5,363
72	4,779	4,120
73	4,293	4,293
74	4,039	4,039
75	4,856	4,856
76	5,176	5,176
77	4,900	4,900
78	4,849	4,518
79	4,515	4,224
80	4,308	4,049

PLANNING AREA 9A (LDR)

LOT AREA SUMMARY
LOTS 359-442

LOT #	LOT AREA (SQ. FT.)	PAD AREA (SQ. FT)
359	6,516	6,516
360	5,973	5,973
361	5,920	5,920
362	5,555	5,555
363	5,587	5,586
364	6,210	6,210
365	6,594	6,251
366	6,662	6,258
367	6,662	6,258
368	6,196	5,853
369	7,829	7,829
370	8,217	8,217
371	5,885	5,885
372	5,775	5,775
373	9,383	8,563
374	8,516	7,640
375	6,722	6,608
376	6,316	6,004
377	8,171	7,609
378	12,917	10,997
379	6,378	5,616
380	6,987	6,204
381	7,287	6,501
382	9,459	8,176
383	14,347	13,043
384	8,428	8,428
385	7,675	7,675
386	7,188	7,188
387	7,722	6,922
388	7,958	6,977
389	6,257	5,669
390	6,578	5,912
391	6,566	5,928
392	8,622	7,172
393	6,512	5,717
394	6,585	6,114
395	6,585	6,253
396	6,579	6,185
397	6,448	5,947
398	6,669	6,114
399	6,530	5,913
400	6,133	5,526
401	6,211	6,079
402	7,158	6,994
403	8,392	7,177
404	5,726	5,726
405	5,830	5,830
406	5,830	5,830
407	5,830	5,830
408	5,830	5,830
409	7,082	7,082
410	7,079	7,079
411	9,243	7,769
412	13,082	11,068
413	7,286	6,566
414	6,732	6,114
415	6,799	6,283
416	6,865	6,399
417	6,931	6,464
418	7,013	6,536
419	6,165	6,728
420	5,706	5,706
421	5,610	5,610
422	5,610	5,610
423	5,610	5,610
424	5,618	5,618
425	5,567	5,567
426	6,504	6,504
427	7,799	7,799
428	9,190	7,113
429	8,732	6,997
430	6,693	6,693
431	6,696	6,696
432	6,600	6,600
433	6,600	6,600
434	6,600	6,600
435	12,318	12,318
436	11,442	11,442
437	10,340	10,340
438	9,306	9,306
439	7,353	7,347
440	7,461	7,461
441	7,903	7,617
442	11,000	11,000

PLANNING AREA 9C (LDR)

LOT AREA SUMMARY
LOTS 99-118 & 127-133

LOT #	LOT AREA (SQ. FT.)	PAD AREA (SQ. FT)
99	6,768	6,768
100	6,721	6,721
101	6,677	6,677
102	6,638	6,638
103	6,602	6,602
104	6,571	6,571
105	6,462	6,462
106	6,360	6,360
107	6,890	6,890
108	9,467	8,352
109	10,536	8,336
110	6,300	6,300
111	6,210	6,210
112	6,245	6,245
113	6,454	6,454
114	6,494	6,494
115	6,434	6,434
116	6,494	9,491
117	6,494	6,494
118	6,494	6,494
127	7,883	6,606
128	8,095	6,568
129	8,039	6,370
130	8,125	6,273
131	9,557	6,996
132	10,570	7,670
133	15,424	10,820

PLANNING AREA 10 (LDR)

LOT AREA SUMMARY
LOTS 86-98, 119-126, 134-146 &196-228

LOT #	LOT AREA (SQ. FT.)	PAD AREA (SQ. FT)
86	7,276	7,276
87	7,230	7,230
88	7,228	7,228
89	7,226	7,226
90	7,194	7,194
91	8,204	8,010
92	13,290	12,155
93	9,501	8,978
94	6,943	6,722
95	6,994	6,994
96	6,932	6,932
97	6,874	6,874
98	6,819	6,819
119	6,494	6,494
120	6,630	6,516
121	6,749	6,498
122	8,520	8,220
123	9,789	8,236
124	7,695	7,695
125	7,485	6,856
126	7,658	6,622
134	7,405	7,405
135	6,720	6,342
137	7,396	6,836
138	7,396	6,977
139	7,396	6,977
140	7,396	6,977
141	7,396	6,977
142	7,509	7,070
143	7,085	6,667
144	7,308	6,893
145	7,135	7,135
146	7,110	7,110
196	7,757	7,099
197	6,526	6,526
198	11,318	7,902
199	7,934	7,323
200	7,057	6,391
201	6,977	6,334
202	11,688	9,178
203	13,763	10,922
204	6,623	6,623
205	7,497	7,051
206	9,551	8,567
207	8,548	6,632
208	6,900	6,321
209	9,640	8,182
210	9,621	8,224
211	7,237	6,924
212	12,383	7,855
213	12,656	9,711
214	20,953	19,138
215	11,176	10,734
216	7,736	7,267
217	8,832	7,391
218	10,446	8,485
219	8,288	7,178
220	7,341	6,878
221	7,881	7,512
222	9,920	9,510
223	8,013	7,184
224	12,817	12,241
225	12,412	12,412
226	8,439	8,439
227	6,408	6,408
228	8,360	7,055

PLANNING AREA 12 (MDR)

LOT AREA SUMMARY
LOTS 280-358

LOT #	LOT AREA (SQ. FT.)	PAD AREA (SQ. FT)
280	6,117	6,117
281	4,096	4,096
282	4,077	4,077
283	3,784	3,784
284	3,619	3,619
285	3,921	3,671
286	3,962	3,680
287	4,003	3,689
288	4,003	3,689
289	4,004	3,690
290	4,246	3,855
291	4,798	4,455
292	5,225	4,802
293	5,587	5,587
294	5,098	5,508
295	4,009	4,009
296	5,763	5,763
297	4,660	4,660
298	3,975	3,975
299	5,632	5,632
300	3,772	3,772
301	6,384	4,486
302	6,184	4,318
303	5,292	4,588
304	5,086	4,285
305	5,079	4,232
306	5,963	4,622
307	6,977	6,977
308	4,309	4,309
309	4,173	4,173
310	4,426	4,147
311	4,461	4,159
312	4,479	4,151
313	4,461	4,239
314	4,481	4,152
315	4,561	4,248
316	4,952	4,637
317	5,513	5,135
318	6,039	4,967
319	4,457	4,407
320	4,099	4,099
321	4,177	4,177
322	6,952	6,113
323	6,291	4,318
324	5,088	4,402
325	5,026	4,374
326	4,398	3,740
327	4,379	3,736
328	4,379	3,744
329	6,192	4,947
330	5,547	4,672
331	3,760	3,760
332	3,760	3,760
333	3,856	3,856
334	4,073	4,073
335	4,011	4,011
336	4,068	4,067
337	6,432	4,933
338	5,868	4,416
339	4,563	3,734
340	4,437	3,643
341	4,714	3,937
342	4,761	4,003
343	4,719	3,953
344	4,567	3,748
345	4,490	3,766
346	5,383	4,155
347	5,943	5,214
348	4,783	4,783
349	4,280	4,730
350	3,817	3,817
351	3,824	3,824
352	3,824	3,824
353	3,694	3,694
354	3,619	3,619
355	3,619	3,619
356	3,619	3,619
357	4,018	4,018
358	5,058	5,058

DATE:	NO.	REVISIONS

PREPARED FOR:

tri pointe HOMES
1250 Corona Pointe Court
Suite 600
Corona, CA 92879
(951) 428-4400

PREPARED BY:

MDS CONSULTING
MONTE DE SCHULTZ
PLANNERS ENGINEERS SURVEYORS

ATWELL
PHASE 2A / TENTATIVE TRACT NO. 37389
P.A.'s 5A, 5B, 9A, 9C, 10, 11, 12, 13, 19, 27, 28, 29, 30, 35A
AREA SUMMARIES
CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA
SHEET 4 OF 17

PHASE 2A - TENTATIVE TRACT MAP

PLANNING AREA SUMMARY

PROPOSED TENTATIVE TRACT NO. 37389

PLANNING AREA (No.)	LAND USE (TYPE)	GROSS AREA (ACRE)	NUMBER LOTS (DU)	GROSS DENSITY (DU/AC)	RESIDENTIAL AREA (ACRE)	STREET AREA (ACRE)	LOT SIZE (MIN)	PAD SIZE (MIN)	LOT AREA MIN (SQ. FT.)	LOT AREA MAX (SQ. FT.)	LOT AREA AVG (SQ. FT.)
5A	MDR	19.44	100	5.1	14.75	4.69	45' x 100'	45' x 100'	4,500	13,699	6,294
5B	MDR	2.82	18	6.4	2.01	0.82	47' X 75'	47' X 75'	3,525	8,277	4,873
9A	LDR	18.78	84	4.5	14.13	4.57	55' x 100'	55' x 100'	5,500	14,347	7,333
9C	LDR	5.47	27	4.9	4.68	0.79	62' x 100'	90' x 100'	6,000	15,424	7,333
10	LDR	18.00	67	3.7	13.02	4.98	60' x 100'	60' x 100'	6,000	20,903	8,463
12	MDR	12.32	79	6.4	8.53	3.79	47' X 75'	47' X 75'	3,525	6,977	4,705
13	MDR	19.34	97	6.5	7.38	2.99	47' X 75'	47' X 75'	3,525	12,238	4,634
11	MDR	27.97	174	6.2	11.94	7.61	40' X 74'	40' X 74'	2,960	9,491	3,990
19	OS	9.94									
27	OS	0.84									
28	WELL SITE (OPTIONAL PARK)	0.51									
29	PARK	2.01									
30	PARK	0.84									
35A *	OS	10.00									

NOTE:

* PORTION OF PLANNING AREA WITHIN TTM NO. 37389 SEE NOTE 35 IN GENERAL INFORMATION ON SHT. 2.

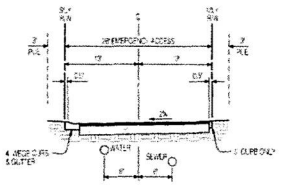
** PA 11 STREET AREA INCLUDES COMMON DRIVES

LEGEND

LDR	LOW DENSITY RESIDENTIAL
MDR	MEDIUM DENSITY RESIDENTIAL
OS	OPEN SPACE
PARK	PARK - RECREATION

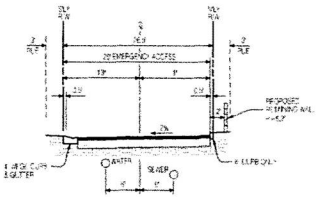
PER BUTTERFIELD SPECIFIC PLAN, 2017

PLANNING AREA (No.)	LAND USE (TYPE)	GROSS AREA (ACRE)	NUMBER LOTS (DU)
5A	MDR	19.8	106
5B	MDR	2.9	15
9A	LDR	20.3	84
9C	LDR	5.8	27
10	LDR	20.8	89
12	LDR	10.8	53
13	MDR	10.0	56
11	MDR	26.5	
19	OS	9.5	
27	OS	1.0	
28	PARK	0.5	
29	PARK	0.8	
30	PARK	0.4	
35A	OS	17.4	



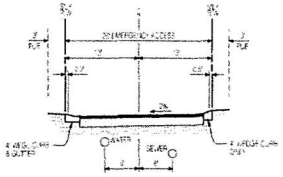
PA 11 COMMON DRIVES 'A'-'J', 'L'-'Z' AND 'AA' (PRIVATE)

SCALE 1" = 10'



PA 11 COMMON DRIVE 'K' (PRIVATE)

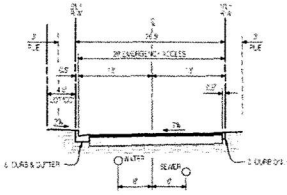
SCALE 1" = 10'



PA 11 COMMON DRIVE 'X' (PRIVATE)

(MODIFIED PA 11 COMMON DRIVE)

SCALE 1" = 10'



PA 11 COMMON DRIVE 'W' (PRIVATE)

SCALE 1" = 10'

RESIDENTIAL LOT SUMMARY - PA11

LOT #	LOT AREA (SQ. FT.)	PAD AREA (SQ. FT)
443	4,258	3,527
444	3,410	3,030
445	3,533	3,164
446	3,675	3,675
447	3,404	3,404
448	3,774	3,273
449	4,262	3,566
450	3,100	2,748
451	3,998	3,589
452	3,675	3,675
453	3,404	3,404
454	3,774	3,276
455	4,263	3,560
456	3,487	3,090
457	3,611	3,217
458	3,836	3,836
459	2,960	2,960
460	4,070	3,572
461	4,047	3,489
462	3,565	3,235
463	3,537	3,254
464	3,248	3,248
465	3,404	3,404
466	3,922	3,495
467	4,134	3,664

LOT #	LOT AREA (SQ. FT.)	PAD AREA (SQ. FT)
468	3,276	2,882
469	4,057	3,587
470	3,863	3,863
471	3,404	3,404
472	3,848	3,344
473	4,318	3,592
474	3,669	3,235
475	4,361	3,713
476	4,625	4,625
477	3,552	3,552
478	4,218	3,699
479	4,239	3,519
480	4,082	3,585
481	5,787	4,892
482	6,214	6,063
483	3,700	3,700
484	4,366	3,856
485	4,392	3,883
486	4,134	3,644
487	4,721	3,713
488	3,389	3,119
489	3,404	3,404
490	2,960	2,960
491	3,926	3,540
492	3,725	3,149

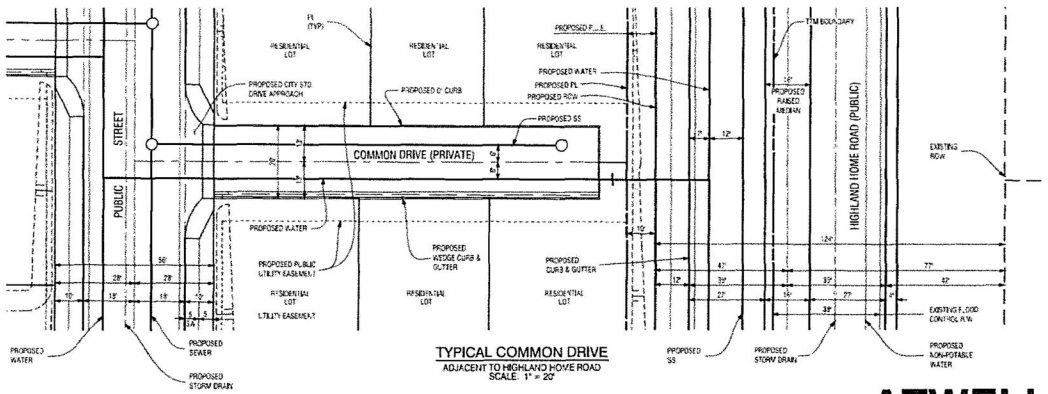
LOT #	LOT AREA (SQ. FT.)	PAD AREA (SQ. FT)
493	3,278	3,023
494	2,980	2,748
495	4,098	3,210
496	3,901	3,184
497	3,256	3,256
498	2,960	2,960
499	3,922	3,469
500	3,634	3,119
501	3,256	3,044
502	2,960	2,770
503	4,124	3,243
504	5,228	4,006
505	3,478	3,478
506	4,837	4,449
507	5,252	3,744
508	5,586	4,488
509	6,562	5,122
510	9,491	6,939
511	9,125	5,609
512	8,760	6,064
513	3,632	3,310
514	3,404	3,404
515	8,738	6,802
516	5,152	5,152
517	3,404	3,404

LOT #	LOT AREA (SQ. FT.)	PAD AREA (SQ. FT)
518	3,996	3,543
519	5,535	4,870
520	4,185	4,185
521	3,605	3,605
522	4,877	4,379
523	3,552	3,552
524	3,108	3,108
525	3,404	3,404
526	5,164	4,679
527	4,208	3,529
528	3,060	2,777
529	3,603	3,291
530	3,298	3,005
531	3,519	3,183
532	4,055	3,358
533	4,070	3,617
534	2,960	2,960
535	3,488	3,488
536	3,192	3,192
537	3,404	3,404
538	3,922	3,477
539	4,125	3,512
540	3,000	2,760
541	3,535	3,266
542	3,459	3,180

LOT #	LOT AREA (SQ. FT.)	PAD AREA (SQ. FT)
543	3,450	3,166
544	3,750	3,184
545	4,370	3,581
546	3,404	3,404
547	3,565	3,170
548	4,263	3,568
549	3,700	3,194
550	3,404	3,404
551	3,414	3,414
552	3,489	3,489
553	3,256	3,256
554	3,774	3,260
555	4,239	3,518
556	3,218	2,820
557	3,696	3,254
558	3,381	2,973
559	3,533	3,103
560	4,239	3,528
561	3,700	3,201
562	3,404	3,404
563	3,415	3,415
564	3,119	3,119
565	3,404	3,404
566	3,996	3,423
567	4,151	3,384

LOT #	LOT AREA (SQ. FT.)	PAD AREA (SQ. FT)
568	3,297	3,297
569	3,696	3,696
570	3,696	3,696
571	3,140	3,140
572	4,318	3,608
573	3,691	3,344
574	3,330	3,330
575	3,193	3,193
576	3,192	3,192
577	3,478	3,478
578	3,739	3,291
579	4,184	3,483
580	3,666	3,666
581	3,198	3,198
582	3,510	3,510
583	4,206	4,206
584	5,272	4,393
585	3,917	3,436
586	3,561	3,105
587	3,917	3,403
588	4,718	3,861
589	4,070	3,782
590	2,960	2,960
591	3,404	3,404
592	3,330	3,330

LOT #	LOT AREA (SQ. FT.)	PAD AREA (SQ. FT)
593	5,538	5,129
594	5,238	4,679
595	3,404	3,404
596	2,960	2,960
597	3,256	3,256
598	3,922	3,424
599	4,030	3,354
600	3,565	31,460
602	6,537	5,094
603	4,423	4,212
604	3,256	3,404
605	2,960	2,960
606	3,998	3,498
607	4,185	4,185
608	3,565	3,159
610	4,302	3,764
611	2,960	2,960
612	4,067	3,569
613	5,414	4,526
614	5,607	4,040
615	4,359	3,750
616	3,345	3,170



TYPICAL COMMON DRIVE

ADJACENT TO HIGHLAND HOME ROAD

SCALE 1" = 20'

DATE:	NO.	REVISIONS

PREPARED FOR:

tri pointe HOMES

1250 Corona Pointe Court
Suite 600
Corona, CA 92879
(951) 428-4400

PREPARED BY:

MDS CONSULTING MORSE SCHULTZ

PLANNERS ENGINEERS SURVEYORS

ATWELL

PHASE 2A / TENTATIVE TRACT NO. 37389

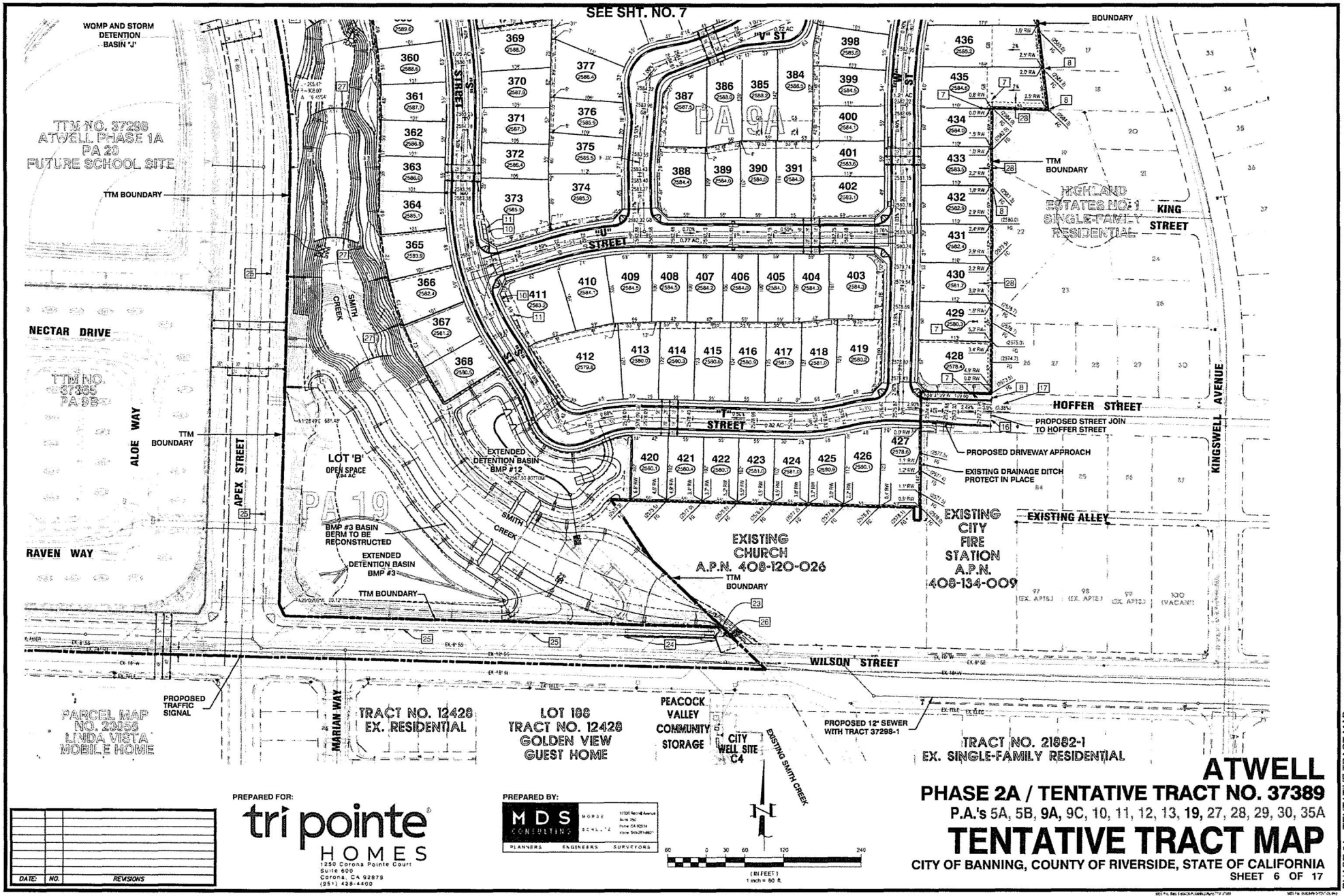
P.A.'s 5A, 5B, 9A, 9C, 10, 11, 12, 13, 19, 27, 28, 29, 30, 35A

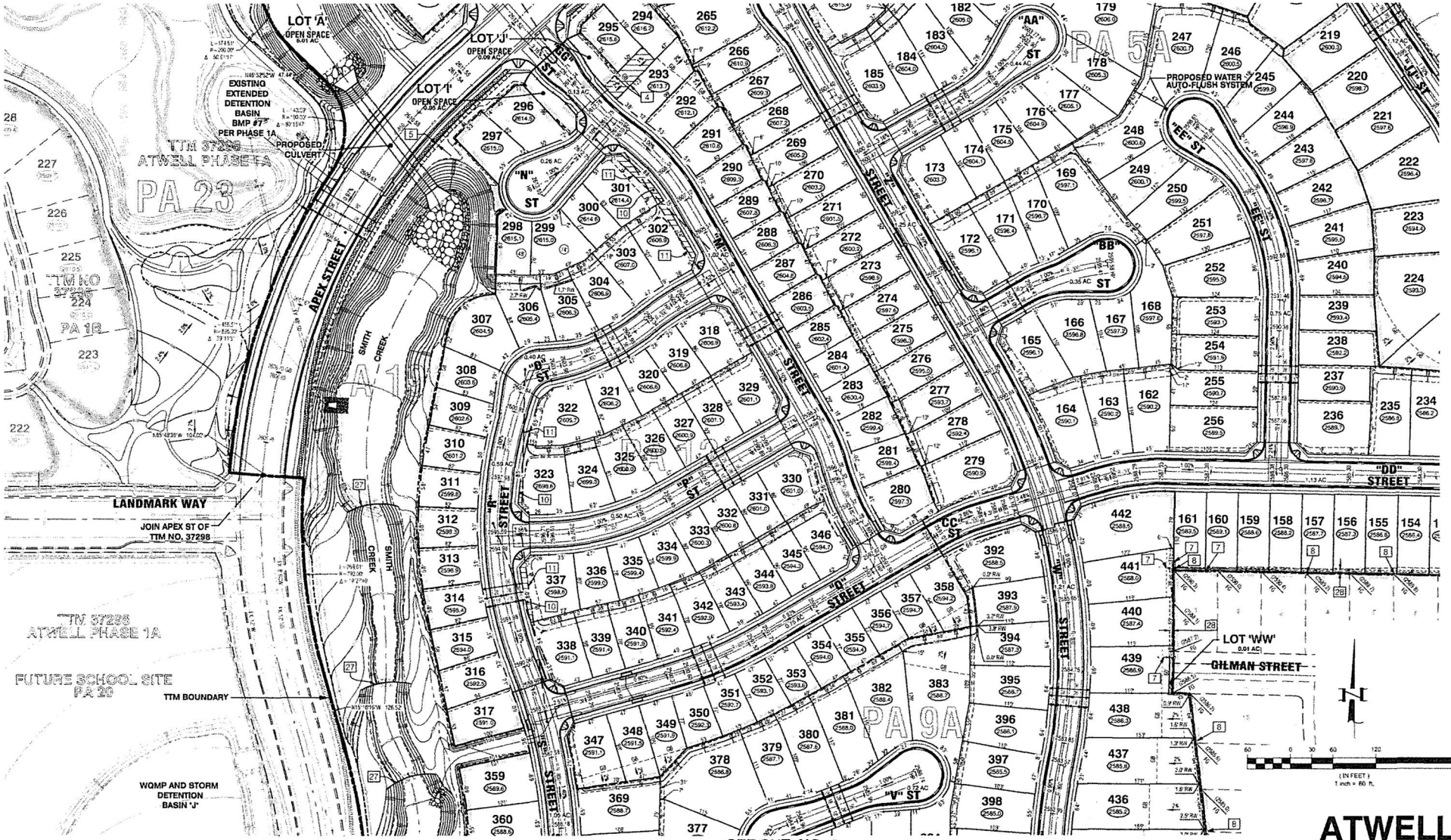
AREA SUMMARIES

CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

SHEET 5 OF 17

PHASE 2A - TENTATIVE TRACT MAP


SEE SHT. NO. 7
WQMP AND STORM DETENTION BASIN "J"
TTM NO. 37288
ATWELL PHASE 1A
PA 20
FUTURE SCHOOL SITE
TTM BOUNDARY
NECTAR DRIVE
TTM NO. 37365
PA 9B
ALOE WAY
RAVEN WAY
APEX STREET
LOT 'B'
OPEN SPACE
7.94 AC
EXTENDED DETENTION BASIN BMP #12
BMP #3 BASIN BERM TO BE RECONSTRUCTED
EXTENDED DETENTION BASIN BMP #3
SMITH CREEK
PA 19
PA 9A
"V" ST
"U" STREET
"T" STREET
S ST
133RD STREET
HIGHLAND ESTATES NO. 1 SINGLE-FAMILY RESIDENTIAL
KING STREET
HOFFER STREET
KINGSWELL AVENUE
PROPOSED STREET JOIN TO HOFFER STREET
PROPOSED DRIVEWAY APPROACH
EXISTING DRAINAGE DITCH PROTECT IN PLACE
EXISTING ALLEY
EXISTING CHURCH
A.P.N. 408-120-026
EXISTING CITY FIRE STATION
A.P.N. 408-134-009
WILSON STREET
PROPOSED TRAFFIC SIGNAL
PARCEL MAP NO. 23058
LINDA VISTA MOBILE HOME
MARIAN WAY
TRACT NO. 12428
EX. RESIDENTIAL
LOT 186
TRACT NO. 12428
GOLDEN VIEW GUEST HOME
PEACOCK VALLEY COMMUNITY STORAGE
CITY WELL SITE C4
EXISTING SMITH CREEK
PROPOSED 12" SEWER WITH TRACT 37298-1
TRACT NO. 21882-1
EX. SINGLE-FAMILY RESIDENTIAL
DATE: NO. REVISIONS
PREPARED FOR:
tri pointe HOMES
1250 Corona Pointe Court
Suite 600
Corona, CA 92879
(951) 478-4400
PREPARED BY:
MDS CONSULTING
PLANNERS ENGINEERS SURVEYORS
(IN FEET)
1 inch = 60 ft.
ATWELL
PHASE 2A / TENTATIVE TRACT NO. 37389
P.A.'s 5A, 5B, 9A, 9C, 10, 11, 12, 13, 19, 27, 28, 29, 30, 35A
TENTATIVE TRACT MAP
CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA
SHEET 6 OF 17
PHASE 2A - TENTATIVE TRACT MAP



DATE:	NO.	REVISIONS

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Corona, CA 92879
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PREPARED BY:

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ATWELL

PHASE 2A / TENTATIVE TRACT NO. 37389

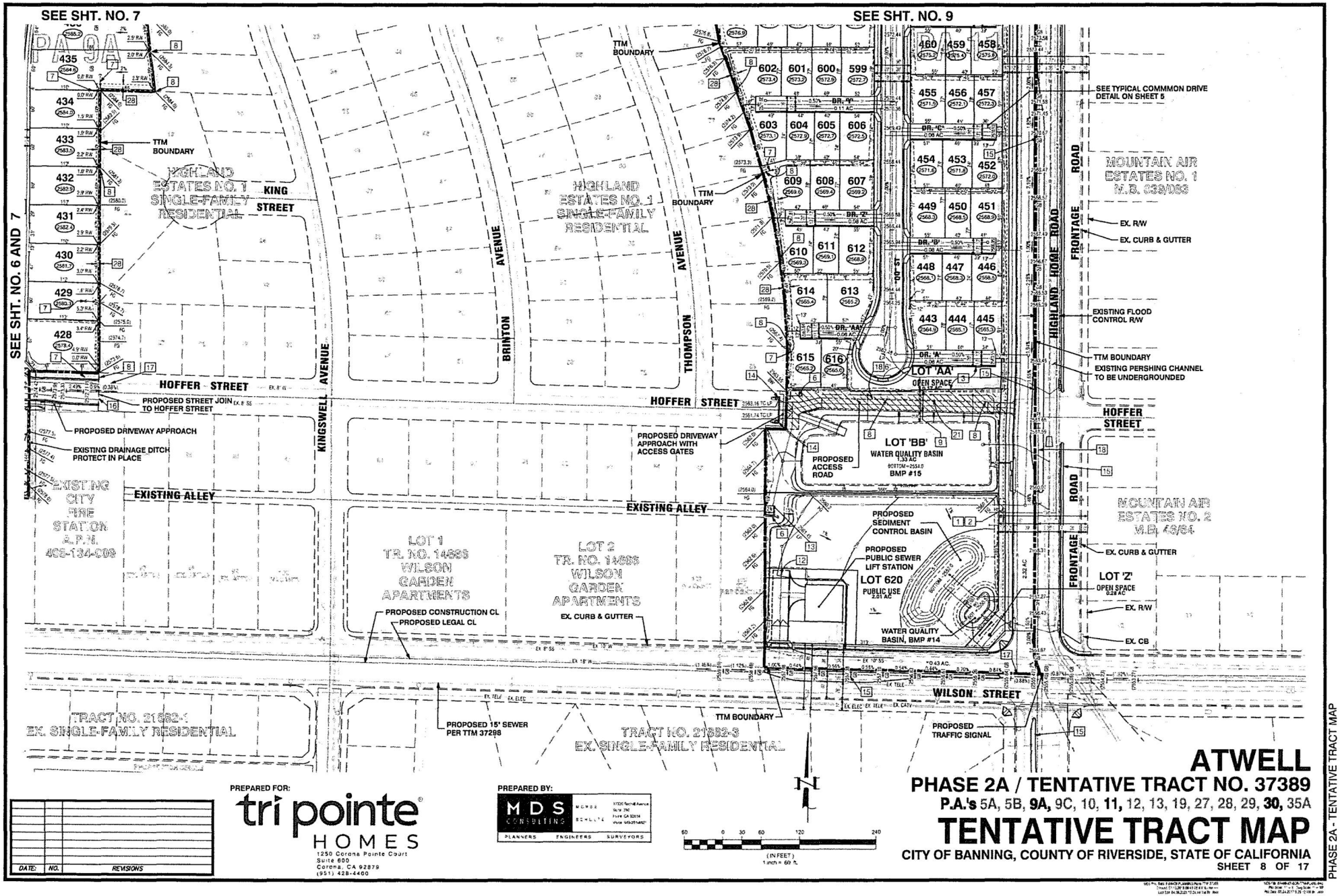
P.A.'s 5A, 5B, **9A**, 9C, **10**, 11, **12**, 13, **19**, 27, 28, 29, 30, **35A**

TENTATIVE TRACT MAP

CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

SHEET 7 OF 17

PHASE 2A - TENTATIVE TRACT MAP



DATE:	NO.	REVISIONS

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tri pointe HOMES
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(951) 428-4400

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ATWELL

PHASE 2A / TENTATIVE TRACT NO. 37389

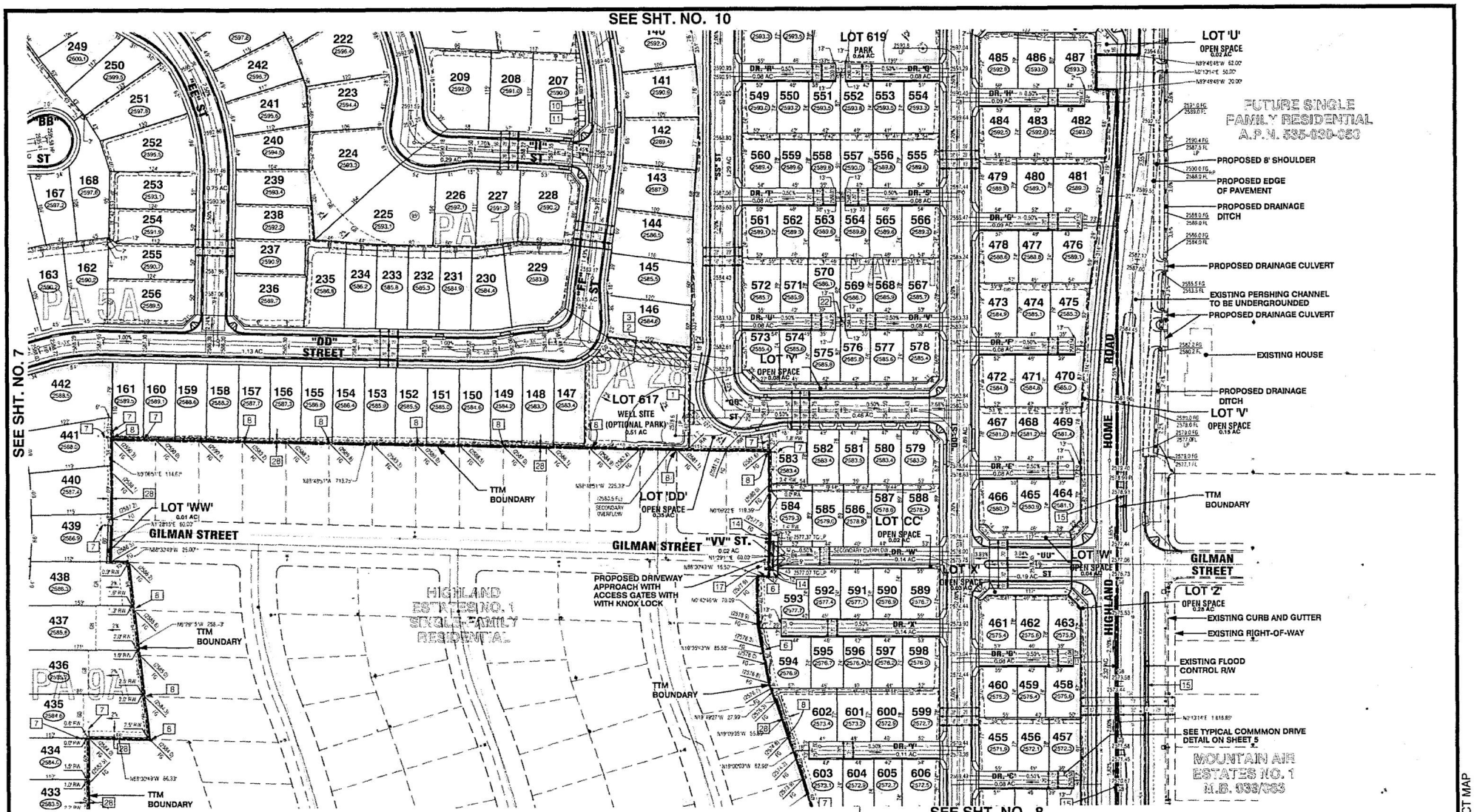
P.A.'s 5A, 5B, **9A**, 9C, 10, **11**, 12, 13, 19, 27, 28, 29, **30**, 35A

TENTATIVE TRACT MAP

CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

SHEET 8 OF 17

PHASE 2A - TENTATIVE TRACT MAP



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tri pointe HOMES
1250 Corona Pointe Court
Suite 600
Corona, CA 92879
(951) 428-4400

PREPARED BY:

MDS CONSULTING
PLANNERS ENGINEERS SURVEYORS

DATE:	NO.	REVISIONS

60 0 30 60 120 240
(IN FEET)
1 inch = 60 ft.

ATWELL

PHASE 2A / TENTATIVE TRACT NO. 37389

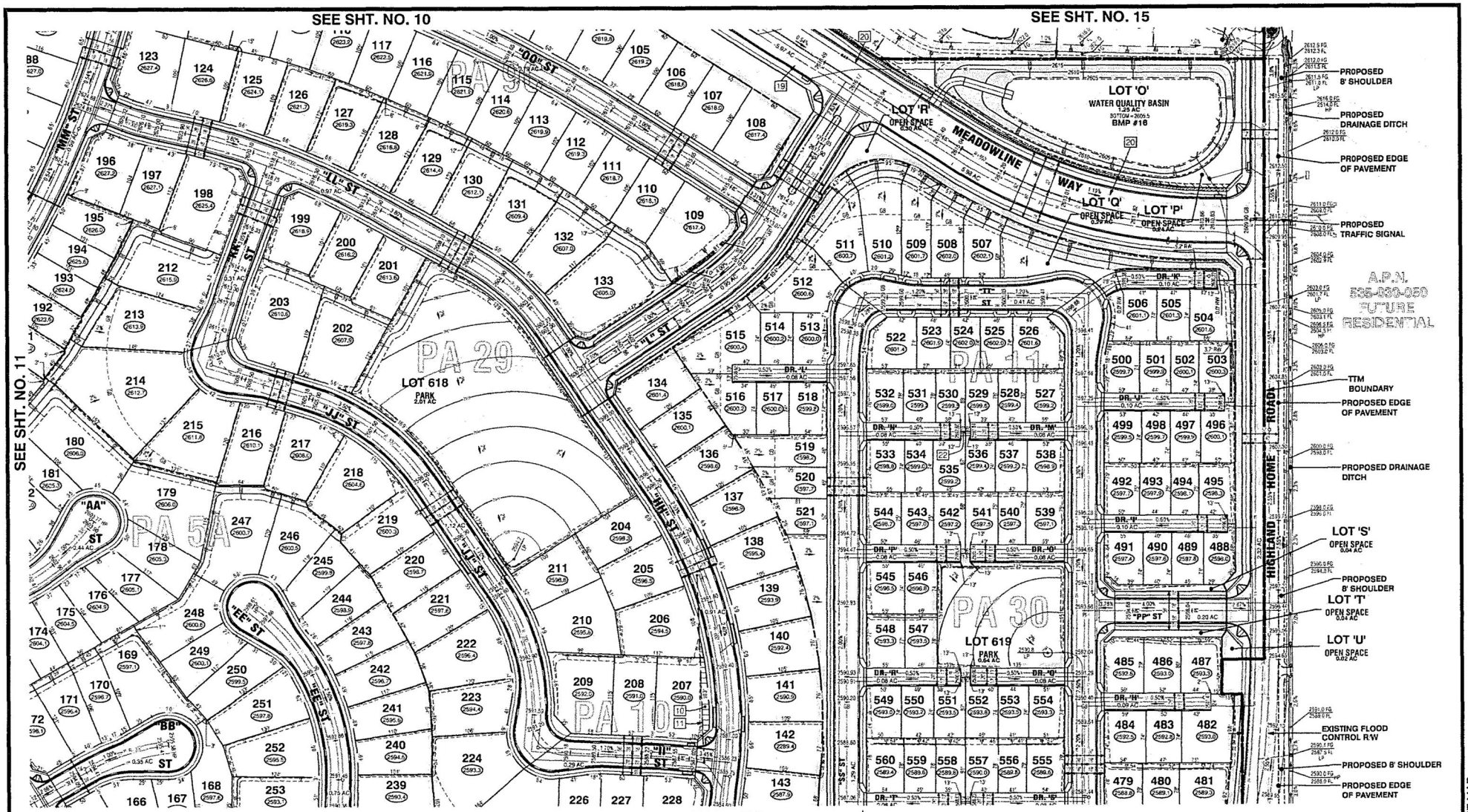
P.A.'s 5A, 5B, **9A,** 9C, **10, 11,** 12, 13, 19, 27, **28,** 29, 30, 35A

TENTATIVE TRACT MAP

CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

SHEET 9 OF 17

PHASE 2A - TENTATIVE TRACT MAP



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DATE:	NO.	REVISIONS

PREPARED BY:

MDS CONSULTING
PLANNERS ENGINEERS SURVEYORS

60 0 30 60 120 240
(IN FEET)
1 inch = 60 ft.

ATWELL

PHASE 2A / TENTATIVE TRACT NO. 37389

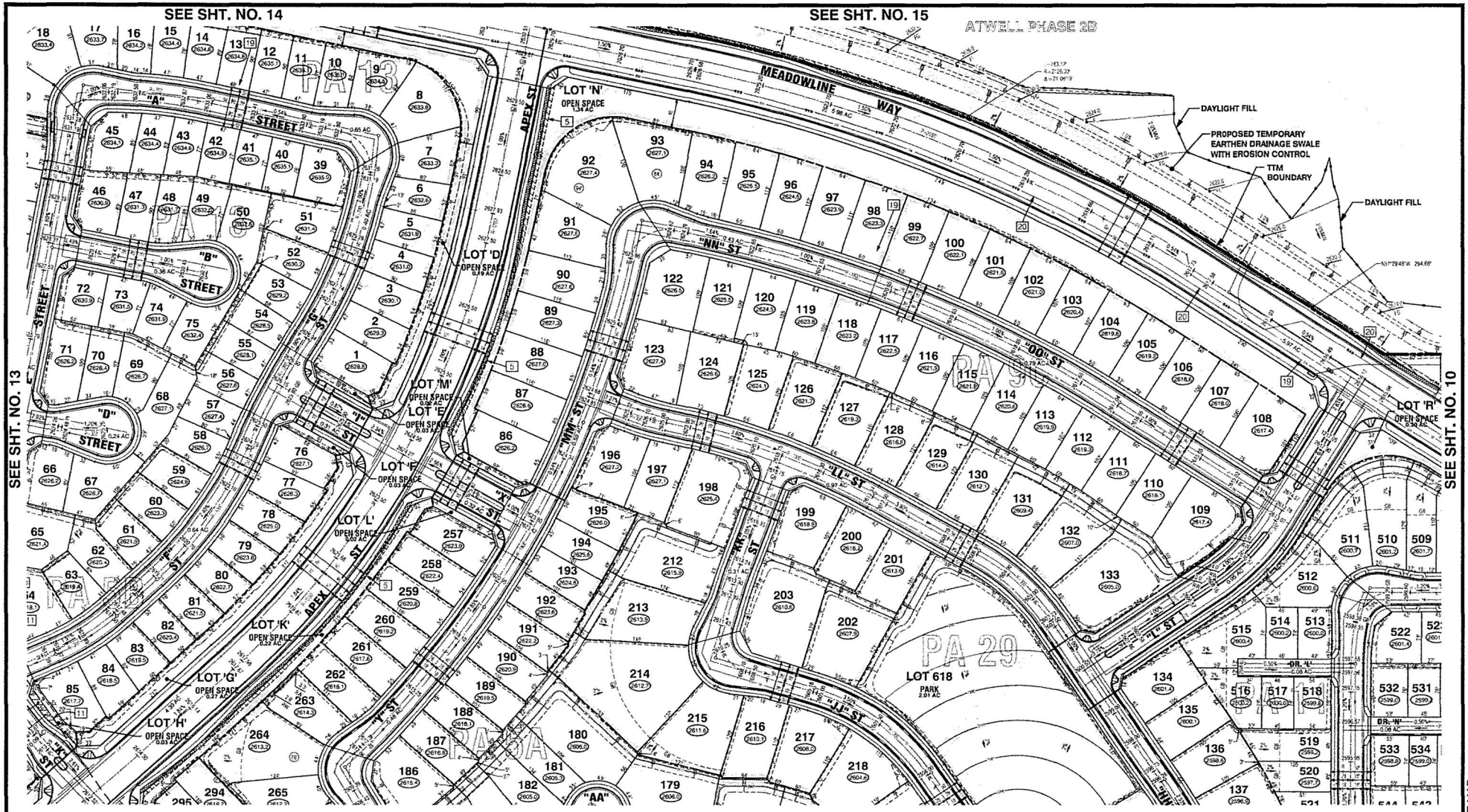
P.A.'s 5A, 5B, 9A, 9C, 10, 11, 12, 13, 19, 27, 28, 29, 30, 35A

TENTATIVE TRACT MAP

CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

SHEET 10 OF 17

PHASE 2A - TENTATIVE TRACT MAP



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(IN FEET)
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ATWELL
PHASE 2A / TENTATIVE TRACT NO. 37389
P.A.'s 5A, 5B, 9A, **9C, 10, 11,** 12, **13,** 19, 27, 28, **29,** 30, 35A
TENTATIVE TRACT MAP
CITY OF BANNING, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA
SHEET 11 OF 17

PHASE 2A - TENTATIVE TRACT MAP

Exhibit "B"

Tentative Tract Map No. 37389 Conditions of Approval

City of Banning

Community Development Department

Conditions of Approval

PROJECT: Tentative Tract Map 37389
SUBJECT: Conditions of Approval (City Council Resolution 2021-59)
APPLICANT: Tri-Pointe Homes
LOCATION: Northeast corner of Highland Springs Avenue and Wilson Street

Exhibit "B"
Tentative Tract Map 37389 Conditions of Approval

Community Development

1. The City and Developer are parties to a Development Agreement, recorded on July 17, 2012, as document number 2012-0332888 ("DA"). In the event of any direct inconsistency or conflict between these Conditions of Approval and the DA, the DA shall control. The Developer shall indemnify the City as described in the DA.

2. Approval of this entitlement shall not waive compliance with any sections of the DA, Butterfield Specific Plan, or other applicable City Ordinances in effect at the time of building permit issuance to the extent such City Ordinances are applicable to the project and not vested under the DA.

3. Approval of Tentative Tract Map 37389 shall run with the term of the DA. All conditions of approval must be met on or before the expiration date or the applicant must request an extension of time at least thirty (30) days prior to the expiration date, and receive approval of said extension; otherwise, the approval shall expire and become null and void.

4. Unless approved otherwise by City, the developer shall comply with all applicable conditions of City Council Ordinance No. 1450 approving the Butterfield Specific Plan and conditions of City Council Resolution No. 2017-07 approving Minor Modifications to the Butterfield Specific Plan.

5. All mitigation measures required by the Butterfield Specific Plan Environmental Impact Report Mitigation Monitoring and Reporting Program (MMRP), as modified pursuant to the approved Addendum, and conditions of the project's Settlement Agreement shall be implemented if those measures/conditions relate to this phase or part of the development or are required to be satisfied in connection with this phase or part of the development.

6. A copy of the signed resolution of approval and all conditions of approval and any applicable mitigation measures shall be reproduced in legible form on the grading plans submitted for review and approval as required by the reviewing department.

7. The Developer shall pay all applicable development impact fees and other fees as required under the DA. Adjustments and/or fee credits to the applicable DIFs may be provided as allowed in the DA and any applicable implementing DIF credit agreement. The project proponent shall provide written evidence to the City that school mitigation fees have been paid or other arrangements acceptable to the applicable school district and Developer have been met.

8. Deposits shall be handled per the executed Deposit Agreement dated May 7, 2019.

9. A copy of the final grading and erosion control plan, approved by Engineering, shall be submitted to the Planning Department for review and approval of the landscaping plans when graded cut slopes exceed five (5) feet in height and fill slopes exceed five (5) feet in height.

10. Per DA Exhibit E, Section 5.2, the Developer shall stabilize according to the City Grading and Landscaping Ordinance [as it may be vested under the DA] the rear slope of all residential lots prior to issuance of a certificate of occupancy but shall not be required to landscape and/or irrigate the slopes. It is the intention that the rear yard landscaping will be required and installed within the time specified in the CC&Rs by the homeowner.

11. Per DA Section 6.5.2, Phasing Plans specifying when the lots within Tract 37389 will be developed and when all appropriate public infrastructure within Tract 37389 will be constructed shall be approved prior to commencement of development within the tract. Prior to approval of the Final Map, all conditions requiring the provision or proposed project facilities and subdivision improvements for the area covered by the Tentative Map must be satisfied either through performance or through the provision of suitable security prior to recordation of the Final Map or deferred with City approval under the terms of the DA.

12. Prior to precise grading plan approval, a conceptual (non-structural) project wall/fencing plan to include retaining walls, perimeter walls, and interior walls shall be developed and shall be subject to design review approval by the Planning Department.

13. Prior to precise grading plan approval for PA's 19 and 35A, a Design Review application for Open Space PA's 19 and 35A shall be reviewed and approved by the Planning Commission. The Design Review application for PA's 19 and 35A shall include conceptual details on recreational uses to be provided within PA's 19 and 35A, including how these facilities will be linkable to other tracts, parks and open space including public access.

14. Prior to construction of the three proposed parks, the Developer shall obtain approval of a detailed site plan demonstrating the facilities to be provided from the Director of Community Development.

15. All residential and commercial neighborhoods and public facilities shall require Design Review approval by the Planning Commission.

16. Temporary construction fencing shall be installed around portions of the tract under construction until replacement by permanent walls/fencing or completion of improvements.

17. Developer shall meet all legal requirements of responsible agencies.

Engineering/Public Works

A. General Requirements

18. A Public Works Permit shall be required prior to commencement of any work within the public right-of-way. The contractor working within the public right-of-way shall submit proof of a Class "A" State Contractor's License, City of Banning Business License, and Liability Insurance. Any existing public improvements, or new public improvements accepted or not accepted by the City that are damaged during construction shall be removed and replaced as determined by the City Engineer or his/her representative.

19. Prior to the issuance of any grading, construction, or public works permit by the City, the applicant shall obtain any applicable and legally required clearances and/or permits. When the requirements include approval of improvement plans, the applicant shall furnish proof of such approvals when submitting improvement plans to the City:

- Fire Marshal (access)
- Public Works Department (grading permits, street improvement permits)
- Community Development Department
- Riverside County Flood Control & Water Conservation District (storm drain)
- California Regional Water Quality Control Board Colorado River Basin (RWQCB)
- South Coast Air Quality Management District (SCAQMD)

20. The following improvement plans shall be prepared by a Civil Engineer licensed by the State of California and submitted to the Engineering Division for review and approval. A separate set of plans shall be prepared for each line item listed below. Unless otherwise authorized in writing by the City Engineer, the plans shall utilize the minimum scale specified and shall be drawn on 24" x 36" Mylar film for final signatures. Plans may be prepared at a larger scale if additional detail or plan clarity is desired (Note: the applicant may be required to prepare other improvement plans not listed here pursuant to improvements required by other agencies and utility purveyors):

a.	Rough Grading Plans	1" = 40' Horizontal
b.	Haul Route Plans (If soils is exported off site)	1" = 40' Horizontal
c.	Clearing Plans (Include fuel modifications zones) (Include construction fencing plan)	1" = 50' Horizontal
d.	Erosion Control & SWPPP, WQMP (Note: a, b, c & d shall be reviewed and approved concurrently)	1" = 40' Horizontal
e.	Storm Drain Plans	1" = 40' Horizontal

f.	Street Improvement Plans	1" = 40' Horizontal 1" = 4' Vertical
g.	Traffic Signal Plans (Caltrans Standard)	1" = 20' Horizontal
h.	Signing & Striping Plans	1" = 40' Horizontal
i.	Construction Traffic Control Plan (Major or Arterial Highways only)	1" = 40' Horizontal
j.	Precise Grading Plans	1" = 40' Horizontal
k.	Landscaping Plans	1" = 20' Horizontal
l.	Water, Sewer, & Recycled Water Plans	1" = 40' Horizontal

Other engineered improvement plans prepared for City approval that are not listed herein shall be prepared in formats approved by the City Engineer prior to commencing plan preparation.

21. All off-site plan and profile street improvement plans and signing & striping plans shall show all existing improvements for a distance of at least 200-feet beyond the project limits, or at a distance sufficient to show any required design transitions.

22. All on-site signing and striping plans shall show the following at a minimum: stop signs, limit lines and legends, no parking signs, raised pavement markers (including blue raised pavement markers at fire hydrants) and street name signs per Public Works standard plans and/or as approved by the City Engineer.

23. A small index map shall be included on the title sheet of each set of plans, showing the overall view of the entire work area.

24. Upon completion of construction, the Developer shall furnish the City with reproducible record drawings on Mylar film of all improvement plans that were approved by the City Engineer. Each sheet shall be clearly marked "As-Built" or "As-Constructed" and shall be stamped and signed by the engineer or surveyor certifying the accuracy and completeness of the drawings. The applicant shall have all AutoCAD files submitted to the City, revised to reflect the "As-Built" conditions.

25. All future utility systems including gas, electric, telephone, water, sewer, and cable TV, except for temporary utility systems as defined under the DA, shall be provided for underground, with easements provided as required, and designed and constructed in accordance with City codes and the utility provider. Telephone, cable TV, and/or security systems shall be pre-wired.

B. Rights of Way/Public Improvements

26. Prior to issuance of any permit(s), the applicant shall acquire or confer property rights necessary for the construction or proper functioning of the proposed project/development. If those property rights are located outside the project/development, then the procedures and requirements of Government Code Section 66462.5 shall apply, including the potential acquisition of those rights by the City or waiver of the City's requirement to obtain those rights. Conferred rights may include right-of-way dedications, irrevocable offers to dedicate or grant of easements to the City for emergency services, maintenance, utilities, storm drain facilities, or temporary construction purposes including the reconstruction of essential improvements.

27. The applicant shall offer for dedication on the Final Map, within Final Map boundaries, all public street right-of-way in conformance with the DA and the Butterfield Specific Plan. The City may reject the dedications and leave them open for future acceptance until all public improvements are installed by the applicant in the rights of way.

28. Maintenance easements dedicated to the City of Banning shall extend at most 10-feet beyond the toe of slope, where sufficient space available or as approved by the City Engineer, for those slope areas where maintenance falls within the responsibility of the City.

29. Prior to the issuance of any certificates of occupancy, the applicant shall not grant any easements over any property subject to a requirement of dedication or irrevocable offer of dedication to the City of Banning or the Riverside County Flood Control and Water Conservation District unless such easements are expressly made subordinate to the easements to be offered for dedication to the City or RCFCD. Prior to granting any of said easements, the applicant shall furnish a copy of the proposed easement to the City Engineer for review and approval. Further, a copy of the approved easement shall be furnished to the City Engineer prior to the issuance of any certificate of use and/or occupancy.

30. All street improvement designs shall provide pavement and lane transitions per City of Banning and Caltrans standards for transition to existing street sections.

31. Design and construct full street improvements in accordance with City standards for ALL streets as approved on the Final Tract Map including, but not limit to street lighting, curb and gutter, cross gutters and spandrels, access ramps, driveway approaches, sidewalk, asphalt concrete pavement, street name signs, traffic signs and striping, and any transitions. Applicant's geotechnical engineer shall provide the design of the pavement section based upon the Caltrans method. STREET AND SIDEWALK WIDTHS AND CROSS SECTIONS SHALL COMPLY WITH THE APPROVED 2016 UPDATED BUTTERFIELD SPECIFIC PLAN or as agreed to by the Developer and City Engineer.

32. The applicant shall plant and maintain trees, shrubs, and ground cover placed in the parkway, slopes adjacent to public right-of-ways, and median islands constructed in connection with

the project in accordance with applicable City standards until maintenance of such area is turned over to HOA, LMD or other public financing District. This includes ensuring that irrigation systems are operating properly, the clearing of debris, and regular weed removal. Turnover to a LMD or other public financing District will not be unreasonably withheld, conditioned or delayed.

33. All applicable public improvements required for occupancy shall be completed, tested, and approved by the Engineering Division prior to issuance of any Certificate of Occupancy. City to provide inspections in timely manner and any inspections exceeding 2 inspections to require meeting with City Engineer to address.

C. Grading and Drainage

34. The applicant shall submit an updated Drainage Study with hydrologic and hydraulic analysis for developed and undeveloped (existing) conditions to the Public Works Department – Engineering Division for review and approval. The study and analysis shall be prepared by a civil engineer licensed by the State of California. Drainage design shall be in accordance with Banning Master Drainage Plan adopted by Riverside County Flood Control and Water Conservation District (RCFCD), RCFCD Hydrology Manual, and standard plans and specifications. The 10-year storm flow shall be contained within the street curbs, and the 100-year storm shall be contained within the street right-of-way. When these criteria are exceeded, additional drainage facilities shall be designed and constructed.

35. At a minimum, all development will make provisions to store runoff from rainfall events up to and including the 100-year 3-hour duration event. Post-development peak urban runoff discharge rates shall not exceed pre-development peak urban runoff discharge rates.

36. If the site is located in an identified Flood Area as identified in Flood Insurance Rate Map dated August 28, 2008, the developer is responsible for providing a certification by a registered professional engineer or architect demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

37. The project grading shall be designed in a manner that perpetuates the existing natural drainage patterns with respect to tributary drainage areas, outlet points and outlet conditions. Otherwise, a drainage easement shall be obtained for the release of concentrated or diverted storm flows.

38. The applicant shall comply with Chapter 13.24 "Stormwater Management Systems" of the Banning Municipal Code (BMC) and Title 18 "Grading, Erosion and Sediment Control" of the California Building Code related to excavation and grading, subject to the terms of the DA; and the State Water Resources Control Board's orders, rules and regulations.

39. For construction activities including clearing, grading or excavation of land that disturbs one (1) acre or more of land, or that disturbs less than one (1) acre of land, but which is a part of a

construction project that encompasses more than one (1) acre of land, the applicant shall be required to submit a Storm Water Pollution Protection Plan (SWPPP) and file a Notice of Intent (NOI) with the Regional Water Quality Control Board.

40. The applicant shall ensure that the required SWPPP is always available for inspection at the project site through and including acceptance of all improvements by the City.

41. The applicant's SWPPP shall include provisions for all of the following Best Management Practices ("BMPs"):

a. Temporary Soil Stabilization (erosion control).
b. Temporary Sediment Control.
c. Wind Erosion Control.
d. Tracking Control.
e. Non-Storm Water Management.
f. Waste Management and Materials Pollution Control.

42. All erosion and sediment control BMPs proposed by the applicant shall be designed using the CASQA BMP handbook and approved by the City Engineer prior to any onsite or offsite grading, pursuant to this phase.

43. The approved SWPPP and BMPs shall remain in effect for the entire duration of project construction until all associated improvements are completed and accepted by the City.

44. Grading and excavations in the public right-of-way shall be supplemented with a soils and geology report prepared by a professional engineer or geologist licensed by the State of California.

45. Prior to the issuance of any building permit(s), a precise grading plan shall be submitted to the City Engineer for review and approval. A grading permit shall be obtained prior to commencement of any grading activity.

46. Prior to issuance of any grading or building permit, a Project-Specific Final Water Quality Management Plan (F-WQMP) shall be reviewed and approved in accordance with California Regional Water Quality Control Board Colorado River Basin Region Order No. R7-2013-0011.

47. Prior to the issuance of a grading permit, the applicant shall execute a Stormwater Management Facilities Agreement on terms agreed to by the parties guaranteeing the maintenance of stormwater pollution controls. Said agreement shall be recorded with the Riverside County Recorder and run with the land.

48. Prior to issuance of any grading or building permit, the applicant shall install trash filters on newly constructed storm drain systems that are not tributary to any onsite water quality/detention basin in compliance with the Trash Amendment as amended and approved in accordance with California Regional Water Quality Control Board Colorado River Basin Region Order No. R7-2013-0011.

49. A notation shall be placed on all applicable rough grading plan(s): "Compliance with Mitigation Measures BIO-1 and BIO-2 is required."

50. Prior to the issuance of a building permit for any building lot, the applicant shall provide a lot pad certification. The pad certification shall include an elevation and compaction certification. The elevation certification shall be stamped and signed by a licensed civil engineer or land surveyor and shall list the pad elevation as shown on the approved grading plan, the actual pad elevation and the difference between the two, if any. The compaction certification shall list the relative compaction of the pad soil and shall be certified by a licensed geotechnical engineer.

51. If this final map includes areas within a designated Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP) Special Flood Hazard Zone, a letter of map revision (LOMR) shall be processed through FEMA and provided to the City Engineer prior to occupancy of affected lots.

52. The design of the development shall not cause any increase in flood boundaries, levels or frequencies in any area outside the development. Prior to issuance of any grading permits, FEMA may require a hydrologic and hydraulic analysis to be submitted and approved that demonstrates that the development will not cause any rise in base flood levels.

D. Landscaping Public Right of Way

53. The developer shall prepare a water conservation using xeriscape principles. "Xeriscape" shall mean a combination of landscape features and techniques that in the aggregate reduce the demand for and consumption of water, including appropriate low water using plants, non-living groundcover, a low percentage of turf coverage (limited to 25% of the planted area), and water conserving irrigation techniques and systems. A low water-using drought tolerant plant includes species suited to our climate, requiring less water in order to grow well.

54. An automatic sprinkler system and landscaping shall be installed, prior to certificate of occupancy for the portion of the project for which certificates of occupancy are requested, within the common areas including perimeter slopes and the interior collector streets. Each system shall include a smart landscape irrigation controller (including remote communication), a separate water meter and electric meter, and plantings as approved by the Community Development Director. Landscaping plans and specifications shall be reviewed and approved by the City Engineer.

55. A homeowners' association shall be established and the applicable Conditions, Covenants & Restrictions (CC & R's), shall be prepared for review and approval of the City Engineer at the time set forth in the DA providing for maintenance of the parkway on-site lighting and landscaping, slopes adjacent to public right-of-way, onsite private parking/roadway, any debris basins, BMP's referenced in the approved WQMP, and median island landscaping. The developer shall appoint the

initial members of the Board of Directors of the homeowners' association or take such other steps as may be reasonably necessary to assure that members have been appointed or elected to such Board of Directors, until under the terms of the applicable CC & R's individual lot owners have the power to elect the members of the Board of Directors in accordance with the CC & R's.

56. The conditions, covenants, and restrictions shall contain provisions which prohibit dissolution of the homeowners' association unless another entity has agreed to assume the operation and maintenance responsibilities of the homeowners' association. The conditions, covenants and restrictions shall contain provisions that prohibit the developer and his/her successors-in-interest from amending said covenants, conditions, and restrictions to conflict with these Conditions of Approval.

57. Alternatively, to having an HOA provide maintenance of the parkway on-site lighting and landscaping, slopes adjacent to public right-of-ways, any debris basins, BMP's referenced in the approved WQMP, and median island landscaping, a Landscaping Maintenance District (LMD), or other public financing mechanism, can be formed to provide for the landscape maintenance.

58. Landscape improvements shall be certified by a licensed landscape architect or licensed landscape contractor as having been installed in accordance with the approved detailed plans and specifications. The applicant shall furnish said certification, including an irrigation management report, for each landscape irrigation system and any other required implementation report determined applicable to the City Engineer for review and approval.

59. Landscape improvement plans shall incorporate the City's letter, dated May 11, 2019, providing construction level recommendations to the landscape working drawings.

E. Traffic

60. As part of each final tract map, a validation report, referencing compliance with Mitigation Measure TRF-2; which requires a Traffic Impact Analysis (TIA) validation report, is required at the direction of the City Engineer.

61. Street name signs and traffic control devices including traffic legends and traffic striping shall be installed or relocated in accordance with applicable City or Caltrans Standards and as shown on the approved plans and/or as directed by the City Engineer.

62. Prior to first building permit issuance of the phase, the applicant shall submit and obtain approval in writing from the Fire Marshall for the plans for the access and possible evacuation of all public or private access roads, drives, streets, and alleys. The plans shall include plan and sectional views and indicate the grade and width of the access road measured flowline to flow-line. When a dead-end access exceeds 150 feet or when otherwise required, a clearly marked fire apparatus access turnaround must be provided and approved by the Fire Marshall. Applicable covenant, conditions or restrictions or other approved documents shall contain provisions which prohibit obstructions such as

speed bumps/humps, control gates or other modifications within said easement or access road unless prior approval of the Fire Marshall is granted.

63. Driveway grades shall be designed in accordance with current City standards.

64. Parking areas shall be designed and improved with grades not to exceed five percent slope. All applicable ADA standards will be adhered to.

65. Access drives to the public right-of-way shall be restricted to those approved by the City Engineer as shown on the approved plans.

66. Prior to the issuance of any certificate of occupancy, all fire hydrants shall have a blue reflective pavement marker indicating the hydrant location on the street as approved by the Fire Marshall and must be maintained in good condition by the applicant or developer until the street is accepted by the City for maintenance.

F. Final Map

67. Prior to approval of any Final Map, the applicant shall construct on-site and off-site improvements required for the development of the property in accordance with the approved plans and satisfy its obligations for same, or shall furnish a fully secured and executed Subdivision Improvement Agreement on terms agreed to by the Parties guaranteeing the construction of such improvements and the satisfaction of its obligations for same, or shall agree to any combination thereof, unless such improvements are deferred with City approval under the terms of the DA or as otherwise set forth under the terms of the DA. For off-site improvements, the procedures and requirements of Government Code Section 66462.5 shall apply, including the potential acquisition of those rights by the City or waiver of the City's requirement to obtain those rights.

68. Prior to the recordation of Final Map or the issuance of the first grading permit (whichever occurs first), the applicant shall obtain approval from the Fire Marshall in consultation with the City Engineer, for a conceptual fuel modification plan and program, unless the City of Banning Fire Marshall ("Fire Marshall") finds in writing to the City that such plan and program are not required for development of the property within the boundaries of this TTM No. 37389. Prior to the issuance of the first certificate of occupancy, within the lots affected by said fuel modification plans, the fuel modification shall be installed and completed under the supervision of the Fire Marshall with an approved plant palette. The CC&Rs or other approved documents shall contain provisions for maintaining the fuel modification zones, including the removal of all dead and dying vegetation.

69. Security for the construction of public improvements in accordance with Government Code Section 66499 shall be as follows:

Faithful Performance Bond	100% of estimated cost
Labor and Material Bond	100% of estimated cost

Monumentation Bond $10,000.00

Securities for the public improvements shall be on file with the City Clerk prior to scheduling the final map for approval by City Council. Unit prices for bonding estimates shall be those specified or approved by the City Engineer.

70. Prior to approval of the Final Map, the applicant shall submit a list of street names and addresses in Microsoft Excel spread sheet format for review and approval. The house number system shall be in accordance with Section 12.32 of the Banning Municipal Code. A reduced copy of the subdivision map shall be included with the submittal.

71. Revisions to the approved Tentative Map during Final Map plan check process; including, but not limited to, lot line alignments, easements, improvement plan revisions, and similar minor changes that are in substantial compliance with the Tentative Map, or associated Conditions of Approval, shall be administratively approved through the plan check process with the mutual consent and approval of the Developer, the Community Development Director, and the City Engineer. Changes that are not administratively approved, through the process referenced above and herein shall be amended in accordance with the Subdivision Map Act, as amended and codified within the Banning Municipal Code (BMC).

72. Prior to approval of any Final Map the applicant shall identify and include in its improvement plans those routine structural and non-structural Best Management Practices (BMP's) as outlined in Supplement A to the Riverside County Drainage Area Management Plans and any attachments or as approved by the City Engineer.

73. Submit a copy of the title report, closure calculations, and any separate instruments or necessary right-of-way documents to the Engineering Division prior to final map approval.

74. A map of the proposed subdivision drawn at 1"=200' showing the outline of the streets including street names shall be submitted to the City to update the city atlas map.

75. An original Mylar of the final map (after recordation) shall be provided to the City for the record files.

76. Public improvements shall be completed and accepted by City of Banning prior to release of Faithful Performance Bond and Labor and Material Bond for such improvements. Faithful Performance Bond for applicable public improvements shall be reduced to 10% once City accepts improvements into maintenance period. Final 10% to serve as the maintenance bond for the 1-year maintenance period.

77. A record of all street centerline monument ties shall be submitted to the Engineering Division upon completion of improvements or prior to release of Monumentation Bond.

G. Water

78. Submit Water Improvement Plans along with the infrastructure phasing plan to the City Engineer for review and approval. The phasing plan, which shall be supported by a hydraulic analysis, shall identify all required water infrastructure (e.g. water mains, wells, booster stations, pressure reducing stations, reservoirs, etc.) required to meet the demands of this tract map. Design and construct water lines throughout and to property boundaries to tract as needed. The proposed new water lines shall connect to the City's water system as needed.

79. Submit a hydraulic analysis report demonstrating adequate pressures throughout the Tract 37389 water system during max day demand (MDD) with fire flow conditions. The hydraulic analysis, based on the City's latest calibrated water model, shall identify when and if additional facilities would be required to meet Tract 37389 water demands.

80. All water lines and fittings shall be a minimum of 8-inch in diameter and shall be DIP. Water line easements shall be a minimum width of 20 feet if installed outside of right-of-way or public utility easement.

81. Fire hydrants shall be installed within and on the tract boundaries as per approved plans, at a 300-foot maximum spacing.

82. A backflow device must be installed on all common-area buildings and at each irrigation water connection. The backflow device must be in compliance with City of Banning.

83. Fire Services will require an RPDA Device.

84. Sizing and timing of the construction of the water storage tanks shall be identified in the phasing plan as determined by the water system analysis or as agreed to by the Developer and City.

H. Sewer

85. Submit Sewer Improvement Plans along with the infrastructure phasing plan to the City Engineer for review and approval. The phasing plan shall identify all required sewer infrastructure (e.g. sewer mains, lift stations, treatment facilities, manholes, etc.) required to meet the demands of the tract map. A hydraulic analysis will need to be prepared and submitted that demonstrates the maximum discharge that can be accommodated by the existing collections system before a new trunk line is needed. Design and construct sewer lines throughout and to property boundaries of this tract. The proposed new sewer lines shall connect into the City's sewer system.

86. All sewer lines to be constructed within the public right-of-way shall be extra strength Vitrified Clay Pipe (VCP) or Polyvinyl Chloride (PVC) SDR 26 Pipe. All sewer mains shall be minimum of 8 inches in diameter. Any sewer main less than or equal to 15-inches (15") shall be PVC. Any sewer main greater than 15-inches (15") shall be extra strength VCP. Final sizes shall be approved by the City Engineer based on calculations submitted by the design engineer accounting for ultimate discharge flows for phase and all upstream areas. Sewer line easements shall be a minimum of 20 feet wide if installed outside of right-of-way or public utility easement.

87. Each residential unit shall have its own sewer lateral and shall be PVC SDR 26.

88. A sewer check valve shall be provided for each building with a finish pad elevation lower than the rim elevation of the immediate up-stream sewer manhole.

89. The new Wilson Sewer Lift Station shall be constructed and fully operational before issuance of the first certificate of occupancy.

I. Non-Potable Water

90. Submit non-potable water Improvement Plans along with a non-potable water Master Plan that includes a written phasing plan to the City Engineer for review and approval. Design and construct non-potable water lines as indicated on the non-potable Master Plan to tie-in points at the tract boundary.

91. All non-potable water lines to be constructed within the Public right-of-way shall be a minimum of 8-inches in diameter DIP. Final sizes shall be approved by the City Engineer based on hydraulic calculations provided by the design engineer. Where non-potable water line easements are necessary, they shall be a minimum of 20 feet wide if improvements are installed outside of right-of-way or public utility easements.

92. Any final subdivision map shall comply with the provisions of Government Code Section 66473.7, as applicable, per the DA.

93. All non-potable water lines shall be Ductile Iron Pipe (DIP) Class 350, with restrained joints conforming to DIPRA design guidelines where required. All non-potable water DIP mains shall be protected with purple-colored V-Bio polyethylene encasement.

94. A backflow device must be installed on each irrigation water connection, and in compliance with the State of California Department of Health Regulations. Contact the City of Banning, Water Operations Division, prior to the installation.

95. The non-potable water plans shall include appropriate signage for the irrigation of publicly accessible areas with non-potable water as required by the California Code of Regulations.

Electric Utility

96. The City of Banning Electric Utility ("Utility") will require adequate easements needed to service the project. An easement area behind sidewalk may be needed on Highland Home Rd, "C" St, "H" St, and "L" St for vaults, conduits, streetlights and pad mounted transformers and switches.

97. Easements will be required for Local Streets to serve residential lots and provide street lighting. Adequate easements will be required to serve all parcels of this project. These easements shall be offered for dedication to the City of Banning for public utility purposes. A non-exclusive easement shall be provided to the City of Banning to include the installation of electric distribution facilities within all common areas.

98. All streetlights to be installed on the major thoroughfares, arterial streets, and local streets are assumed to be publicly owned and maintained by the Utility.

99. Prior to constructing the Utility's electric distribution system, the developer shall submit a detailed engineering plan showing design, location and schematics for the utility system to be approved by the Utility. It will also be required that the developer follow the Electric Utility Maps & Records requirement (per attachment). This will allow the utility to assist with the completion of a distribution plan and provide a cost estimate to service the project. Design conditions and requirements to serve the Butterfield Project with electricity shall be discussed and reviewed following approval of TTM No. 37389.

100. The Developer shall execute an agreement with the Utility providing for the installation, construction, improvement, and dedication of the utility system following recordation of final map.

Fire Department

101. Fire Hydrants and Fire Flow: Prior to the issuance of building permits, plans for the water system shall be submitted to the fire department for review and approval. The water system shall be capable of delivering the required fire flow. Fire hydrant(s) location and spacing shall comply with the fire code. An approved water supply for fire protection during construction shall be made available prior to the arrival of combustible materials on site. Reference 2016 California Fire Code (CFC) 507.5.1, 3312, Appendices B and C.

102. Fire Department Access: Prior to building permit issuance, provide a site plan showing the fire lanes. Access roads shall be provided to within 150 feet to all portions of the exterior building walls and shall have an unobstructed width of not less than 24 feet. The construction of the access roads shall be all weather and capable of sustaining 40,000 lbs. over two axles for areas of residential development and 60,000 lbs. over two axels for commercial developments. Approved vehicle access,

either permanent or temporary, shall be provided during construction Ref. CFC 503.1.1, 3310.1 and 503.2.1

103. Requests for installation of traffic calming designs/devices on fire apparatus access roads shall be submitted and approved by the Office of the Fire Marshal. Ref. CFC 503.4.1

104. Construction Permits Fire Department Review: Submittal of house construction plans to the Office of the Fire Marshal for development, construction, installation, and operational use permitting will be required. Final fire and life safety conditions will be addressed when the Office of the Fire Marshal reviews these plans. These conditions will be based on occupancy, use, California Building Code (CBC), California Fire Code, and related codes, which are in effect at the time of building plan submittal.

105. Phased Construction Access: If construction is phased, each phase shall provide approved access for fire protection prior to any construction. Ref. CFC 503.1Banning Fire Services – Office of the County Fire Marshal Planning Case Conditions - Page 2 99 E. Ramsey Street • P.O. Box 998 • Banning, CA 92220-0998 • (951) 922-3100 7. Residential Fire Sprinklers: Residential fire sprinklers are required in all one and two-family dwellings per the California Residential Code (CRC). Plans must be submitted to the Office of the Fire Marshal for review and approval prior to installation. Ref. CRC 313.2

106. All electronically operated gates shall be provided with Knox key switches and automatic sensors for access. Ref. CFC 506.1

107. Addressing: All residential dwellings shall display street numbers in a prominent location on the street side of the residence. All commercial buildings shall display street numbers in a prominent location on the address side and additional locations as required. Ref. CFC 505.1 and County of Riverside Office of the Fire Marshal Standard #07-01

-END-

Bond No. 30239067
Premium: $3,290 / Annually

CITY OF BANNING

FAITHFUL PERFORMANCE BOND

Atwell – PA 12 TR 37389-4 – Street Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install, complete and guarantee for one year after acceptance thereof, certain designated public improvements generally identified as follows: Atwell – PA 12 TR 37389-4 – Street Improvements; and

WHEREAS, said Agreement is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement to furnish a corporate surety bond or other approved improvement security to guarantee the faithful performance of said Agreement;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held and firmly bound unto the City in the penal sum of Eight Hundred Eighty-Nine Thousand One Hundred Fifty-Four and 86/100 Dollars ($889,154.86), lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, successors, executors and administrators, jointly and severally, firmly by these presents.

The condition of this obligation is such that if the above-bounded Principal, his or its heirs, executors, administrators, successors, or assigns, shall in all things stand to, abide by, well and truly keep and perform the covenants, conditions and provisions in said Agreement and any modification thereof made as therein provided, on his or their part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the City, its officers, agents and employees, as therein stipulated; then this obligation shall become void; otherwise, this obligation shall be and remain in full force and effect.

As a part of the obligation secured hereby, and in addition to the face amount specified, costs and reasonable expenses and fees shall be included, including reasonable attorneys' fees, incurred by the City in successfully enforcing the obligation, all to be taxed as costs and included in any judgment rendered.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement, the work to be performed thereunder, or the Improvement Plans and related specifications accompanying the Agreement shall in any manner affect its obligations on this bond. The Surety hereby waives notice of any such change, extension of time, alteration or addition to the terms of the Agreement, the work, or the Improvement Plans and related specifications.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1·29·25

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"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

_____
City Attorney

11303-0014\2299407v5.doc

ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public
(Here insert name and title of the officer),

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Notary Public Signature (Notary Public Seal)

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jun 25, 2026

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date_____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer
  _____
  (Title)
- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

2015 Version www.NotaryClasses.com 800-873-9865

INSTRUCTIONS FOR COMPLETING THIS FORM

This form complies with current California statutes regarding notary wording and, if needed, should be completed and attached to the document. Acknolwedgents from other states may be completed for documents being sent to that state so long as the wording does not require the California notary to violate California notary law.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they,~~ is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
  - Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - Indicate title or type of attached document, number of pages and date.
  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT NOTARY PUBLIC SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Bond No. 30239067
Premium is included in Performance Bond.

CITY OF BANNING

PAYMENT BOND

Atwell – PA 12 TR 37389-4 – Street Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. , (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install and complete certain designated public improvements generally identified as follows:

Atwell – PA 12 TR 37389-4 – Street Improvements; and

WHEREAS, said Agreement is dated _____, 20__ and is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement, before entering upon the performance of the work, to file with the City a good and sufficient payment bond, or other approved security, to secure the claims to which reference is made in Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the California Civil Code and in Government Code Section 66497;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held firmly bound unto the City and all contractors, subcontractors, laborers, materialmen and other persons employed in the performance of said Agreement and referred to in the above-referenced Civil Code and Government Code in the sum of Eight Hundred Eighty-Nine Thousand One Hundred Fifty-Four and 86/100 Dollars ($889,154.86), for materials furnished or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor; that said Surety will pay the same in an amount not exceeding the amount hereinabove set forth; and in case suit is brought upon this bond, will pay, in addition to the face amount thereof, costs and reasonable expenses and fees, including reasonable attorneys' fees, incurred by the City in successfully enforcing such obligation, to be awarded and fixed by the court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies and corporations entitled to file claims under Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code, and under Government Code Section 66497, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void, otherwise it shall be and remain in full force and effect.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of said Agreement or the Improvement Plans or related specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration or addition.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1·29·25

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ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES NOTARY PUBLIC - CALIFORNIA COMMISSION # 2466323 RIVERSIDE COUNTY My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

_____
City Attorney

11303-0014\2299407v5.doc

ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public
(Here insert name and title of the officer),

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jun 25, 2026

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date_____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer
  _____
  (Title)
- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

2015 Version www.NotaryClasses.com 800-873-9865

INSTRUCTIONS FOR COMPLETING THIS FORM

This form complies with current California statutes regarding notary wording and, if needed, should be completed and attached to the document. Acknowledgments from other states may be completed for documents being sent to that state so long as the wording does not require the California notary to violate California notary law.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they,~~ is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
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- Signature of the notary public must match the signature on file with the office of the county clerk.
  - Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - Indicate title or type of attached document, number of pages and date.
  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT NOTARY PUBLIC SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Bond No. 30239068
Premium: $1,719 / Annually

CITY OF BANNING

FAITHFUL PERFORMANCE BOND

Atwell – PA 12 TR 37389-4 – Water Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install, complete and guarantee for one year after acceptance thereof, certain designated public improvements generally identified as follows: Atwell – PA 12 TR 37389-4 – Water Improvements
; and

WHEREAS, said Agreement is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement to furnish a corporate surety bond or other approved improvement security to guarantee the faithful performance of said Agreement;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held and firmly bound unto the City in the penal sum of Four Hundred Sixty-Four Thousand Five Hundred Five and 77/100 Dollars ($464,505.77), lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, successors, executors and administrators, jointly and severally, firmly by these presents.

The condition of this obligation is such that if the above-bounded Principal, his or its heirs, executors, administrators, successors, or assigns, shall in all things stand to, abide by, well and truly keep and perform the covenants, conditions and provisions in said Agreement and any modification thereof made as therein provided, on his or their part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the City, its officers, agents and employees, as therein stipulated; then this obligation shall become void; otherwise, this obligation shall be and remain in full force and effect.

As a part of the obligation secured hereby, and in addition to the face amount specified, costs and reasonable expenses and fees shall be included, including reasonable attorneys' fees, incurred by the City in successfully enforcing the obligation, all to be taxed as costs and included in any judgment rendered.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement, the work to be performed thereunder, or the Improvement Plans and related specifications accompanying the Agreement shall in any manner affect its obligations on this bond. The Surety hereby waives notice of any such change, extension of time, alteration or addition to the terms of the Agreement, the work, or the Improvement Plans and related specifications.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1·29·25

11303-0014\2299407v5.doc

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES
NOTARY PUBLIC - CALIFORNIA
COMMISSION # 2466323
RIVERSIDE COUNTY
My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

_____
City Attorney

11303-0014\2299407v5.doc

ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

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State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public
(Here insert name and title of the officer),

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jun 25, 2026

WITNESS my hand and official seal.

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date_____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer
  _____
  (Title)
- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

2015 Version www.NotaryClasses.com 800-873-9865

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- Print the name(s) of document signer(s) who personally appear at the time of notarization.
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- Securely attach this document to the signed document with a staple.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT NOTARY PUBLIC SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Bond No. 30239068
Premium is included in Performance Bond.

CITY OF BANNING

PAYMENT BOND

Atwell – PA 12 TR 37389-4 – Water Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. , (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install and complete certain designated public improvements generally identified as follows:

Atwell – PA 12 TR 37389-4 – Water Improvements; and

WHEREAS, said Agreement is dated _____, 20__ and is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement, before entering upon the performance of the work, to file with the City a good and sufficient payment bond, or other approved security, to secure the claims to which reference is made in Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the California Civil Code and in Government Code Section 66497;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held firmly bound unto the City and all contractors, subcontractors, laborers, materialmen and other persons employed in the performance of said Agreement and referred to in the above-referenced Civil Code and Government Code in the sum of Four Hundred Sixty-Four Thousand Five Hundred Five and 77/100 Dollars ($464,505.77), for materials furnished or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor; that said Surety will pay the same in an amount not exceeding the amount hereinabove set forth; and in case suit is brought upon this bond, will pay, in addition to the face amount thereof, costs and reasonable expenses and fees, including reasonable attorneys' fees, incurred by the City in successfully enforcing such obligation, to be awarded and fixed by the court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies and corporations entitled to file claims under Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code, and under Government Code Section 66497, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void, otherwise it shall be and remain in full force and effect.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of said Agreement or the Improvement Plans or related specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration or addition.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1.29.25

11303-0014\2299407v5.doc

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES
NOTARY PUBLIC - CALIFORNIA
COMMISSION # 2466323
RIVERSIDE COUNTY
My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

_____
City Attorney

11303-0014\2299407v5.doc

ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public
(Here insert name and title of the officer),

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jun 25, 2026

WITNESS my hand and official seal.

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date_____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer
  _____
  (Title)
- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

2015 Version www.NotaryClasses.com 800-873-9865

INSTRUCTIONS FOR COMPLETING THIS FORM

This form complies with current California statutes regarding notary wording and, if needed, should be completed and attached to the document. Acknolwedgents from other states may be completed for documents being sent to that state so long as the wording does not require the California notary to violate California notary law.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they,~~ is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
  - Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - Indicate title or type of attached document, number of pages and date.
  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT NOTARY PUBLIC SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Bond No. 30239069
Premium: $1,597 / Annually

CITY OF BANNING

FAITHFUL PERFORMANCE BOND

Atwell – PA 12 TR 37389-4 – Sewer Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install, complete and guarantee for one year after acceptance thereof, certain designated public improvements generally identified as follows: Atwell – PA 12 TR 37389-4 – Sewer Improvements; and

WHEREAS, said Agreement is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement to furnish a corporate surety bond or other approved improvement security to guarantee the faithful performance of said Agreement;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held and firmly bound unto the City in the penal sum of Four Hundred Thirty-One Thousand Five Hundred Ninety and 01/100 Dollars ($431,590.01), lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, successors, executors and administrators, jointly and severally, firmly by these presents.

The condition of this obligation is such that if the above-bounded Principal, his or its heirs, executors, administrators, successors, or assigns, shall in all things stand to, abide by, well and truly keep and perform the covenants, conditions and provisions in said Agreement and any modification thereof made as therein provided, on his or their part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the City, its officers, agents and employees, as therein stipulated; then this obligation shall become void; otherwise, this obligation shall be and remain in full force and effect.

As a part of the obligation secured hereby, and in addition to the face amount specified, costs and reasonable expenses and fees shall be included, including reasonable attorneys' fees, incurred by the City in successfully enforcing the obligation, all to be taxed as costs and included in any judgment rendered.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement, the work to be performed thereunder, or the Improvement Plans and related specifications accompanying the Agreement shall in any manner affect its obligations on this bond. The Surety hereby waives notice of any such change, extension of time, alteration or addition to the terms of the Agreement, the work, or the Improvement Plans and related specifications.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1·29·25

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ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES
NOTARY PUBLIC - CALIFORNIA
COMMISSION # 2466323
RIVERSIDE COUNTY
My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

_____
City Attorney

11303-0014\2299407v5.doc

ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public
(Here insert name and title of the officer),

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jun 25, 2026

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date_____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer
  _____
  (Title)
- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

2015 Version www.NotaryClasses.com 800-873-9865

INSTRUCTIONS FOR COMPLETING THIS FORM

This form complies with current California statutes regarding notary wording and, if needed, should be completed and attached to the document. Acknolwedgents from other states may be completed for documents being sent to that state so long as the wording does not require the California notary to violate California notary law.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they,~~ is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
  - Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - Indicate title or type of attached document, number of pages and date.
  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT NOTARY PUBLIC SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Bond No. 30239069
Premium is included in Performance Bond.

CITY OF BANNING

PAYMENT BOND

Atwell – PA 12 TR 37389-4 – Sewer Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. _____, (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install and complete certain designated public improvements generally identified as follows:

Atwell – PA 12 TR 37389-4 – Sewer Improvements; and

WHEREAS, said Agreement is dated _____, 20__ and is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement, before entering upon the performance of the work, to file with the City a good and sufficient payment bond, or other approved security, to secure the claims to which reference is made in Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the California Civil Code and in Government Code Section 66497;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held firmly bound unto the City and all contractors, subcontractors, laborers, materialmen and other persons employed in the performance of said Agreement and referred to in the above-referenced Civil Code and Government Code in the sum of Four Hundred Thirty-One Thousand Five Hundred Ninety and 01/100 Dollars ($431,590.01), for materials furnished or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor; that said Surety will pay the same in an amount not exceeding the amount hereinabove set forth; and in case suit is brought upon this bond, will pay, in addition to the face amount thereof, costs and reasonable expenses and fees, including reasonable attorneys' fees, incurred by the City in successfully enforcing such obligation, to be awarded and fixed by the court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies and corporations entitled to file claims under Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code, and under Government Code Section 66497, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void, otherwise it shall be and remain in full force and effect.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of said Agreement or the Improvement Plans or related specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration or addition.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1·29·25

11303-0014\2299407v5.doc

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES
NOTARY PUBLIC - CALIFORNIA
COMMISSION # 2466323
RIVERSIDE COUNTY
My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

_____
City Attorney

11303-0014\2299407v5.doc

ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public
(Here insert name and title of the officer),

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jun 25, 2026

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date_____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer
  _____
  (Title)
- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

2015 Version www.NotaryClasses.com 800-873-9865

INSTRUCTIONS FOR COMPLETING THIS FORM

This form complies with current California statutes regarding notary wording and, if needed, should be completed and attached to the document. Acknolwedgents from other states may be completed for documents being sent to that state so long as the wording does not require the California notary to violate California notary law.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they,~~ is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
  - Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - Indicate title or type of attached document, number of pages and date.
  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT NOTARY PUBLIC SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Bond No. 30239070
Premium: $100 / Annually

CITY OF BANNING

FAITHFUL PERFORMANCE BOND

Atwell – PA 12 TR 37389-4 – Monumentation Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install, complete and guarantee for one year after acceptance thereof, certain designated public improvements generally identified as follows: Atwell – PA 12 TR 37389-4 – Monumentation Improvements; and

WHEREAS, said Agreement is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement to furnish a corporate surety bond or other approved improvement security to guarantee the faithful performance of said Agreement;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held and firmly bound unto the City in the penal sum of Twenty-Six Thousand Two Hundred Thirty-Seven and 20/100 Dollars ($26,237.20), lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, successors, executors and administrators, jointly and severally, firmly by these presents.

The condition of this obligation is such that if the above-bounded Principal, his or its heirs, executors, administrators, successors, or assigns, shall in all things stand to, abide by, well and truly keep and perform the covenants, conditions and provisions in said Agreement and any modification thereof made as therein provided, on his or their part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the City, its officers, agents and employees, as therein stipulated; then this obligation shall become void; otherwise, this obligation shall be and remain in full force and effect.

As a part of the obligation secured hereby, and in addition to the face amount specified, costs and reasonable expenses and fees shall be included, including reasonable attorneys' fees, incurred by the City in successfully enforcing the obligation, all to be taxed as costs and included in any judgment rendered.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement, the work to be performed thereunder, or the Improvement Plans and related specifications accompanying the Agreement shall in any manner affect its obligations on this bond. The Surety hereby waives notice of any such change, extension of time, alteration or addition to the terms of the Agreement, the work, or the Improvement Plans and related specifications.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1·29·25

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ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES NOTARY PUBLIC - CALIFORNIA COMMISSION # 2466323 RIVERSIDE COUNTY My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

_____
City Attorney

11303-0014\2299407v5.doc

ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

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State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public
(Here insert name and title of the officer),

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jun 25, 2026

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date_____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer

(Title)

- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

2015 Version www.NotaryClasses.com 800-873-9865

INSTRUCTIONS FOR COMPLETING THIS FORM

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- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
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- Signature of the notary public must match the signature on file with the office of the county clerk.
  - Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - Indicate title or type of attached document, number of pages and date.
  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT NOTARY PUBLIC SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Bond No. 30239070
Premium is included in Performance Bond.

CITY OF BANNING

PAYMENT BOND

Atwell – PA 12 TR 37389-4 – Monumentation Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. , (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install and complete certain designated public improvements generally identified as follows:

Atwell – PA 12 TR 37389-4 – Monumentation Improvements; and

WHEREAS, said Agreement is dated _____, 20__ and is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement, before entering upon the performance of the work, to file with the City a good and sufficient payment bond, or other approved security, to secure the claims to which reference is made in Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the California Civil Code and in Government Code Section 66497;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held firmly bound unto the City and all contractors, subcontractors, laborers, materialmen and other persons employed in the performance of said Agreement and referred to in the above-referenced Civil Code and Government Code in the sum of Twenty-Six Thousand Two Hundred Thirty-Seven and 20/100 Dollars ($26,237.20), for materials furnished or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor; that said Surety will pay the same in an amount not exceeding the amount hereinabove set forth; and in case suit is brought upon this bond, will pay, in addition to the face amount thereof, costs and reasonable expenses and fees, including reasonable attorneys' fees, incurred by the City in successfully enforcing such obligation, to be awarded and fixed by the court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies and corporations entitled to file claims under Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code, and under Government Code Section 66497, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void, otherwise it shall be and remain in full force and effect.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of said Agreement or the Improvement Plans or related specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration or addition.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1·29·25

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ACKNOWLEDGMENT

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State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES
NOTARY PUBLIC - CALIFORNIA
COMMISSION # 2466323
RIVERSIDE COUNTY
My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

_____
City Attorney

11303-0014\2299407v5.doc

ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

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State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public
(Here insert name and title of the officer),

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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WITNESS my hand and official seal.

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jun 25, 2026

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date_____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer

(Title)

- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

2015 Version www.NotaryClasses.com 800-873-9865

INSTRUCTIONS FOR COMPLETING THIS FORM

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- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they,~~ is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
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- Signature of the notary public must match the signature on file with the office of the county clerk.
  - Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - Indicate title or type of attached document, number of pages and date.
  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT NOTARY PUBLIC SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Bond No. 30239063
Premium: $4,142 / Annually

CITY OF BANNING

FAITHFUL PERFORMANCE BOND

Atwell – PA 9A TR 37389-6 – Street Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install, complete and guarantee for one year after acceptance thereof, certain designated public improvements generally identified as follows:

Atwell – PA 9A TR 37389-6 – Street Improvements

; and

WHEREAS, said Agreement is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement to furnish a corporate surety bond or other approved improvement security to guarantee the faithful performance of said Agreement;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held and firmly bound unto the City in the penal sum of One Million One Hundred Nineteen Thousand Four Hundred Thirty-Nine and 12/100 Dollars ($1,119,439.12), lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, successors, executors and administrators, jointly and severally, firmly by these presents.

The condition of this obligation is such that if the above-bounded Principal, his or its heirs, executors, administrators, successors, or assigns, shall in all things stand to, abide by, well and truly keep and perform the covenants, conditions and provisions in said Agreement and any modification thereof made as therein provided, on his or their part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the City, its officers, agents and employees, as therein stipulated; then this obligation shall become void; otherwise, this obligation shall be and remain in full force and effect.

As a part of the obligation secured hereby, and in addition to the face amount specified, costs and reasonable expenses and fees shall be included, including reasonable attorneys' fees, incurred by the City in successfully enforcing the obligation, all to be taxed as costs and included in any judgment rendered.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement, the work to be performed thereunder, or the Improvement Plans and related specifications accompanying the Agreement shall in any manner affect its obligations on this bond. The Surety hereby waives notice of any such change, extension of time, alteration or addition to the terms of the Agreement, the work, or the Improvement Plans and related specifications.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1·29·25

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ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES
NOTARY PUBLIC - CALIFORNIA
COMMISSION # 2466323
RIVERSIDE COUNTY
My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

_____
City Attorney

11303-0014\2299407v5.doc

ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public
(Here insert name and title of the officer),

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jun 25, 2026

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date_____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer

(Title)

- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

2015 Version www.NotaryClasses.com 800-873-9865

INSTRUCTIONS FOR COMPLETING THIS FORM

This form complies with current California statutes regarding notary wording and, if needed, should be completed and attached to the document. Acknolwedgents from other states may be completed for documents being sent to that state so long as the wording does not require the California notary to violate California notary law.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they,~~ is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
  - Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - Indicate title or type of attached document, number of pages and date.
  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT NOTARY PUBLIC SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Bond No. 30239063
Premium is included in Performance Bond.

CITY OF BANNING

PAYMENT BOND

Atwell – PA 9A TR 37389-6 – Street Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. _____, (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install and complete certain designated public improvements generally identified as follows:

Atwell – PA 9A TR 37389-6 – Street Improvements; and

WHEREAS, said Agreement is dated _____, 20__ and is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement, before entering upon the performance of the work, to file with the City a good and sufficient payment bond, or other approved security, to secure the claims to which reference is made in Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the California Civil Code and in Government Code Section 66497;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held firmly bound unto the City and all contractors, subcontractors, laborers, materialmen and other persons employed in the performance of said Agreement and referred to in the above-referenced Civil Code and Government Code in the sum of One Million One Hundred Nineteen Thousand Four Hundred Thirty-Nine and 12/100 Dollars ($1,119,439.12), for materials furnished or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor; that said Surety will pay the same in an amount not exceeding the amount hereinabove set forth; and in case suit is brought upon this bond, will pay, in addition to the face amount thereof, costs and reasonable expenses and fees, including reasonable attorneys' fees, incurred by the City in successfully enforcing such obligation, to be awarded and fixed by the court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies and corporations entitled to file claims under Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code, and under Government Code Section 66497, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void, otherwise it shall be and remain in full force and effect.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of said Agreement or the Improvement Plans or related specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration or addition.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1·29·25

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ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES NOTARY PUBLIC - CALIFORNIA COMMISSION # 2466323 RIVERSIDE COUNTY My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

_____
City Attorney

11303-0014\2299407v5.doc

ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public
(Here insert name and title of the officer),

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jun 25, 2026

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date_____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer

(Title)

- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

2015 Version www.NotaryClasses.com 800-873-9865

INSTRUCTIONS FOR COMPLETING THIS FORM

This form complies with current California statutes regarding notary wording and, if needed, should be completed and attached to the document. Acknolwedgents from other states may be completed for documents being sent to that state so long as the wording does not require the California notary to violate California notary law.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they,~~ is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
  - Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - Indicate title or type of attached document, number of pages and date.
  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT NOTARY PUBLIC SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Bond No. 30239064
Premium: $2,049 / Annually

CITY OF BANNING

FAITHFUL PERFORMANCE BOND

Atwell – PA 9A TR 37389-6 – Water Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install, complete and guarantee for one year after acceptance thereof, certain designated public improvements generally identified as follows: Atwell – PA 9A TR 37389-6 – Water Improvements; and

WHEREAS, said Agreement is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement to furnish a corporate surety bond or other approved improvement security to guarantee the faithful performance of said Agreement;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held and firmly bound unto the City in the penal sum of Five Hundred Fifty-Three Thousand Eight Hundred Thirteen and 63/100 Dollars ($553,813.63), lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, successors, executors and administrators, jointly and severally, firmly by these presents.

The condition of this obligation is such that if the above-bounded Principal, his or its heirs, executors, administrators, successors, or assigns, shall in all things stand to, abide by, well and truly keep and perform the covenants, conditions and provisions in said Agreement and any modification thereof made as therein provided, on his or their part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the City, its officers, agents and employees, as therein stipulated; then this obligation shall become void; otherwise, this obligation shall be and remain in full force and effect.

As a part of the obligation secured hereby, and in addition to the face amount specified, costs and reasonable expenses and fees shall be included, including reasonable attorneys' fees, incurred by the City in successfully enforcing the obligation, all to be taxed as costs and included in any judgment rendered.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement, the work to be performed thereunder, or the Improvement Plans and related specifications accompanying the Agreement shall in any manner affect its obligations on this bond. The Surety hereby waives notice of any such change, extension of time, alteration or addition to the terms of the Agreement, the work, or the Improvement Plans and related specifications.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1·29·25

11303-0014\2299407v5.doc

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES
NOTARY PUBLIC - CALIFORNIA
COMMISSION # 2466323
RIVERSIDE COUNTY
My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

_____
City Attorney

11303-0014\2299407v5.doc

ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public,
(Here insert name and title of the officer)

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jun 25, 2026

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date_____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer

(Title)

- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

2015 Version www.NotaryClasses.com 800-873-9865

INSTRUCTIONS FOR COMPLETING THIS FORM

This form complies with current California statutes regarding notary wording and, if needed, should be completed and attached to the document. Acknolwedgents from other states may be completed for documents being sent to that state so long as the wording does not require the California notary to violate California notary law.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they,~~ is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
  - Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - Indicate title or type of attached document, number of pages and date.
  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT NOTARY PUBLIC SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Bond No. 30239064
Premium is included in Performance Bond.

CITY OF BANNING

PAYMENT BOND

Atwell – PA 9A TR 37389-6 – Water Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. , (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install and complete certain designated public improvements generally identified as follows:

Atwell – PA 9A TR 37389-6 – Water Improvements; and

WHEREAS, said Agreement is dated _____, 20__ and is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement, before entering upon the performance of the work, to file with the City a good and sufficient payment bond, or other approved security, to secure the claims to which reference is made in Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the California Civil Code and in Government Code Section 66497;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held firmly bound unto the City and all contractors, subcontractors, laborers, materialmen and other persons employed in the performance of said Agreement and referred to in the above-referenced Civil Code and Government Code in the sum of Five Hundred Fifty-Three Thousand Eight Hundred Thirteen and 63/100 Dollars ($553,813.63), for materials furnished or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor; that said Surety will pay the same in an amount not exceeding the amount hereinabove set forth; and in case suit is brought upon this bond, will pay, in addition to the face amount thereof, costs and reasonable expenses and fees, including reasonable attorneys' fees, incurred by the City in successfully enforcing such obligation, to be awarded and fixed by the court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies and corporations entitled to file claims under Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code, and under Government Code Section 66497, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void, otherwise it shall be and remain in full force and effect.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of said Agreement or the Improvement Plans or related specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration or addition.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1·29·25

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ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES
NOTARY PUBLIC - CALIFORNIA
COMMISSION # 2466323
RIVERSIDE COUNTY
My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

_____
City Attorney

11303-0014\2299407v5.doc

ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public
(Here insert name and title of the officer),

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jun 25, 2026

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages ____ Document Date____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer
  (Title)
- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other ____

2015 Version www.NotaryClasses.com 800-873-9865

INSTRUCTIONS FOR COMPLETING THIS FORM

This form complies with current California statutes regarding notary wording and, if needed, should be completed and attached to the document. Acknolwedgents from other states may be completed for documents being sent to that state so long as the wording does not require the California notary to violate California notary law.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they,~~ is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
  - Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - Indicate title or type of attached document, number of pages and date.
  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT NOTARY PUBLIC SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Bond No. 30239065
Premium: $1,845 / Annually

CITY OF BANNING

FAITHFUL PERFORMANCE BOND

Atwell – PA 9A TR 37389-6 – Sewer Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install, complete and guarantee for one year after acceptance thereof, certain designated public improvements generally identified as follows: Atwell – PA 9A TR 37389-6 – Sewer Improvements
; and

WHEREAS, said Agreement is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement to furnish a corporate surety bond or other approved improvement security to guarantee the faithful performance of said Agreement;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held and firmly bound unto the City in the penal sum of Four Hundred Ninety-Eight Thousand Five Hundred Ninety and 28/100 Dollars ($498,590.28), lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, successors, executors and administrators, jointly and severally, firmly by these presents.

The condition of this obligation is such that if the above-bounded Principal, his or its heirs, executors, administrators, successors, or assigns, shall in all things stand to, abide by, well and truly keep and perform the covenants, conditions and provisions in said Agreement and any modification thereof made as therein provided, on his or their part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the City, its officers, agents and employees, as therein stipulated; then this obligation shall become void; otherwise, this obligation shall be and remain in full force and effect.

As a part of the obligation secured hereby, and in addition to the face amount specified, costs and reasonable expenses and fees shall be included, including reasonable attorneys' fees, incurred by the City in successfully enforcing the obligation, all to be taxed as costs and included in any judgment rendered.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement, the work to be performed thereunder, or the Improvement Plans and related specifications accompanying the Agreement shall in any manner affect its obligations on this bond. The Surety hereby waives notice of any such change, extension of time, alteration or addition to the terms of the Agreement, the work, or the Improvement Plans and related specifications.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1·29·25

11303-0014\2299407v5.doc

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES NOTARY PUBLIC - CALIFORNIA COMMISSION # 2466323 RIVERSIDE COUNTY My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

_____
City Attorney

11303-0014\2299407v5.doc

ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public,
(Here insert name and title of the officer)

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jun 25, 2026

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date_____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer
  (Title)
- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

2015 Version www.NotaryClasses.com 800-873-9865

INSTRUCTIONS FOR COMPLETING THIS FORM

This form complies with current California statutes regarding notary wording and, if needed, should be completed and attached to the document. Acknolwedgents from other states may be completed for documents being sent to that state so long as the wording does not require the California notary to violate California notary law.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they,~~ is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
  - Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - Indicate title or type of attached document, number of pages and date.
  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT NOTARY PUBLIC SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Bond No. 30239065
Premium is included in Performance Bond.

CITY OF BANNING

PAYMENT BOND

Atwell – PA 9A TR 37389-6 – Sewer Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. , (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install and complete certain designated public improvements generally identified as follows:

Atwell – PA 9A TR 37389-6 – Sewer Improvements; and

WHEREAS, said Agreement is dated _____, 20__ and is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement, before entering upon the performance of the work, to file with the City a good and sufficient payment bond, or other approved security, to secure the claims to which reference is made in Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the California Civil Code and in Government Code Section 66497;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held firmly bound unto the City and all contractors, subcontractors, laborers, materialmen and other persons employed in the performance of said Agreement and referred to in the above-referenced Civil Code and Government Code in the sum of Four Hundred Ninety-Eight Thousand Five Hundred Ninety and 28/100 Dollars ($498,590.28), for materials furnished or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor; that said Surety will pay the same in an amount not exceeding the amount hereinabove set forth; and in case suit is brought upon this bond, will pay, in addition to the face amount thereof, costs and reasonable expenses and fees, including reasonable attorneys' fees, incurred by the City in successfully enforcing such obligation, to be awarded and fixed by the court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies and corporations entitled to file claims under Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code, and under Government Code Section 66497, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void, otherwise it shall be and remain in full force and effect.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of said Agreement or the Improvement Plans or related specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration or addition.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1.29.25

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ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES NOTARY PUBLIC - CALIFORNIA COMMISSION # 2466323 RIVERSIDE COUNTY My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

City Attorney

11303-0014\2299407v5.doc

ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public,
(Here insert name and title of the officer)

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person~~(s)~~ whose name~~(s)~~ is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity~~(ies)~~, and that by ~~his~~/her/~~their~~ signature~~(s)~~ on the instrument the person~~(s)~~, or the entity upon behalf of which the person~~(s)~~ acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jul 25, 2026

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date_____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer
  (Title)
- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

2015 Version www.NotaryClasses.com 800-873-9865

INSTRUCTIONS FOR COMPLETING THIS FORM

This form complies with current California statutes regarding notary wording and, if needed, should be completed and attached to the document. Acknolwedgents from other states may be completed for documents being sent to that state so long as the wording does not require the California notary to violate California notary law.

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- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
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  - Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - Indicate title or type of attached document, number of pages and date.
  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT
NOTARY PUBLIC
SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Bond No. 30239066
Premium: $102 / Annually

CITY OF BANNING

FAITHFUL PERFORMANCE BOND

Atwell – PA 9A TR 37389-6 – Monumentation Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install, complete and guarantee for one year after acceptance thereof, certain designated public improvements generally identified as follows:

Atwell – PA 9A TR 37389-6 – Monumentation Improvements; and

WHEREAS, said Agreement is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement to furnish a corporate surety bond or other approved improvement security to guarantee the faithful performance of said Agreement;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held and firmly bound unto the City in the penal sum of Twenty-Seven Thousand Six Hundred Thirty-Eight and 51/100 Dollars ($27,638.51), lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, successors, executors and administrators, jointly and severally, firmly by these presents.

The condition of this obligation is such that if the above-bounded Principal, his or its heirs, executors, administrators, successors, or assigns, shall in all things stand to, abide by, well and truly keep and perform the covenants, conditions and provisions in said Agreement and any modification thereof made as therein provided, on his or their part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the City, its officers, agents and employees, as therein stipulated; then this obligation shall become void; otherwise, this obligation shall be and remain in full force and effect.

As a part of the obligation secured hereby, and in addition to the face amount specified, costs and reasonable expenses and fees shall be included, including reasonable attorneys' fees, incurred by the City in successfully enforcing the obligation, all to be taxed as costs and included in any judgment rendered.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement, the work to be performed thereunder, or the Improvement Plans and related specifications accompanying the Agreement shall in any manner affect its obligations on this bond. The Surety hereby waives notice of any such change, extension of time, alteration or addition to the terms of the Agreement, the work, or the Improvement Plans and related specifications.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1·29·25

11303-0014\2299407v5.doc

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES
NOTARY PUBLIC - CALIFORNIA
COMMISSION # 2466323
RIVERSIDE COUNTY
My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

_____
City Attorney

11303-0014\2299407v5.doc

ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

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State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public
(Here insert name and title of the officer),

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jun 28, 2026

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date_____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer
  _____
  (Title)
- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

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  - Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
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  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT NOTARY PUBLIC SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Bond No. 30239066
Premium is included in Performance Bond.

CITY OF BANNING

PAYMENT BOND

Atwell – PA 9A TR 37389-6 – Monumentation Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. , (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install and complete certain designated public improvements generally identified as follows:

Atwell – PA 9A TR 37389-6 – Monumentation Improvements; and

WHEREAS, said Agreement is dated _____, 20__ and is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement, before entering upon the performance of the work, to file with the City a good and sufficient payment bond, or other approved security, to secure the claims to which reference is made in Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the California Civil Code and in Government Code Section 66497;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held firmly bound unto the City and all contractors, subcontractors, laborers, materialmen and other persons employed in the performance of said Agreement and referred to in the above-referenced Civil Code and Government Code in the sum of Twenty-Seven Thousand Six Hundred Thirty-Eight and 51/100 Dollars ($27,638.51), for materials furnished or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor; that said Surety will pay the same in an amount not exceeding the amount hereinabove set forth; and in case suit is brought upon this bond, will pay, in addition to the face amount thereof, costs and reasonable expenses and fees, including reasonable attorneys' fees, incurred by the City in successfully enforcing such obligation, to be awarded and fixed by the court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies and corporations entitled to file claims under Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code, and under Government Code Section 66497, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void, otherwise it shall be and remain in full force and effect.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of said Agreement or the Improvement Plans or related specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration or addition.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1·29·25

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ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES
NOTARY PUBLIC - CALIFORNIA
COMMISSION # 2466323
RIVERSIDE COUNTY
My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

_____
City Attorney

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ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public
(Here insert name and title of the officer),

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jun 25, 2026

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date_____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer

(Title)

- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

2015 Version www.NotaryClasses.com 800-873-9865

INSTRUCTIONS FOR COMPLETING THIS FORM

This form complies with current California statutes regarding notary wording and, if needed, should be completed and attached to the document. Acknolwedgents from other states may be completed for documents being sent to that state so long as the wording does not require the California notary to violate California notary law.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they,~~ is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
  - ❖ Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - ❖ Indicate title or type of attached document, number of pages and date.
  - ❖ Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT
NOTARY PUBLIC
SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Bond No. 30239071
Premium: $3,481 / Annually

CITY OF BANNING

FAITHFUL PERFORMANCE BOND

Atwell – PA 13 TR 37389-F – Street Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install, complete and guarantee for one year after acceptance thereof, certain designated public improvements generally identified as follows: Atwell – PA 13 TR 37389-F – Street Improvements; and

WHEREAS, said Agreement is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement to furnish a corporate surety bond or other approved improvement security to guarantee the faithful performance of said Agreement;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held and firmly bound unto the City in the penal sum of Nine Hundred Forty Thousand Seven Hundred Ninety-Eight and 01/100 Dollars ($940,798.01), lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, successors, executors and administrators, jointly and severally, firmly by these presents.

The condition of this obligation is such that if the above-bounded Principal, his or its heirs, executors, administrators, successors, or assigns, shall in all things stand to, abide by, well and truly keep and perform the covenants, conditions and provisions in said Agreement and any modification thereof made as therein provided, on his or their part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the City, its officers, agents and employees, as therein stipulated; then this obligation shall become void; otherwise, this obligation shall be and remain in full force and effect.

As a part of the obligation secured hereby, and in addition to the face amount specified, costs and reasonable expenses and fees shall be included, including reasonable attorneys' fees, incurred by the City in successfully enforcing the obligation, all to be taxed as costs and included in any judgment rendered.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement, the work to be performed thereunder, or the Improvement Plans and related specifications accompanying the Agreement shall in any manner affect its obligations on this bond. The Surety hereby waives notice of any such change, extension of time, alteration or addition to the terms of the Agreement, the work, or the Improvement Plans and related specifications.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1·29·25

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ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES NOTARY PUBLIC - CALIFORNIA COMMISSION # 2466323 RIVERSIDE COUNTY My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

_____
City Attorney

11303-0014\2299407v5.doc

ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public
(Here insert name and title of the officer),

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jun 25, 2026

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date_____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer
  _____
  (Title)
- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

2015 Version www.NotaryClasses.com 800-873-9865

INSTRUCTIONS FOR COMPLETING THIS FORM

This form complies with current California statutes regarding notary wording and, if needed, should be completed and attached to the document. Acknolwedgents from other states may be completed for documents being sent to that state so long as the wording does not require the California notary to violate California notary law.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they,~~ is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
  - Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - Indicate title or type of attached document, number of pages and date.
  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT NOTARY PUBLIC SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Bond No. 30239071
Premium is included in Performance Bond.

CITY OF BANNING

PAYMENT BOND

Atwell – PA 13 TR 37389-F – Street Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. , (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install and complete certain designated public improvements generally identified as follows:

Atwell – PA 13 TR 37389-F – Street Improvements; and

WHEREAS, said Agreement is dated _____, 20__ and is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement, before entering upon the performance of the work, to file with the City a good and sufficient payment bond, or other approved security, to secure the claims to which reference is made in Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the California Civil Code and in Government Code Section 66497;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held firmly bound unto the City and all contractors, subcontractors, laborers, materialmen and other persons employed in the performance of said Agreement and referred to in the above-referenced Civil Code and Government Code in the sum of Nine Hundred Forty Thousand Seven Hundred Ninety-Eight and 01/100 Dollars ($940,798.01), for materials furnished or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor; that said Surety will pay the same in an amount not exceeding the amount hereinabove set forth; and in case suit is brought upon this bond, will pay, in addition to the face amount thereof, costs and reasonable expenses and fees, including reasonable attorneys' fees, incurred by the City in successfully enforcing such obligation, to be awarded and fixed by the court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies and corporations entitled to file claims under Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code, and under Government Code Section 66497, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void, otherwise it shall be and remain in full force and effect.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of said Agreement or the Improvement Plans or related specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration or addition.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1·29·25

11303-0014\2299407v5.doc

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES NOTARY PUBLIC - CALIFORNIA COMMISSION # 2466323 RIVERSIDE COUNTY My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

_____
City Attorney

11303-0014\2299407v5.doc

ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public
(Here insert name and title of the officer),

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jun 25, 2026

WITNESS my hand and official seal.

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date_____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer

(Title)

- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

2015 Version www.NotaryClasses.com 800-873-9865

INSTRUCTIONS FOR COMPLETING THIS FORM

This form complies with current California statutes regarding notary wording and, if needed, should be completed and attached to the document. Acknolwedgents from other states may be completed for documents being sent to that state so long as the wording does not require the California notary to violate California notary law.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they,~~ is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
  - ❖ Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - ❖ Indicate title or type of attached document, number of pages and date.
  - ❖ Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT NOTARY PUBLIC SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Bond No. 30239072
Premium: $1,649 / Annually

CITY OF BANNING

FAITHFUL PERFORMANCE BOND

Atwell – PA 13 TR 37389-F – Water Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install, complete and guarantee for one year after acceptance thereof, certain designated public improvements generally identified as follows: Atwell – PA 13 TR 37389-F – Water Improvements; and

WHEREAS, said Agreement is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement to furnish a corporate surety bond or other approved improvement security to guarantee the faithful performance of said Agreement;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held and firmly bound unto the City in the penal sum of Four Hundred Forty-Five Thousand Six Hundred Seventy-Four and 62/100 Dollars ($445,674.62), lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, successors, executors and administrators, jointly and severally, firmly by these presents.

The condition of this obligation is such that if the above-bounded Principal, his or its heirs, executors, administrators, successors, or assigns, shall in all things stand to, abide by, well and truly keep and perform the covenants, conditions and provisions in said Agreement and any modification thereof made as therein provided, on his or their part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the City, its officers, agents and employees, as therein stipulated; then this obligation shall become void; otherwise, this obligation shall be and remain in full force and effect.

As a part of the obligation secured hereby, and in addition to the face amount specified, costs and reasonable expenses and fees shall be included, including reasonable attorneys' fees, incurred by the City in successfully enforcing the obligation, all to be taxed as costs and included in any judgment rendered.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement, the work to be performed thereunder, or the Improvement Plans and related specifications accompanying the Agreement shall in any manner affect its obligations on this bond. The Surety hereby waives notice of any such change, extension of time, alteration or addition to the terms of the Agreement, the work, or the Improvement Plans and related specifications.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1·29·25

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ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES
NOTARY PUBLIC - CALIFORNIA
COMMISSION # 2466323
RIVERSIDE COUNTY
My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

_____
City Attorney

11303-0014\2299407v5.doc

ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

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State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public
(Here insert name and title of the officer),

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jun 25, 2026

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date_____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer
  _____
  (Title)
- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

2015 Version www.NotaryClasses.com 800-873-9865

INSTRUCTIONS FOR COMPLETING THIS FORM

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- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
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- Signature of the notary public must match the signature on file with the office of the county clerk.
  - Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - Indicate title or type of attached document, number of pages and date.
  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT NOTARY PUBLIC SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Bond No. 30239072
Premium is included in Performance Bond.

CITY OF BANNING

PAYMENT BOND

Atwell – PA 13 TR 37389-F – Water Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. _____, (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install and complete certain designated public improvements generally identified as follows:

Atwell – PA 13 TR 37389-F – Water Improvements; and

WHEREAS, said Agreement is dated _____, 20__ and is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement, before entering upon the performance of the work, to file with the City a good and sufficient payment bond, or other approved security, to secure the claims to which reference is made in Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the California Civil Code and in Government Code Section 66497;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held firmly bound unto the City and all contractors, subcontractors, laborers, materialmen and other persons employed in the performance of said Agreement and referred to in the above-referenced Civil Code and Government Code in the sum of Four Hundred Forty-Five Thousand Six Hundred Seventy-Four and 62/100 Dollars ($445,674.62), for materials furnished or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor; that said Surety will pay the same in an amount not exceeding the amount hereinabove set forth; and in case suit is brought upon this bond, will pay, in addition to the face amount thereof, costs and reasonable expenses and fees, including reasonable attorneys' fees, incurred by the City in successfully enforcing such obligation, to be awarded and fixed by the court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies and corporations entitled to file claims under Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code, and under Government Code Section 66497, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void, otherwise it shall be and remain in full force and effect.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of said Agreement or the Improvement Plans or related specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration or addition.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1.29.25

11303-0014\2299407v5.doc

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES
NOTARY PUBLIC - CALIFORNIA
COMMISSION # 2466323
RIVERSIDE COUNTY
My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

_____
City Attorney

11303-0014\2299407v5.doc

ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

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State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public
(Here insert name and title of the officer),

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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WITNESS my hand and official seal.

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jun 25, 2026

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date_____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer
  _____
  (Title)
- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

2015 Version www.NotaryClasses.com 800-873-9865

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POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT
NOTARY PUBLIC
SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Bond No. 30239073
Premium: $1,550 / Annually

CITY OF BANNING

FAITHFUL PERFORMANCE BOND

Atwell – PA 13 TR 37389-F – Sewer Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install, complete and guarantee for one year after acceptance thereof, certain designated public improvements generally identified as follows: Atwell – PA 13 TR 37389-F – Sewer Improvements; and

WHEREAS, said Agreement is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement to furnish a corporate surety bond or other approved improvement security to guarantee the faithful performance of said Agreement;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held and firmly bound unto the City in the penal sum of Four Hundred Eighteen Thousand Eight Hundred Fifty-Three and 05/100 Dollars ($418,853.05), lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, successors, executors and administrators, jointly and severally, firmly by these presents.

The condition of this obligation is such that if the above-bounded Principal, his or its heirs, executors, administrators, successors, or assigns, shall in all things stand to, abide by, well and truly keep and perform the covenants, conditions and provisions in said Agreement and any modification thereof made as therein provided, on his or their part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the City, its officers, agents and employees, as therein stipulated; then this obligation shall become void; otherwise, this obligation shall be and remain in full force and effect.

As a part of the obligation secured hereby, and in addition to the face amount specified, costs and reasonable expenses and fees shall be included, including reasonable attorneys' fees, incurred by the City in successfully enforcing the obligation, all to be taxed as costs and included in any judgment rendered.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement, the work to be performed thereunder, or the Improvement Plans and related specifications accompanying the Agreement shall in any manner affect its obligations on this bond. The Surety hereby waives notice of any such change, extension of time, alteration or addition to the terms of the Agreement, the work, or the Improvement Plans and related specifications.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1·29·25

11303-0014\2299407v5.doc

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES NOTARY PUBLIC - CALIFORNIA COMMISSION # 2466323 RIVERSIDE COUNTY My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

_____
City Attorney

11303-0014\2299407v5.doc

ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public
(Here insert name and title of the officer),

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jun 25, 2026

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages ____ Document Date____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer
  (Title)
- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other ____

2015 Version www.NotaryClasses.com 800-873-9865

INSTRUCTIONS FOR COMPLETING THIS FORM

This form complies with current California statutes regarding notary wording and, if needed, should be completed and attached to the document. Acknolwedgents from other states may be completed for documents being sent to that state so long as the wording does not require the California notary to violate California notary law.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they,~~ is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
  - Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - Indicate title or type of attached document, number of pages and date.
  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT NOTARY PUBLIC SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Bond No. 30239073
Premium is included in Performance Bond.

CITY OF BANNING

PAYMENT BOND

Atwell – PA 13 TR 37389-F – Sewer Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. , (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install and complete certain designated public improvements generally identified as follows:

Atwell – PA 13 TR 37389-F – Sewer Improvements; and

WHEREAS, said Agreement is dated _____, 20__ and is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement, before entering upon the performance of the work, to file with the City a good and sufficient payment bond, or other approved security, to secure the claims to which reference is made in Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the California Civil Code and in Government Code Section 66497;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held firmly bound unto the City and all contractors, subcontractors, laborers, materialmen and other persons employed in the performance of said Agreement and referred to in the above-referenced Civil Code and Government Code in the sum of Four Hundred Eighteen Thousand Eight Hundred Fifty-Three and 05/100 Dollars ($418,853.05), for materials furnished or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor; that said Surety will pay the same in an amount not exceeding the amount hereinabove set forth; and in case suit is brought upon this bond, will pay, in addition to the face amount thereof, costs and reasonable expenses and fees, including reasonable attorneys' fees, incurred by the City in successfully enforcing such obligation, to be awarded and fixed by the court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies and corporations entitled to file claims under Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code, and under Government Code Section 66497, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void, otherwise it shall be and remain in full force and effect.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of said Agreement or the Improvement Plans or related specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration or addition.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1·29·25

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ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES FRS01
NOTARY PUBLIC - CALIFORNIA
COMMISSION # 2466323
RIVERSIDE COUNTY
My Comm. Exp. October 12, 2027

Signature Edelmira Gonzales (Seal)

"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

_____
City Attorney

11303-0014\2299407v5.doc

ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public,
(Here insert name and title of the officer)

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jun 25, 2026

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date_____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer

(Title)

- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

2015 Version www.NotaryClasses.com 800-873-9865

INSTRUCTIONS FOR COMPLETING THIS FORM

This form complies with current California statutes regarding notary wording and, if needed, should be completed and attached to the document. Acknolwedgents from other states may be completed for documents being sent to that state so long as the wording does not require the California notary to violate California notary law.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they,~~ is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
  - Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - Indicate title or type of attached document, number of pages and date.
  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT NOTARY PUBLIC SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Bond No. 30239074
Premium: $105 / Annually

CITY OF BANNING

FAITHFUL PERFORMANCE BOND

Atwell – PA 13 TR 37389-F – Monumentation Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install, complete and guarantee for one year after acceptance thereof, certain designated public improvements generally identified as follows: Atwell – PA 13 TR 37389-F – Monumentation Improvements; and

WHEREAS, said Agreement is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement to furnish a corporate surety bond or other approved improvement security to guarantee the faithful performance of said Agreement;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held and firmly bound unto the City in the penal sum of Twenty-Eight Thousand Three Hundred Twenty-Four and 25/100 Dollars ($28,324.25), lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, successors, executors and administrators, jointly and severally, firmly by these presents.

The condition of this obligation is such that if the above-bounded Principal, his or its heirs, executors, administrators, successors, or assigns, shall in all things stand to, abide by, well and truly keep and perform the covenants, conditions and provisions in said Agreement and any modification thereof made as therein provided, on his or their part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the City, its officers, agents and employees, as therein stipulated; then this obligation shall become void; otherwise, this obligation shall be and remain in full force and effect.

As a part of the obligation secured hereby, and in addition to the face amount specified, costs and reasonable expenses and fees shall be included, including reasonable attorneys' fees, incurred by the City in successfully enforcing the obligation, all to be taxed as costs and included in any judgment rendered.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement, the work to be performed thereunder, or the Improvement Plans and related specifications accompanying the Agreement shall in any manner affect its obligations on this bond. The Surety hereby waives notice of any such change, extension of time, alteration or addition to the terms of the Agreement, the work, or the Improvement Plans and related specifications.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1·29·25

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ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Edelmira Gonzales (Seal)

FRS01 EDELMIRA GONZALES
NOTARY PUBLIC - CALIFORNIA
COMMISSION # 2466323
RIVERSIDE COUNTY
My Comm. Exp. October 12, 2027 FRS01

"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

_____
City Attorney

11303-0014\2299407v5.doc

ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public
(Here insert name and title of the officer),

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Notary Public Signature (Notary Public Seal)

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jun 25, 2026

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date_____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer
  _____
  (Title)
- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

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INSTRUCTIONS FOR COMPLETING THIS FORM

This form complies with current California statutes regarding notary wording and, if needed, should be completed and attached to the document. Acknolwedgents from other states may be completed for documents being sent to that state so long as the wording does not require the California notary to violate California notary law.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they,~~ is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
  - Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - Indicate title or type of attached document, number of pages and date.
  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT NOTARY PUBLIC SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

Bond No. 30239074
Premium is included in Performance Bond.

CITY OF BANNING

PAYMENT BOND

Atwell – PA 13 TR 37389-F – Monumentation Improvements
(Name or Tract Number of Subdivision)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, Tri Pointe Homes IE-SD, Inc. , (hereinafter designated as "Principal") has executed a Subdivision Improvement Agreement ("Agreement" herein) with the City of Banning, a municipal corporation of the State of California ("City" herein), whereby Principal agrees to construct, install and complete certain designated public improvements generally identified as follows:

Atwell – PA 13 TR 37389-F – Monumentation Improvements; and

WHEREAS, said Agreement is dated _____, 20__ and is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said Agreement, before entering upon the performance of the work, to file with the City a good and sufficient payment bond, or other approved security, to secure the claims to which reference is made in Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the California Civil Code and in Government Code Section 66497;

NOW, THEREFORE, the Principal designated above, and The Continental Insurance Company, as Surety, are held firmly bound unto the City and all contractors, subcontractors, laborers, materialmen and other persons employed in the performance of said Agreement and referred to in the above-referenced Civil Code and Government Code in the sum of Twenty-Eight Thousand Three Hundred Twenty-Four and 25/100 Dollars ($28,324.25), for materials furnished or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor; that said Surety will pay the same in an amount not exceeding the amount hereinabove set forth; and in case suit is brought upon this bond, will pay, in addition to the face amount thereof, costs and reasonable expenses and fees, including reasonable attorneys' fees, incurred by the City in successfully enforcing such obligation, to be awarded and fixed by the court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies and corporations entitled to file claims under Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code, and under Government Code Section 66497, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void, otherwise it shall be and remain in full force and effect.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of said Agreement or the Improvement Plans or related specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration or addition.

IN WITNESS WHEREOF, this instrument has been duly executed by the above-named Principal and Surety as of the date or dates set forth below the signatures of their authorized officers.

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment.

"PRINCIPAL"

Tri Pointe Homes IE-SD, Inc.
(Type name of Principal)

1250 Corona Pointe Court, Suite 600
(Street Address)

Corona CA 92879
(City) (State) (Zip)

By: _____
(Signature of authorized officer)

Michael C. Taylor, Division President
(Title of officer)

Date: 1·29·25

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ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES
NOTARY PUBLIC - CALIFORNIA
COMMISSION # 2466323
RIVERSIDE COUNTY
My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

"SURETY"

The Continental Insurance Company
(Type name of Surety)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

By: Michelle Haase
(Signature of authorized officer)

Michelle Haase, Attorney-in-Fact
(Title of officer)

Date: January 27, 2025

APPROVED:

_____
City Attorney

11303-0014\2299407v5.doc

ALL- PURPOSE
CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }

County of Orange }

On JAN 27 2025 before me, Janina Monroe, Notary Public
(Here insert name and title of the officer),

personally appeared Michelle Haase,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JANINA MONROE
Notary Public - California
Orange County
Commission # 2406696
My Comm. Expires Jun 25, 2026

Notary Public Signature (Notary Public Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date_____

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer
  _____
  (Title)
- ☐ Partner(s)
- ☒ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

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INSTRUCTIONS FOR COMPLETING THIS FORM

This form complies with current California statutes regarding notary wording and, if needed, should be completed and attached to the document. Acknolwedgents from other states may be completed for documents being sent to that state so long as the wording does not require the California notary to violate California notary law.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they,~~ is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
  - Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - Indicate title or type of attached document, number of pages and date.
  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Marina Tapia, Janina Monroe, Michelle Haase, Timothy J Noonan, Edward C Spector, Aidan Smock, Jaren A Marx, Erin Brown, Charles R Teter III, Simone Gerhard, B Aleman, K D Wapato, Rachel A Mullen, D Garcia, Sandra Corona, Jennifer Ochs, Ethan Spector, Sarah Campbell, Individually

of Irvine, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the Authorizing By-Laws and Resolutions printed at the bottom of this page, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 29th day of April, 2024.

The Continental Insurance Company

Larry Kasten — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 29th day of April, 2024, before me personally came Larry Kasten to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.

M. BENT NOTARY PUBLIC SOUTH DAKOTA

My Commission Expires March 2, 2026

M. Bent — Notary Public

CERTIFICATE

I, Paula Kolsrud, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolutions of the Board of Directors of the insurance company printed below this certificate are still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 27th day of January, 2025.

The Continental Insurance Company

Paula Kolsrud — Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Larry Kasten, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

This Power of Attorney may be signed by digital signature and sealed by a digital or otherwise electronic-formatted corporate seal under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 27th day of April, 2022:

"RESOLVED: That it is in the best interest of the Company to periodically ratify and confirm any corporate documents signed by digital signatures and to ratify and confirm the use of a digital or otherwise electronic-formatted corporate seal, each to be considered the act and deed of the Company."

CITY OF BANNING

SUBDIVISION IMPROVEMENT AGREEMENT

* * * * * * SUBDIVISION REFERENCE DATA * * * * * *

[X] FINAL TRACT MAP NO. 37389-F ("Final Map" herein)

[ ] PARCEL MAP NO. _____("Parcel Map" herein)

NAME OR TRACT NUMBER OF SUBDIVISION ("Subdivision" herein):	ATWELL – PA 13
NAME AND ADDRESS OF SUBDIVIDER(S):	TRI POINTE HOMES, IE-SD 1250 CORONA POINTE CT, #600 CORONA, CA 92879
CITY COUNCIL RESOLUTION OF APPROVAL NO.	_____ ("Resolution of Approval" herein)

DATE(S) THAT IMPROVEMENT PLANS WERE APPROVED BY THE CITY ENGINEER: see below

IMPROVEMENT/PLAN NO.:	Sewer Improvement Plan	
	Street Improvement Plan	
	Water Improvement Plan	
	Monumentation Improvement Plan	
ESTIMATED TOTAL COSTS:	IMPROVEMENTS	$1,805,325.68
	GRADING	$_____
	MONUMENTATION	$28,324.25
	TOTAL:	$1,833,649.93

FORM OF IMPROVEMENT SECURITY:

[ ] AAA Corporate surety bonds

[ ] Deposit of money

NAME AND ADDRESS OF CORPORATE SURETY (if applicable):

The Continental Insurance Company
(Name of Corporate Entity)

2 Park Plaza, Suite 400
(Street Address)

Irvine CA 92614
(City) (State) (Zip)

SURETY BOND NUMBERS (if applicable):

Sewer Imp: Bond No. 30239073

Street Imp: Bond No. 30239071

Water Imp: Bond No. 30239072

Monumentation Imp: Bond No. 30239074

EFFECTIVE DATE OF AGREEMENT:

(to be inserted by City)

COMPLETION PERIOD: All improvements of Tract _____ ~~(including the complete water and sewer system in _____ Street) with the exception of the roadway (street) improvements on _____ Street~~, shall be completed within two years from the Effective Date of the Agreement. _____ ~~Street roadway (street) construction (so that _____ Street is a continuous route from _____ to _____) shall be constructed prior to the Certificate of Occupancy for development of lots _____ and _____ of Tract _____.~~

* *

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SUBDIVISION IMPROVEMENT AGREEMENT

THIS SUBDIVISION IMPROVEMENT AGREEMENT ("Agreement") is made and entered into by and between the City of Banning, a municipal corporation ("City"), and the Subdivider whose name and address is set forth above in the Subdivision Reference Data.

RECITALS

A. Subdivider has presented to the City for approval and recordation a Final Map, identified above in the Subdivision Reference Data, of a proposed subdivision pursuant to the Subdivision Map Act of the State of California and the City's ordinances and regulations as such ordinances and regulations are vested under the development agreement recorded in the official records of the County of Riverside on July 17, 2012 as Document No. 2012-0332888 ("Development Agreement") relating to the filing, approval and recordation of subdivision maps (collectively referred to herein as the "Subdivision Laws").

B. A tentative map of the Subdivision was previously approved by City, subject to the Subdivision Laws and to the City's standard requirements as vested under the Development Agreement and conditions of approval contained in the City Council's Resolution of Approval, a copy of which is on file in the Office of the City Clerk and which is incorporated herein by this reference.

C. The Subdivision Laws establish, as a condition precedent to the approval of a Final Map, that the Subdivider comply with the City Council's Resolution of Approval and either (i) complete, in compliance with applicable City standards, all of the improvements and land development work required by the Subdivision Laws and the City Council's Resolution of Approval; or (ii) enter into a secured agreement with the City to complete the improvements and land development work within a period of time specified by the City.

D. In consideration of approval of the Final Map for the Subdivision by the City Council, Subdivider desires to enter into this Agreement whereby Subdivider promises to install and complete, at its sole expense, except as otherwise provided in a credit/reimbursement agreement as provided for in the Development Agreement, all public improvement work required by the City as set forth on the Improvement Plans (as defined below) for the proposed Subdivision. Subdivider has secured this Agreement by improvement security required by the Subdivision Laws and approved by the City. In any conflict between the terms in this Agreement and the Development Agreement, the Development Agreement shall be the controlling document.

E. Improvement Plans, and related specifications, numbered as designated above in the Subdivision Reference Data, for the construction, installation and completion of the Improvements identified in Schedule A hereto, have been prepared by the Subdivider, approved by the City Engineer, and are on file in the office of the City Engineer. Said Improvement Plans, and related specifications, subsequently modified by the mutual written agreement of the parties, are hereby referred to as the "Improvement Plans" and are incorporated herein by this reference.

Any improvement to be constructed pursuant to the Improvement Plan is hereby referred to individually as an "**Improvement**" and collectively as the "**Improvements**".

NOW, THEREFORE, in consideration of the approval and recordation by the City Council of the Final Map of the Subdivision, Subdivider and City agree as follows:

1. SUBDIVIDER'S OBLIGATION TO CONSTRUCT IMPROVEMENTS

A. Subdivider shall, at its sole expense, unless otherwise provided in a credit/reimbursement agreement as provided for in the Development Agreement, and in compliance with the provisions of the Subdivision Laws, the Improvement Plans, conditions of approval of the Tentative Map, and all applicable City standards and fees, and in a good and workmanlike fashion, furnish, construct, install and guarantee (as set forth in Section 3) the Improvements, Grading, and Monumentation described on the tentative map and in the City Council's Resolution of Approval relating thereto (collectively, the "Improvements").

B. To the extent necessary to construct the Improvements, as determined by the City Engineer, the Subdivider shall acquire and dedicate, or pay the reasonable, documented cost of acquisition by City of, all rights-of-way, easements and other interests in real property for the construction or installation of the Improvements, free and clear of all liens and encumbrances. If the Subdivider is unable to acquire such rights-of-way, easements and other interests in real property by negotiation, then Subdivider shall, within 120 days of Final Map approval, enter into a condemnation agreement with City pursuant to Government Code Section 66462.5, by which the City will commence the process for the acquisition of the rights-of-way, easements or other real property.

C. Subject to any time extensions granted in accordance with Section 4, Subdivider shall complete all Improvements within its respective "Completion Period" specified in the Subdivision Reference Data; provided, however, that if the City Engineer reasonably determines in good faith that accelerated construction of the Improvements is essential in order to protect the public health, welfare and safety, the City Engineer shall give Subdivider not less than fifteen (15) business days' prior written notice to commence or accelerate installation and construction of such Improvements, or any portion thereof. The notice shall be in writing, and shall describe the work to be done by Subdivider, the time within which the work will commence, the period within which the work will be completed and identify the reasons that such early commencement is essential in order to protect the public health, welfare and safety. All or any portions of said Improvements may be required to be constructed or completed at a specified time, providing the foregoing criteria is met. If the Subdivider objects to the commencement or acceleration of the Improvements as specified by the City Engineer, Subdivider may appeal the decision of the City Engineer to the City Council. Any such appeal shall be filed with the City Clerk within 10 days after receipt by Subdivider of the written notice from the City Engineer.

D. If the Improvements to be constructed by Subdivider include monumentation, such monumentation shall be installed not later than thirty (30) days after the City's acceptance of all other Improvements pursuant to Section 2. As used herein,

"monumentation" shall mean the setting of survey monuments and tie points in accordance with the Subdivision Laws, and the delivery to the City Engineer of tie notes for said points.

E. Subdivider shall , at its sole expense, unless otherwise provided in a credit/reimbursement agreement as provided for in the Development Agreement, replace or repair all public improvements, public utility facilities, and surveying or subdivision monuments which are destroyed or damaged as a result of any work performed by Subdivider under this Agreement during or after the Completion Period. Any such replacement or repair shall be subject to the approval of the City Engineer.

F. In addition to, and separate from, the indemnity obligations contained in Section 9 of this Agreement, and without limiting the City's remedies under general construction defect law, Subdivider shall be responsible for the care, repair and maintenance of the applicable portion of the Improvements until the latter of the following time periods: (i) the Improvements or applicable portion thereof is accepted in writing by the City; or (ii) the expiration of the required one-year guarantee and warranty period as specified herein; or (iii) the expiration of any applicable period of time requiring the care, repair and maintenance of the applicable Improvement specified in the Development Agreement (not including the term of any Development Agreement). Neither City, nor its officers, agents and employees, shall have any liability for any accident, loss or damage to the Improvements and that may result from the construction of the Improvements prior to their completion and written acceptance by the City

G. In addition to, and separate from: (1) the indemnity obligations contained in Section 7 of this Agreement, (2) the care, repair and maintenance provisions under paragraph E of this Section 1 of this Agreement; and (3) the warranty and guarantee provisions of Section 3 of this Agreement, Subdivider shall repair and correct, or be liable to the City for any cost to repair and correct, any defect in the construction of the Improvements that is identified by City within in accordance with general construction defect law ten (10) years after City's acceptance of the Improvement, provided the City provides written notice to Subdivider of the existence of the defect within that the time period under law, and the defect is caused directly or indirectly by the design, construction, functionality, installation, assembly or workmanship of Subdivider. Nothing contained in this paragraph is intended to limit or otherwise waive any right or cause of action under applicable construction defect law that City may assert against Subdivider.

H. Subdivider shall, at its sole expense, unless otherwise provided in a credit/reimbursement agreement as provided for in the Development Agreement, obtain all necessary permits and licenses for the construction and installation of the Improvements, give all necessary notices, and pay all applicable fees required by City ordinance or resolution and all taxes required by law.

I. Not less than seven (7) days prior to commencement of work on the Improvements, Subdivider shall give written notice to the City Engineer of the date fixed for such commencement of work in order that the City Engineer shall have adequate time to schedule all necessary inspections.

J. SUBDIVIDER shall pay all applicable City fees and costs stipulated in the latest fee resolution as adopted by the City Council from time to time as required for the development of the SUBDIVISION including but not limited to the following:

1. Building Permit Fees --- to be paid at the time of building permit issuance;

2. Final Map Plan Check Fees --- to be paid at time of submittal of final map for plan check and resubmittal of revised final map for plan check;

3. Final Map Moratorium Fees --- to be paid from cash deposit established at time of filing final map;

4. Plan Check and Review Fees --- to be paid from cash deposit established at time of filing improvement plans for plan check;

5. Encroachment Permit Fees --- to be paid at time of application for encroachment permit;

6. Inspection Fees --- to be paid from cash deposit established at time of construction permit issuance; and

7. Grading Permit Fee --- to be paid from cash deposit established at time of grading permit issuance.

K. Subdivider shall provide City with final Record Drawings of all plans developed for the Subdivision, showing all changes and as built conditions as specified in the Tentative Tract Map Conditions of Approval, and shall provide electronic image files of those final Record Drawings consistent with electronic image file size and type specifications of the City prior to the acceptance of improvements and release of bonds or other security.

2. INSPECTION OF WORK AND FINAL ACCEPTANCE

A. Subdivider shall at all times maintain proper facilities and safe access for inspection of the Improvements by the City Engineer and other City personnel and inspection consultants.

B. Upon completion of the work on all or any category of the Improvements, the Subdivider may request a final inspection by the City Engineer. Within forty-five (45) days of receipt of the written letter request, the City Engineer shall inspect the Improvements and provide written notice to Subdivider of the list of items which have been found to be incomplete and the list of items which have been found to be complete. If the City Engineer determines that all or any specified category of the Improvements have been completed in accordance with this Agreement and in compliance with the Improvement Plans and all applicable City standards, then the City Engineer shall acknowledge that determination in a report to the City Council. If the Improvements that are completed are to be dedicated to or owned by the City (Improvements within City right of way and property for public use), the City Engineer's determination shall be

submitted to the City Council for final acceptance by the City, unless such power to accept has been delegated by the City Council to the City Engineer or some other officer of the City, in which case the final acceptance shall be subject to the approval of that specified official. If the Improvements that are completed are to be dedicated to or owned by a public entity other than the City, the Subdivider's written request shall be submitted to the applicable public entity or other owner, for final acceptance. Subdivider shall bear all costs of inspection and determination of completeness in accordance with City's formally adopted and applicable fees and rates.

C. Acceptance of all or any specified category of the Improvements by the City Council shall be made upon recommendation and certification of the City Engineer following inspection of said Improvements pursuant to subparagraph B above. The City Council shall act upon the City Engineer's recommendation that such public Improvements have been completed unless such power to accept has been delegated by the City Council to the City Engineer or some other officer of the City, in which case the final acceptance shall be subject to the approval of that specified official. Acceptance by the City or by the governing body of the entity that is to accept dedication or ownership of the public improvements shall not constitute a waiver by the City or such other public entity of any defects in the public Improvements.

3. GUARANTEE AND WARRANTY OF THE IMPROVEMENTS

A. If, within a period of one year following acceptance by the City of the applicable Improvements specified in Schedule A, any Improvements or part of any Improvements specified in Section A furnished, installed or constructed by the Subdivider, or any of the work performed under this Agreement by Subdivider, fails to comply with any requirements of this Agreement, or the Subdivision Laws, or the Improvement Plans and related specifications, the Subdivider shall, without delay and without cost to the City, repair, replace or reconstruct any defective or otherwise unsatisfactory part or parts of the Improvements. Subdivider's obligations hereunder shall include the repair, replacement or reconstruction of all irrigation systems and all trees, shrubs, ground cover and landscaping for such one year.

B. Should the Subdivider fail or refuse to act promptly or in accordance with subparagraph A above, or should the exigencies of the situation require repair, replacement, or reconstruction to be undertaken before the Subdivider can be notified and can perform the necessary work, then the City may, in its discretion, make the necessary repairs or replacements or perform the necessary reconstruction and draw upon the Subdivider's improvement security to reimburse itself for the costs incurred. If the Subdivider's improvement security does not cover the total cost of such repair, replacement, or reconstruction, the Subdivider shall reimburse the City for any excess costs incurred.

C. The security furnished for the faithful performance of the Subdivider's obligation to construct and install the Improvements described herein shall include the Subdivider's liability and obligation hereunder to provide the one-year guarantee and warranty of the Improvements.

4. TIME EXTENSIONS

A. Upon a showing by the Subdivider of good cause therefor, the duration of the Completion Period for the Improvements (or any of them) may be extended by the City Engineer in writing. As used herein, "good cause" may include, without limitation, delay resulting from, arising out of or relating to an act of the City; acts of God or force majeure, strikes, boycotts or similar job actions by employees or labor organizations which prevent the conduct of the work; findings made by a governmental entity that the site of a particular Improvement is of archeological significance or requires further permitting and approval; and/or actions or failure to act of native American monitor(s); and, the order of any court.

B. A time extension may be granted without notice to any surety or sureties of the Subdivider and shall not affect the validity of this Agreement nor release the surety or sureties on any bond given as an improvement security pursuant to this Agreement.

C. As a condition of any time extension provided for herein, the City Engineer, may require the Subdivider to furnish new or modified improvement security guaranteeing performance of this Agreement, as extended, in an increased amount as necessary to compensate for any projected increase in the Estimated Total Cost of Improvements, as determined by the City Engineer.

5. IMPROVEMENT SECURITY

A. Prior to City's execution of this Agreement, Subdivider shall provide as security to the City:

1. For Performance and Guarantee: Security in an amount equal to one hundred percent (100%) of the Estimated Total Cost of the Improvements, excluding Grading, as set forth above in the Subdivision Reference Data. The security shall be issued by a bonding company licensed to issue bonds in the State of California and having a Best rating of AAA or better. With this security, the form of which shall be subject to City Attorney's prior approval, the Subdivider assures faithful performance under this Agreement and guarantees the Improvements for one year after the completion and acceptance of the applicable portion of such Improvements, against any defective workmanship or materials or any unsatisfactory performance, pursuant to Section 3 hereof.

2. For Payment: Security in an amount equal to one hundred percent (100%) of the Estimated Total Cost of the Improvements, excluding Grading, as set forth above in the Subdivision Reference Data. The security shall be issued by a bonding company licensed to issue bonds in the State of California and having a Best rating of AAA or better. With this security, the form of which shall be subject to City Attorney's prior approval, the Subdivider guarantees payment to contractors, subcontractors, and persons renting equipment or furnishing labor or materials to them or to the Subdivider.

B. If the improvement security is a corporate surety bond and, in the opinion of the City, any surety or sureties thereon become insufficient, because (i) the surety becomes

insolvent; (ii) the surety's bond rating is downgraded; (iii) the surety declares bankruptcy; or (iv) the surety is no longer deemed to be an admitted surety in California by the California Department of Insurance, or (v) the form of the surety or the amount is found by City to be in error or materially insufficient, the Subdivider shall renew or replace any such surety bond with good and sufficient surety or sureties within thirty (30) days after receiving from City written demand therefor.

C. The amount of security for performance, payment and warranty obligations provided by this section shall not include the cost of monumentation, as required by Government Code Section 66497 so long as a separate cash deposit or security acceptable to the City Engineer for the estimated cost of monumentation has been submitted to the City.

D. Improvement security consisting of corporate surety bonds, in a form accepted by the City Attorney, shall be filed with the City Engineer and then kept on file with the City Clerk. If a corporate surety bond is replaced by another approved bond, the replacement shall be submitted to the City Engineer and, upon filing with the City Clerk, shall be deemed to have been made a part of and incorporated into this Agreement. Upon submission to the City Engineer and then filing with the City Clerk of a replacement bond, the former improvement security shall be released following written approval of the City Engineer.

E. Modifications of the Improvement Plans and related specifications, and modifications of the Improvements, not exceeding ten percent (10%) of the original Estimated Total Cost of the Improvements, shall not relieve or release any improvement security furnished by Subdivider pursuant to this Agreement. If any such modifications exceed ten percent (10%) of the Estimated Total Cost of the Improvements, Subdivider shall furnish additional improvement security for performance and guarantee, and for payment, as required by subparagraph A above, for one hundred percent (100%) of the revised Estimated Total Cost of the Improvements.

F. Subject to any time extensions granted in accordance with Section 4 herein, the Subdivider shall be in default if the Subdivider has not completed all improvements within two years from the Execution Date of the Agreement and has not repaired any defects in the completed Improvements within the one-year guarantee and warranty period.

Alternatively, in the event of a default by the Subdivider pursuant to Section 10, and after written notice to Subdivider and reasonable opportunity to cure, City, at its sole option, shall have the right, without limiting any other rights and/or remedies available to City at law or in equity, to draw upon or utilize the improvement security furnished herewith to construct and install the Improvements itself. If City exercises this right, the release of any unused portion of such improvement security shall be in accordance with the procedures outlined in Section 6 herein, including any retention necessary for the one-year guarantee period.

6. REDUCTION OR RELEASE OF IMPROVEMENT SECURITY

A. All public Improvements (Improvements that are to be owned or dedicated to the City or other public entity as distinguished from those owned by a private community

association) shall be first completed, deemed completed by the City Engineer and then accepted as complete by the City prior to release of sureties. All private Improvements (Improvements that are to be owned by a private community association and not dedicated or owned by the City or other public entity) shall be first completed and then accepted as complete in writing by the City Engineer.

B. Partial releases or reductions in the Subdivider's improvement (performance) security may be authorized prior to the City's acceptance of all Improvements required hereunder, as follows:

1. At the time that the Subdivider believes that the obligation to perform the work for which security was required is complete, the Subdivider may notify the City in writing of the completed work, including a list of work completed. Upon receipt of the written notice, the City shall review and comment or approve the completion of the required work within forty-five (45) days. If the City does not agree that all work has been completed in accordance with the plans and specifications for the Improvements, it shall supply a list of all remaining work to be completed within this 45-day period.

2. Within forty-five (45) days of receipt of the list of remaining work from the local agency, the Subdivider may then provide cost estimates for all remaining work for review and approval by the City. Upon receipt of the cost estimates, the City shall then have forty-five (45) days to review, comment, and approve, modify, or disapprove those cost estimates. The City shall not be required to engage in this process of partial release more than once between the start of work and completion and acceptance of all work; however, nothing in this section prohibits the City from allowing for multiple and phased partial releases as it otherwise deems appropriate.

3. If the City approves the cost estimate, the City shall release all performance security except for security in an amount up to two hundred percent (200%) of the cost estimate of the remaining work. The process allowing for a partial release of performance security shall occur when the cost estimate of the remaining work does not exceed twenty percent (20%) of the total original performance security unless the City allows for a release at an earlier time. Substitute bonds or other security may be used as a replacement for the performance security, subject to the approval of the City. If substitute bonds or other security is used as a replacement for the performance security released, the release shall not be effective unless and until the City receives and approves that form of replacement security. A reduction in the performance security, authorized under this section, is not, and shall not be deemed to be, an acceptance by the City of the completed improvements in and of itself, and the risk of loss or damage to the Improvements and the obligation to maintain the Improvements shall remain the sole responsibility of the Subdivider until the applicable required public Improvements have been accepted by the City in writing and all other required improvements have been fully completed in accordance with the plans and specifications for the improvements.

4. The Subdivider shall complete the works of Improvement until all remaining items are accepted by the City.

5. Upon the completion of the Improvements, the Subdivider, or his or her assigns, shall be notified in writing by the City within forty-five (45) days.

6. Within sixty (60) days of the issuance of the notification by the City Engineer, any remaining performance security, except ten percent (10%) of the original amount of the security to guarantee and warrant the Improvements for the one-year guarantee and warranty period, shall be released within sixty (60) days of the issuance of the written statement of completion.

C. Security securing the payment to the contractor, his or her subcontractors and to persons furnishing labor, materials or equipment shall, after passage of the time within which claims of lien are required to be recorded pursuant to Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code and after acceptance of the work, be reduced to an amount equal to the total claimed by all stop notice claimants for whom stop notices have been filed with the City, and if no claims have been filed, the security shall be released in full.

D. The partial release provisions of this Section 6 shall not apply to any required guarantee and warranty period required by Section 66499.9 for the guarantee or warranty nor to the amount of the security deemed necessary by the local agency for the guarantee and warranty period nor to costs and reasonable expenses and fees, including reasonable attorneys' fees. Security furnished to guarantee and warrant the Improvements against any defective work or labor done or defective materials furnished, shall be released within thirty (30) days after the completion of the one-year period following completion and acceptance of all Improvements.

E. If Subdivider's obligations relating to any Improvements are subject to the approval of another governmental agency, the City shall not release the improvement (performance) security therefor until the obligations are performed to the satisfaction of such other governmental agency. Such agency shall have sixty (60) days after receipt of written notice from the Subdivider of the Subdivider's performance of the obligation to register its satisfaction or dissatisfaction. If at the end of that period it has not registered its satisfaction or dissatisfaction, it shall be conclusively deemed that the Subdivider's performance of the obligation was done to its satisfaction, and such improvement security shall be promptly released.

F. In the event the time periods for action by the City specified in this Section conflict with a shorter or longer time period for such actions as provided in Government Code Section 66499.7, the time periods in Government Code Section 66499.7 shall control.

7. INDEMNIFICATION OF CITY BY SUBDIVIDER

A. Neither the City, nor its officers, agents and employees, shall be liable or responsible for any accident, injury, loss or damage to either property or person attributable to or arising out of the defective design, construction, functionality, installation assembly or improper

maintenance including, without limitation, the use of defective methods, materials or workmanship (collectively "Subdivider's Faults") of the Improvements by Subdivider, its officers, employees and agents. Subdivider shall indemnify, hold harmless and defend the City, its officers, agents and employees, from and against any and all losses, claims, costs, expenses, liabilities, damages, actions, causes of action and judgments, including attorneys' fees, arising directly or indirectly out of or attributable to Subdivider's Faults.

B. Subdivider's obligations under this Section 7 are not conditioned or dependent upon whether the City, or its officers, agents and employees, prepared, supplied or reviewed any Improvement Plans or related specifications in connection with the Subdivision or the Improvements, or has insurance or other indemnification covering any of these matters.

C. Subdivider's obligation to indemnify, hold harmless and defend the City under this Section 7 shall extend to injuries to persons and damages to or alleged taking of property resulting from the Subdivider's Faults, and the Improvements required herein, and shall likewise extend to claims asserted by adjacent property owners based upon the diversion of waters caused by the Subdivider's defective design or defective construction of public drainage systems, streets, and other public facilities or improvements. Except for a City Directive as defined below, the City's acceptance of the Improvements shall not constitute an assumption by the City of any responsibility or liability for any damage or alleged taking of property referenced herein. City shall not be responsible or liable for the design or construction of the Subdivision or the Improvements constructed or installed pursuant to the approved Improvement Plans or the Final Map, regardless of any act or omission by the City in approving the Improvement Plans or the Final Map, unless the particular Improvement design was required by the City over the written objection of the Subdivider, which objection stated that the Improvement design was potentially dangerous or defective and set forth an alternative design (a "City Directive"). After City's acceptance of the Improvements, the Subdivider shall remain obligated to correct or eliminate all dangerous conditions created by defects in design, construction or Subdivider's Faults (other than those required by a City Directive); provided, however, that Subdivider shall not be responsible for routine maintenance as specified in Section 1(F) of this Agreement. Subdivider's indemnity obligations hereunder shall remain in effect for ten (10) years following acceptance of the respective Improvement(s) by the City Council. Subdivider acknowledges and agrees that Subdivider shall be responsible and liable for the Subdivider's Faults with respect to the Improvements and other work done pursuant to this Agreement, unless same is due to a City Directive. City shall not be liable for any acts or omissions in approving, reviewing, checking, correcting or modifying any Improvement Plans or related specifications, or in inspecting, reviewing or approving any work or construction of Improvements, unless same is due to a City Directive. The Subdivider's improvement security shall not be required to secure the Subdivider's obligations under this subparagraph C beyond the one-year guarantee and warranty period, unless the City Engineer provides notice to Subdivider prior to the expiration of the one-year period of the existence of, or continued existence of, defects in the improvements, in which case the portion of the improvement security to guarantee and warranty the improvements against defective work shall not be released and shall remain in place until the City Engineer provides written confirmation that the defects have been cured and corrected. The indemnity shall be effective retroactively to the earliest recordation date of the Final Map.

D. Subdivider shall pay and satisfy any judgment, award or decree that may be rendered against City, its officers, officials, employees, agents, representatives and volunteers (collectively hereinafter "City and City Personnel") to the extent of the indemnity provided above, in any such suit, action, or other legal proceeding, provided City gives Subdivider prompt written notice of such claim and allows Subdivider to undertake the defense thereof, and provided further that City cooperates in any such suit, action, or other legal proceeding, but shall retain its right to reject a settlement that the City deems, in its sole and absolute discretion, to be contrary to the interests of the City.

E. Subdivider's obligation to indemnify shall not be restricted to Insurance proceeds, if any, received by the City and City Personnel.

F. Subdivider, on behalf of itself and all parties claiming under or through it, hereby waives all rights of subrogation and contribution against City and City Personnel to the extent of the indemnity above provided.

8. INSURANCE

The following coverages will be provided by Subdivider and maintained on behalf of City and in accordance with the requirements set forth herein. If Subdivider performs construction activities through a general contractor, some or all of these insurance requirements for the period of construction may be satisfied by the general contractor's insurance coverages. In such case, Subdivider shall maintain during this same construction period, and after the construction period, the coverages shown below as "Insurance After Construction." In addition, Subdivider may elect to obtain, for all or any portion of the Project, an "Owner-Controlled Wrap Up" insurance policy in satisfaction of the insurance requirements for general contractors and subcontractors provided it satisfies all of the insurance requirements below for general contractors and subcontractors. Throughout these specifications, the word "Subdivider" refers to the Party responsible to provide the coverages as specified and, depending on context, may refer either to Subdivider or to a separate General Contractor.

A. Insurance During Construction. Subdivider shall provide the following insurance during construction of the Improvements. Insurance requirements may be met through insurance provided by Subdivider's General Contractor:

1. Commercial General Liability Insurance. Commercial General Liability Insurance (primary) shall be provided on ISO-CGL Form No. CG 00 01 or equivalent coverage, including provisions for defense of additional insureds. Policy limits shall be no less than two million dollars ($2,000,000) per occurrence for all coverages and five million dollars ($5,000,000) general aggregate. City and its officers, employees and agents shall be added as additional insureds using ISO Form CG 20 10 11 85 or other revision of the CG 20 10 form if available from the insurer and reasonably acceptable to the City, not limiting coverage for the additional insured to "ongoing operations" or in any way excluding coverage for completed operations. Coverage shall apply on a primary non-contributing basis in relation to any other insurance or self-insurance, primary or excess, available to City or any officer, employee or agent of City.

Coverage shall not be limited to the vicarious liability or supervisory role of any additional insured. Coverage shall contain no contractors' limitation or other endorsement limiting the scope of coverage for liability arising from pollution, explosion, collapse, or underground property damage.

2. Umbrella Liability Insurance. Umbrella Liability Insurance (or, at Subdivider's election, Excess Liability Insurance) (over primary) shall apply to bodily injury/property damage, personal injury/advertising injury, at a minimum. Coverage shall be at least as broad as any underlying coverage. Coverage shall be provided on a "pay on behalf" basis. There shall be no cross liability exclusion and no contractor's limitation endorsement. Policy limits shall be not less than five million dollars ($5,000,000) per occurrence and in the aggregate, including any limits required in the underlying policies. The policy shall have a starting date no later than and an ending date no earlier than those of the underlying coverages. The Named Insured (Subdivider or General Contractor as appropriate) may determine the layering of primary and excess liability insurance provided that if such layering differs from that described here, the actual coverage program meets the minimum total required limits and complies with all other requirements listed here.

3. Business Auto Coverage. Business Auto Coverage shall be written on ISO Business Auto Coverage Form CA 00 01 or the equivalent, including symbol (1) (any Auto). If Subdivider (or Contractor) does not own any vehicles, this requirement may be satisfied by a non-owned vehicle endorsement to the general and umbrella liability policies. Limits shall be no less than one million dollars ($1,000,000) per accident. This policy shall be scheduled as underlying insurance to the umbrella policy required above for a total limit of no less than five million dollars ($5,000,000) each accident.

4. Workers' Compensation/Employer's Liability. Workers' Compensation/Employer's Liability shall provide workers' compensation statutory benefits as required by law. Employer's liability limits shall be no less than one million dollars ($1,000,000) per accident or disease. Employer's liability coverage shall be scheduled under the umbrella or excess liability policy described above. This policy shall be endorsed to waive any right of subrogation with respect to City, its officers, employees or agents.

5. Builder's Risk Insurance. Builder's Risk Insurance covering all real and personal property for "all risks" of loss or "comprehensive perils" coverage including but not limited to the perils of earth movement, including earthquake (if required by Subdivider's lender or if available at commercially reasonable rates) and flood for all Improvements.

B. Insurance After Construction. Upon completion of construction of the Improvements, and for the required one-year guarantee and warranty period for Improvements and the required 10-year indemnification period, Subdivider at Subdivider's expense shall maintain or cause to be maintained the following insurance:

1. Commercial Property Insurance. Commercial Property Insurance covering the Improvements. Coverage shall be at least as broad as the Insurance Services Offices broad causes of loss form CP 10 20, and reasonably approved of in writing by the City. Coverage shall be sufficient to insure 100% of the replacement value and there shall be no coinsurance provisions. The policy shall include an inflation guard endorsement, 100% rents coverage, contents coverage, coverage for personal property of others, ordinance or law and increased cost of construction coverage. Subdivider also agrees to provide builder's all-risk insurance using an inland marine form during the period of any major alteration or improvement, using the broadest form available.

The insurance coverage for the peril of earthquake required for this project is subject to availability on the open market at commercially reasonable premium cost, as determined by mutual agreement between Subdivider and City. If such earthquake insurance coverage should, after diligent effort by Subdivider, be unobtainable at such mutually determined commercially reasonable premium cost, then Subdivider shall obtain the maximum insurance reasonably obtainable at commercially reasonable premium cost (if any) and give notice to City of the extent of Subdivider's inability to obtain, in full, the required insurance, and in such event, Subdivider's obligation to procure and maintain such insurance may be excused, subject to City's verification of inability to obtain the required insurance. Subdivider and City agree that a premium cost of earthquake insurance coverage of up to 150% of the premium cost paid by Subdivider for such coverage on the Effective Date (to be adjusted over time based on the Consumer Price Index,) shall constitute a commercially reasonable premium cost. Non-availability at commercially reasonable premium cost must be documented by a letter from Subdivider's insurance broker or agent indicating a good faith effort to place the required insurance and showing, at a minimum, the names of the insurance carriers and the declinations or quotations received from each.

2. Commercial General Liability Insurance. Commercial General Liability Insurance (primary) shall be provided on ISO-CGL form No. CG 00 01 or equivalent coverage, including provisions for defense of additional insureds. Policy limits shall be no less than two million dollars ($2,000,000) per occurrence for all coverages and five million dollars ($5,000,000) general aggregate. City and its officers, employees and agents shall be added as additional insureds using ISO form CG 20 10 or equivalent if available from the insurer and reasonably acceptable to the City. Coverage shall apply on a primary non-contributing basis in relation to any other insurance or self-insurance, primary or excess, available to City or any officer, employee or agent of City until the warranty period specified in this Agreement expires.

3. Umbrella Liability Insurance. Umbrella Liability Insurance (or, at Subdivider's election, Excess Liability Insurance) (over primary) shall apply to bodily injury/property damage, personal injury/advertising injury, at a minimum. Coverage shall be at least as broad as any underlying coverage. Coverage shall be provided on a "pay on behalf" basis. There shall be no cross liability exclusion. Policy limits shall be not less than five million dollars ($5,000,000) per occurrence and in the aggregate, including any limits required in the underlying policies. The policy shall have a starting

date no later than and an ending date no earlier than those of the underlying coverages. Subdivider may determine the layering of primary and excess liability insurance provided that if such layering differs from that described here, the actual coverage program meets the minimum total required limits.

4. Workers Compensation Insurance. Workers' Compensation/Employer's Liability shall provide workers' compensation statutory benefits as required by law. Employer's liability limits shall be no less than one million dollars per accident or disease. Employer's liability coverage shall be scheduled under any umbrella or excess liability policy described above. Unless otherwise agreed, this policy shall be endorsed to waive any right of subrogation as respects City, its employees or agents.

5. Business Auto Coverage. Business Auto Coverage for vehicles owned, operated or maintained in any way connected with the project, shall be written on ISO Business Auto Coverage form CA 00 01 or the equivalent, including symbol (1) (any Auto). If Subdivider (or Contractor) does not own any vehicles, this requirement may be satisfied by a non-owned vehicle endorsement to the general and umbrella liability policies. Limits shall be no less than one million dollars ($1,000,000) per accident. This policy shall be scheduled as underlying insurance to the umbrella or excess liability policy required above for a total limit of no less than five million dollars ($5,000,000) each accident.

C. Provisions Pertaining to Insurance Provided by Subdivider

1. All insurance coverage and limits provided pursuant to this Agreement shall apply to the full extent of the policies involved, available or applicable. Nothing contained in this Agreement or any other agreement relating to City or its operations limits the application of such insurance coverage.

2. Requirements of specific coverage features or limits contained in this Section are not intended as a limitation on coverage, limits or other requirements, or a waiver of any coverage normally provided by any insurance. Specific reference to a given coverage feature is for purposes of clarification only and is not intended by any Party to be all inclusive, or to the exclusion of other coverage, or a waiver of any type.

3. All general or auto liability insurance coverage provided pursuant to this Agreement, or any other agreements pertaining to the performance of this Agreement, shall not prohibit Subdivider, and Subdivider's employees, or agents, from waiving the right of subrogation prior to a loss. Subdivider waives its right of subrogation against City.

4. None of the policies required herein shall be in compliance with these requirements if they include any limiting endorsement that has not been first submitted to City and approved in writing by the City.

5. Unless otherwise approved by City, Subdivider's insurance and insurance provided by any contractor or subcontractor relating to the construction of the Improvements shall be written by insurers authorized to do business in the State of California and with a minimum "Best's" Insurance Guide rating of at least "A-:VII." Self-insurance will not comply with these insurance specifications unless expressly approved in writing by the City.

6. In the event any policy of insurance required under this Agreement does not comply with these requirements and Subdivider does not cure the non-compliance within thirty (30) days after written notice from City (or Subdivider does not provide reasonable evidence of such cure within such period), or if the insurance is canceled and not replaced, City has the right but not the duty to obtain the insurance it deems necessary and any reasonable premium paid by City will be promptly reimbursed by Subdivider.

7. Subdivider agrees to provide evidence of the insurance required herein, satisfactory to City, consisting of certificate(s) of insurance evidencing all of the coverages required and an additional insured endorsement to Subdivider's general liability and umbrella liability policies using ISO Form CG 20 10 11 85. Certificate(s) are to reflect that the insurer will provide 30 days' notice of any cancellation of coverage and policies are to have a "cancellation endorsement" to the same effect. Subdivider agrees to provide copies of any endorsements modifying coverage in any way upon request from City.

8. Subdivider shall provide proof that policies of insurance required herein expiring during the term of this Agreement have been renewed or replaced with other policies providing at least the same coverage.

9. Any actual or alleged failure on the part of City or any other additional insured under these requirements to obtain proof of insurance required under this Agreement in no way waives any right or remedy of City or any additional insured, in this or any other regard.

10. Subdivider agrees to require all subcontractors or other parties (but not including a general contractor) hired for this project to construct the Improvements to purchase and maintain insurance for general liability (minimum limit $1,000,000 per occurrence), automobile liability ($1,000,000 per accident) and workers' compensation (statutory benefits). Prior to the issuance of the Certificate of Completion for each Phase, Subdivider shall, upon request by City, provide the City with copies of all insurance policies, certificates and endorsements related to such Phase.

11. Subdivider agrees to monitor and review all coverage required by this Section and assumes all responsibility for ensuring that such coverage is provided as required here. Subdivider agrees to obtain certificates evidencing such coverage. Subdivider agrees that upon request, all agreements with subcontractors or others with whom Subdivider contracts with on behalf of City, and all certificates of insurance

obtained in compliance with this paragraph will be submitted to City for review upon request by City. Failure of City to request copies of such documents will not impose any liability on City, or its employees.

12. Subdivider agrees to require that no contract used by any general contractor or subcontractor in connection with construction of the Improvements, or contracts Subdivider enters into on behalf of City, will reserve the right to charge back to City the cost of insurance required by this Agreement.

13. Where appropriate (such as in the case of automobile insurance coverages), coverage will not be limited to the specific location designated as the Property.

14. Subdivider agrees to provide notice to City of any claim or loss against Subdivider that includes City as a defendant promptly after Subdivider receives written notice or obtains knowledge thereof. City assumes no obligation or liability by such notice, but has the right (but not the duty) to monitor the handling of any such claim or claims if they are likely to involve City. City agrees to provide similar notice to Subdivider of any such claims it is notified of respecting the Property.

15. Subdivider agrees not to attempt to avoid its defense and indemnity obligations to City, and its officers, employees, agents by using as a defense Subdivider's statutory immunity under workers' compensation and similar statutes.

16. Subdivider agrees to ensure that coverage provided to meet these requirements is applicable separately to each insured and that there will be no cross liability exclusions that preclude coverage for suits between Subdivider and City or between City and any other insured or Named Insured under the policy, or between City and any Party associated with City or its employees.

17. If Subdivider or any contractor or subcontractor is a Limited Liability Company, general liability coverage must apply so that the Limited Liability Company and its Managers, Members, Affiliates, and their employees are insureds.

18. Subdivider shall require General Contractor to maintain commercial general liability, and if necessary, commercial umbrella liability insurance with a limit of not less than $15,000,000 for each occurrence, until the warranty period specified in this Agreement expires.

19. Subdivider agrees to obtain and provide to City evidence of professional liability coverage for Architects, Engineers or other design professionals working on the Improvements. The limit of liability required is subject to City approval, but in no event to be less than $1,000,000 per claim and in the aggregate, and Subdivider shall use reasonable efforts to require and cause such professionals to maintain coverage with respect to each occurrence for at least three years following substantial completion of the work and, in the event Subdivider is unable to do so, Subdivider shall promptly inform the City of the scope of such efforts and the reasons that it was unable to do so. If

Subdivider requests that the City approve a lower limit for any particular design professional Subdivider seeks to employ on the Improvements, City will evaluate each such request based on City's perception of liability exposure associated with the work that would be performed by that design professional.

20. To the extent a particular coverage or policy form or specification is not reasonably available from Subdivider's insurer or would result in an additional premium that is extraordinary or unreasonably disproportionate to the premium for the policy as a whole, then Subdivider shall provide substantially similar coverage reasonably acceptable to City for which the cost is not extraordinary or unreasonably disproportionate.

9. OWNERSHIP OF THE IMPROVEMENTS

A. Ownership of all or any category of the Improvements constructed and installed by the Subdivider pursuant to this Agreement and shown on the Map to be dedicated to the public shall vest, as applicable, in the City (or other specified governmental agency) upon acceptance of said Improvements by the City. The acceptance of the Improvements shall either be shown by a certificate on the Final Map or by subsequent resolution accepting the Improvements adopted by the City pursuant to Government Code Section 66477.2 and recorded with the County Recorder or by other writing.

B. The Subdivider shall at all times prior to the acceptance of the Improvements by the City, give good and adequate warning to the public of each and every dangerous and defective condition caused by the construction of the Improvements and shall take all steps reasonably necessary to protect the public from such dangerous or defective conditions. The Subdivider agrees and understands that until acceptance of the Improvements by the City in writing, each Improvement and Improvement area that is offered for dedication shall be under the charge of the Subdivider, and the Subdivider may close all or a portion of any street or area whenever necessary to protect the public during the construction of the Improvements.

10. PREPARATION AND RECORDATION OF CC&RS.

A. The Subdivider shall establish a Homeowners Association for the residential areas of the Final Map owned by Subdivider, and to pay all costs associated with the creation of the associations.

B. The Subdivider shall prepare and record Covenants, Conditions, and Restrictions (CC&Rs) which obligate each homeowners association to provide for maintenance of the shared facilities, improvements, and landscaping within the boundaries of the associations in perpetuity in accordance with the Development Agreement and conditions of approval. The CC&Rs shall describe the homeowners association and the City's responsibilities and rights, and shall be subject to the approval of the City prior to recordation.

C. The Subdivider shall implement applicable provisions of the Mitigation Monitoring and Reporting Program.

11. DEFAULT AND BREACH BY THE SUBDIVIDER AND REMEDIES OF THE CITY

A. Upon the occurrence of any of the following events, the Subdivider shall be deemed to be in default under this Agreement:

1. Subject to any time extensions granted in accordance with Section 4, failure to complete construction and installation of the Improvements or any of them by the completion date set forth above in the Subdivision Reference Data;

2. Failure to promptly correct or cure any defect in the Improvements or any of them (other than a City Directive) during the one-year guarantee and warranty period as required by Section 3.A or failure to commence correction or cure of any such defect or failure to diligently prosecute same to completion, in each instance following receipt by Subdivider of written notice that such defect exists;

3. Subject to any time extensions granted in accordance with Section 4, failure to perform substantial construction work of the Improvements or any of them, after commencement of work on same, for a period of thirty (30) days after Subdivider's receipt of written notice thereof from the City;

4. Insolvency, appointment of a receiver, or the filing of any petition in bankruptcy, whether voluntary or involuntary, and such is not cured or discharged within a period of thirty (30) days;

5. Commencement of a foreclosure action against the Subdivision or any portion thereof, or any conveyance by the Subdivider in lieu or in avoidance of foreclosure, within thirty (30) days after receipt by Subdivider of written notice thereof from the City; or

6. Failure to perform any other obligations in accordance with the terms and provisions of this Agreement within thirty (30) days after receipt by Subdivider of written notice thereof from the City.

B. City reserves to itself all remedies available to it at law or in equity for any breach of Subdivider's obligations under this Agreement. City shall have the right, without limitation of other rights or remedies, after written notice to Subdivider and a reasonable opportunity for Subdivider to cure any such alleged default, to draw upon or utilize any improvement security furnished hereunder to complete the Improvements or otherwise mitigate City's damages in the event of Subdivider's default.

C. Following Subdivider's receipt of written notice of alleged default and failure by Subdivider to promptly commence the cure of any alleged default and to diligently prosecute such cure to completion, the City may serve written notice of any such default upon the surety on any corporate surety bond furnished as improvement security hereunder, and request that said surety take over and complete the Improvements herein specified. If such surety, within thirty (30) days after service of such notice of default, does not give the City

written notice of its intention to perform this Agreement, or does not commence such performance within thirty (30) days after notice to the City of such intention to perform, the City may take over the work and prosecute the same to completion, by contract or by any other method the City deems advisable, for the account and at the expense of the Subdivider and its surety.

D. Subdivider acknowledges that the Estimated Total Costs and Improvement Security amounts set forth herein may not reflect the actual cost of construction or installation of the Improvements, and, consequently, City's damages for Subdivider's default shall be measured by the actual cost of completing the required Improvements. If the damages incurred by the City in taking over and completing the Improvements exceeds the principal amount of the improvement security, then the Subdivider shall reimburse the City in the amount of such excess damages.

E. Following Subdivider's receipt of written notice of alleged default and failure by Subdivider to promptly commence the cure of any alleged default and to diligently prosecute such cure to completion, City may, without liability for so doing, take possession of, and utilize in completing the Improvements, such materials, appliances, plant and other property belonging to Subdivider as may be on the site of the work and necessary for the performance of the work. Subdivider hereby consents to such entry by the City and its representatives, including contractors, following written notice to Subdivider upon the real property in the Subdivision owned by Subdivider and necessary for City to enter or access under this Agreement, in the event the City elects to maintain or complete the work on the Improvements following Subdivider's default.

F. Subdivider acknowledges and agrees that approval of the Final Map for the Subdivision conferred substantial rights upon the Subdivider, including the right to sell, lease or finance lots within the Subdivision, and that such approval constitutes the final act necessary to permit the division of land within the Subdivision. As a result, City will be damaged to the extent of the cost of construction or installation of the Improvements upon Subdivider's failure to perform its obligations under this Agreement, which failure is not promptly remedied by sureties or by Subdivider.

G. The City's failure to take an enforcement action with respect to a default, or to declare a default or breach, shall not be construed as a waiver of that default or breach or any subsequent default or breach of the Subdivider.

H. If City sues to compel Subdivider's performance of this Agreement, or to recover damages or costs incurred in completing or maintaining the work on the Improvements, and is the prevailing party, Subdivider agrees to pay all reasonable attorneys' fees and other costs and expenses of litigation incurred by the City in connection therewith, even if Subdivider subsequently resumes and completes the work.

12. RELATIONSHIP OF THE PARTIES

Neither Subdivider, nor any of Subdivider's contractors, employees or agents, are or shall be deemed to be, agents of the City in connection with the performance of Subdivider's obligations under this Agreement.

13. ASSIGNMENT

A. Subdivider shall not assign this Agreement, or any portion thereof without the prior written consent of the City in accordance with the Development Agreement. Any attempted or purported assignment in violation of this subparagraph A shall be null and void and shall have no force or effect.

B. The sale or other disposition of the Subdivision shall not relieve Subdivider of its obligations hereunder. If Subdivider intends to sell the Subdivision, or any portion thereof (except for the sale of individual lots with homes to individual purchasers), to any other person or entity, the Subdivider may request an assignment or novation of this Agreement and a substitution of improvement security. Upon the City's approval of the assignment or novation and substitution of improvement security, the Subdivider may request a release or reduction of the improvement security furnished pursuant to this Agreement.

14. NOTICES

All notices required or provided for in this Agreement shall be in writing and delivered in person or by mail, postage prepaid, and addressed as follows:

If to the City:	Art Vela Director of Public Works/City Engineer City of Banning 99 E. Ramsey Drive Banning, California 92220
If to the Subdivider:	To the address set forth above in the Subdivision Reference Data, or to such other address as may subsequently be designated in written notice to the City.

Notice shall be effective on the date that it is delivered in person, or, if mailed, three (3) days after the date of deposit in the United States Mail.

15. ENTIRE AGREEMENT

This Agreement constitutes the entire agreement of the parties with respect to its subject matter. All modifications, amendments, or waivers of any terms of this Agreement shall be in writing and signed by the duly authorized representatives of the parties. In the case of the City, the duly authorized representative, unless otherwise specified herein, shall be the City Engineer.

16. SEVERABILITY

The provisions of this Agreement are severable. If any portion of this Agreement is held invalid by a court of competent jurisdiction, the remainder of the Agreement shall remain in full force and effect.

17. INCORPORATION OF SUBDIVISION REFERENCE DATA AND RECITALS

The Subdivision Reference Data and the Recitals are incorporated into this Agreement.

18. GOVERNING LAW

This Agreement shall be governed by the laws of the State of California.

19. EFFECTIVE DATE OF THE AGREEMENT

This Agreement shall be and become effective as of the date that it is executed by a duly authorized officer or employee of the City, it being the intention of the parties that the Subdivider shall first execute this Agreement and thereafter submit it to the City. The City shall insert the effective date in the Subdivision Reference Data in all counterparts of this Agreement and shall transmit a fully executed counterpart to the Subdivider.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their respective officers, thereunto duly authorized, as of the dates set forth below their respective signatures.

[Note: All signatures must be acknowledged by a notary public and the acknowledgement must be attached. If signed by a Corporation, the signatures of two Corporate officers are required, unless a resolution of the Corporation's Board of Directors is provided indicating that the signature of the one signatory is sufficient to bind the Corporation.]

SUBDIVIDER

By: _____
Print Name: Michael C. Taylor
Title: Division President
Date: 1.29.25

CITY

CITY OF BANNING

_____
MAYOR

ATTEST:

_____ (SEAL)

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ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Riverside)

On 01/29/2025 before me, Edelmira Gonzales / Notary Public
(insert name and title of the officer)

personally appeared Michael C. Taylor,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

FRS01 EDELMIRA GONZALES NOTARY PUBLIC - CALIFORNIA COMMISSION # 2466323 RIVERSIDE COUNTY My Comm. Exp. October 12, 2027 FRS01

Signature Edelmira Gonzales (Seal)

CITY CLERK

Approved as to form:

_____

CITY ATTORNEY

[This page for acknowledgments.]

CITY OF BANNING
STAFF REPORT

TO:	**CITY COUNCIL**
FROM:	**Robert Fisher, Acting City Manager**
PREPARED BY:	**Patrick Safari, Capital Improvement Projects Manager** **Art Vela, Director of Public Works**
MEETING DATE:	**February 25, 2025**
SUBJECT:	**Consideration of Resolution 2025-28, Approving a Sole Source Contract with Rick Engineering, Inc. for the Continuation of the Design of Ramsey Street Water Main Replacement in the Amount of $156,224.03**

RECOMMENDATION:

Adopt Resolution 2025-28.

BACKGROUND:

The City of Banning owns, operates, and maintains water distribution and transmission pipelines that distribute water to residents and businesses. To provide its customers with a reliable supply of water, it is important for the city to continue replacing aging and undersized water distribution infrastructure.

On April 12, 2022, City Council approved Resolution 2022-35 authorizing the use of American Rescue Plan Act (ARPA) funds on certain eligible projects including making the necessary investments in water infrastructure. The approved ARPA project list included the replacement of waterlines along Ramsey Street.

On November 14, 2023, City Council approved Resolution 2023-182 approving a Professional Services Agreement ("Agreement") for the Design of Ramsey Street Water Main Replacement to Rick Engineering, Inc., in the amount of $399,540 with an expiration date of June 30, 2024, and maximum term and subsequent amendments not to exceed five (5) years.

JUSTIFICATION:

The previous Agreement approved under Resolution 2023-182 expired on June 30, 2024 and the City and Rick Engineering, Inc. desire to complete the scope of work as outlined in the original Agreement. The amount of funds remaining in the expired contract is $156,224.03 which will be used to fund the remainder of the unfinished tasks in the previously approved scope of work.

Due to construction funding challenges for this project, the original Agreement with Rick Engineering, Inc. for the design of Ramsey Street Water Main Replacement called for a three (3) phase design process. The available ARPA funds were only sufficient to cover the construction of the first phase and therefore, it was necessary to prioritize the completion of the design of the first phase. The design work took longer than anticipated due to unforeseen site conditions and design challenges.

FISCAL IMPACT:

Staff recommends awarding a new Professional Services Agreement to Rick Engineering, Inc. in the amount of $156,224.03 to complete the outstanding design phases in a manner that meets all project specifications and regulatory requirements.

No fiscal impact is expected since the requested amount of $156,224.03 had previously been allocated to this project through the expired contract.

ALTERNATIVES:

Do not approve Resolution 2025-28 and provide alternative direction to staff.

BUDGETED?:

Yes

CONTRACT/AGREEMENT:

Yes

ATTACHMENTS:

1. Resolution 2025-28, Rick Engineering Agreement.docx
2. C01126 Rick Engineering - Design of Ramsey Street Water Main Revised.pdf
3. Resolution 2022-35.pdf
4. Resolution 2023-182.pdf
5. Sole Source Form.pdf
6. Original Agreement - Rick Engineering.pdf

RESOLUTION 2025-28

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BANNING, CALIFORNIA, APPROVING A SOLE SOURCE CONTRACT WITH RICK ENGINEERING, INC. FOR THE CONTINUATION OF THE DESIGN OF RAMSEY STREET WATER MAIN REPLACEMENT IN THE AMOUNT OF $156,224.03

WHEREAS, the City of Banning owns, operates, and maintains water distribution and transmission pipelines that distribute water to residents and businesses. To provide its customers with a reliable supply of water, it is important for the city to continue replacing aging and undersized water distribution infrastructure; and

WHEREAS, on April 12, 2022, City Council approved Resolution 2022-35 authorizing the use of American Rescue Plan Act (ARPA) funds on certain eligible projects including making the necessary investments in water infrastructure. The approved ARPA project list included the replacement of waterlines along Ramsey Street; and

WHEREAS, on November 14, 2023, City Council approved Resolution 2023-182 approving a Professional Services Agreement for the Design of Ramsey Street Water Main Replacement to Rick Engineering, Inc., in the amount of $399,540 with an expiration date of June 30, 2024, and maximum term and subsequent amendments not to exceed five (5) years; and

WHEREAS, the previous Agreement approved under Resolution 2023-182 expired on June 30, 2024 and the City and Rick Engineering, Inc. desire to complete the scope of work as outlined in the original Agreement; and

WHEREAS, the amount of funds remaining in the expired contract is $156,224.03 which will be used to fund the remainder of the unfinished tasks in the previously approved scope of work; and

WHEREAS, due to construction funding challenges for this project, the original Agreement with Rick Engineering, Inc. for the design of Ramsey Street Water Main Replacement called for a three (3) phase design process; and

WHEREAS, the available ARPA funds were only sufficient to cover the construction of the first phase and therefore, it was necessary to prioritize the completion of the design of the first phase. The design work took longer than anticipated due to unforeseen site conditions and design challenges; and

WHEREAS, staff recommend awarding a new Professional Services Agreement to Rick Engineering, Inc. in the amount of $156,224.03 to complete the outstanding design phases in a manner that meets all project specifications and regulatory requirements; and

WHEREAS, no fiscal impact is expected since the requested amount of $156,224.03 had previously been allocated to this project through the expired contract.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Banning as follows:

SECTION 1. The City Council approves a Sole Source Professional Services Agreement with Rick Engineering, Inc. in the amount of $156,224.03 for the continued Design of Ramsey Street Water Main Replacement Project.

SECTION 2. The City Council authorizes the City Manager to make non-substantive changes to the Professional Services Agreement and to execute the Professional Services Agreement with Rick Engineering, Inc. on behalf of the City Council.

SECTION 3. The City Council authorizes the City Manager, or designee, to make necessary budget adjustments, appropriations, and transfers related to this resolution.

SECTION 4. The City Clerk shall certify to the adoption of this resolution and shall cause a certified resolution to be filed in the book of original resolutions.

PASSED, APPROVED AND ADOPTED this 25th day of February, 2025.

Sheri Flynn, Mayor
City of Banning

ATTEST:

Caroline Patton, Administrative City Clerk
City of Banning

APPROVED AS TO FORM:

John Pinkney, City Attorney
Slovak, Baron, Empey, Murphy & Pinkney, LLP

CERTIFICATION:

I, Caroline Patton, Administrative City Clerk of the City of Banning, California, do hereby certify that the foregoing Resolution 2025-28, was duly adopted by the City Council of the City of Banning, California, at a regular meeting thereof held on the 25th day of February, 2025 by the following vote, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

Caroline Patton, Administrative City Clerk
City of Banning, California

EXHIBIT A
Professional Services Agreement with Rick Engineering, Inc.

AGREEMENT FOR PROFESSIONAL SERVICES (C01126) FOR DESIGN OF RAMSEY STREET WATER MAIN BY AND BETWEEN CITY OF BANNING AND GLENN A. RICK ENGINEERING & DEVELOPMENT CO., DBA RICK ENGINEERING COMPANY

THIS AGREEMENT FOR PROFESSIONAL SERVICES (herein "Agreement") is made and entered into this day: _____, ("Effective Date") by and between the **CITY OF BANNING,** a California municipal corporation ("City") and Glenn A. Rick Engineering & Development Co., a California Corporation, dba Rick Engineering Company. ("Consultant"). City and Consultant are sometimes hereinafter individually referred to as "Party" and hereinafter collectively referred to as the "Parties."

RECITALS

A. City has sought by issuance of a Request for Proposals (RFP No. 23-036) from the bench of prequalified Engineers (RFQ-22-007), the performance of the services for the Design of Ramsey Street Water Main and as further defined and described particularly in Article 1 of this Agreement.

B. Consultant, following submission of a proposal for the performance of the services defined and described particularly in Article 1 of this Agreement, was selected by City to perform those services.

C. The Parties desire to formalize the selection of Consultant for performance of those services defined and described particularly in Article 1 of this Agreement and desire that the terms of that performance be as particularly defined and described herein.

D. Pursuant to the City of Banning's Municipal Code, City has authority to enter into this Agreement.

NOW, THEREFORE, in consideration of the mutual promises and covenants made by the Parties and contained herein and other consideration, the value and adequacy of which are hereby acknowledged, the Parties agree as follows:

ARTICLE 1. SERVICES OF CONSULTANT

1.1 Scope of Services.

In compliance with all terms and conditions of this Agreement, Consultant shall provide those services specified in the "Scope of Services" attached hereto as **Exhibit A** and incorporated herein by this reference, which services may be referred to herein as the "Services" hereunder. As a material inducement to City entering into this Agreement, Consultant represents and warrants that it has the qualifications, experience, and facilities necessary to properly perform the Services required under this Agreement in a thorough, competent, and professional manner, and is experienced in performing the Services contemplated herein. Consultant shall at all times faithfully, competently and to the best of its ability, experience and talent, perform all Services described herein. Consultant covenants that it shall follow the highest professional standards in

performing the Services required hereunder and that all materials will be of good quality, and fit for the purpose intended. For purposes of this Agreement, the phrase "highest professional standards" shall mean those standards of practice recognized by one or more first-class firms performing similar work under similar circumstances. This Agreement calls for services that, in whole or in part, constitute "public works" as defined in the California Labor Code. Therefore, as to those services that are "public works," Consultant shall comply in all respects with all applicable provisions of the California Labor Code, including those set forth in Exhibit B hereto.

1.2 Contract Documents and Exhibits.

This Agreement includes the Request for Proposal and Consultant's accepted proposal ("Contract Documents"), both of which are on file with the City and incorporated herein by this general reference as though fully set forth herein. **Exhibit A** (Scope of Services), **Exhibit B** (Special Requirements), **Exhibit C** (Schedule of Compensation), and **Exhibit D** (Schedule of Performance) also constitute a part of this Agreement and are incorporated into this Agreement by this reference. Except as set forth in Section 1.10 regarding **Exhibit B**, this Agreement controls over the Contract Documents and the provisions in **Exhibits A, B** and **C**.

1.3 Compliance with Law.

Consultant shall keep itself informed concerning all ordinances, resolutions, statutes, rules, and regulations of City and any Federal, State or local governmental entity having jurisdiction in effect at the time service is rendered, and shall render all Services hereunder in accordance therewith.

1.4 Licenses, Permits, Fees and Assessments.

Consultant shall obtain and maintain during the term of this Agreement, at its sole cost and expense, all necessary licenses, permits, certificates and approvals required by law for the performance of Services under this Agreement, including a City business license. Consultant shall have the sole obligation to pay for all fees, assessments and taxes, plus applicable penalties and interest, which may be imposed by law and which arise from or are necessary for Consultant's performance of the Services required by this Agreement. Consultant shall indemnify, defend and hold harmless City, its officers, employees or agents, against all such fees, assessments, taxes, penalties or interest levied, assessed or imposed against City hereunder.

1.5 Familiarity with Services.

By executing this Agreement, Consultant warrants that Consultant: (i) has thoroughly investigated and considered the Scope of Services to be performed, (ii) has carefully considered how the Services should be performed, and (iii) fully understands the facilities and any difficulties and restrictions attending performance of the Services under this Agreement. If the Services involve work upon any site, Consultant warrants that Consultant has or will investigate the site and is or will be fully acquainted with the conditions existing therein, prior to commencement of Services hereunder. Should Consultant discover any latent or unknown conditions, which will materially affect the performance of the Services hereunder, Consultant shall immediately inform City of such fact and shall not proceed except at Consultant's risk until written instructions are received from the Contract Officer (defined in Section 1.12. A).

1.6 Prevention of Loss and Damages.

Consultant shall adopt reasonable methods during the Term (defined in Section 3.4) to furnish continuous protection to the work product, and the equipment, materials, papers, documents, plans, studies and/or other components thereof to prevent losses or damages, and shall be responsible for all such damages, to persons or property, until acceptance of the Services by City, except such losses or damages as may be caused by City's own negligence.

1.7 Further Responsibilities of Parties.

Both Parties agree to use reasonable care and diligence to perform their respective obligations under this Agreement. Both Parties agree to act in good faith to execute all instruments, prepare all documents and take all actions as may be reasonable necessary to carry out the purposes of this Agreement. Unless hereafter specified, neither Party shall be responsible to perform the Services of the other.

1.8 Additional Services.

City shall have the right at any time during the performance of the Services, without invalidating this Agreement, to order extra services beyond that specified in the Scope of Services or to make changes by altering, adding to or deducting from the Services. No such extra services may be undertaken unless a written order is first given by the Contract Officer to Consultant, which written order incorporates therein an adjustment in (i) the Contract Sum (as defined in Section 2.1), and/or (ii) the Schedule of Performance, (as defined in Section 3.2), and which written order is approved in writing by Consultant. Any increase in compensation of up to ten percent (10%) of the Contract Sum, or $25,000, whichever is less; or in the Schedule of Performance of up to one hundred eighty (180) days may be approved by the Contract Officer. Any greater increases, taken either separately or cumulatively, must be approved by City Council. It is expressly understood by Consultant that the provisions of this Section shall not apply to Services which are specifically set forth in the Scope of Services or which are reasonably contemplated therein. Consultant hereby acknowledges that it accepts the risk that the Services to be provided pursuant to the Scope of Services may be more costly or time consuming than Consultant anticipates and that Consultant shall not be entitled to additional compensation therefor.

1.9 Facilities and Equipment.

Except as otherwise provided, Consultant shall, at its own cost and expense, provide all facilities and equipment necessary to perform the Services required by this Agreement. City shall make available to Consultant only physical facilities such as desks, filing cabinets, and conference space ("City Facilities"), as City deems, in its sole discretion, to be reasonably necessary for Consultant's use while consulting with City employees and reviewing records and the information in possession of City. The location, quality, and time of furnishing City Facilities shall be in the sole discretion of City. In no event shall City be required to furnish any facilities that may involve incurring any direct expense, including but not limited to a computer, long distance telephone, network data, internet or other communication charges, vehicles and reproduction facilities.

1.10 Special Requirements.

Additional terms and conditions of this Agreement, if any, which are made a part hereof are set forth in the "Special Requirements" attached hereto as **Exhibit B** and incorporated herein by this reference. In the event of a conflict between the provisions of **Exhibit B** and any other provisions of this Agreement, the provisions of **Exhibit B** shall govern.

1.11 Corrections.

In addition to the indemnification obligations set forth in Article 4, and Sections 1.4, 1.13, 5.3, 5.4, and 6.3, Consultant shall correct, at its expense, all errors in the Services which may be disclosed during City's review of Consultant's report or plans. Should Consultant fail to make such correction(s) in a reasonably timely manner, such correction(s) may be made by City, and the cost thereof shall be charged to Consultant. In addition to all other available remedies, City may deduct the cost of such correction(s) from any retention amount held by City, or may withhold payment otherwise owed Consultant under this Agreement up to the amount of the cost of correction(s), as provided in Section 6.3.

1.12 Party Representatives.

A. Contract Officer: For the purposes of this Agreement, the Contract Officer shall be the City Manager, or such other person designated in writing by the City Manager ("Contract Officer"). Unless otherwise specified herein, any approval of City required hereunder shall mean the approval of the Contract Officer. The Contract Officer shall have authority, if specified in writing by the City Manager, to sign all documents on behalf of City required hereunder to carry out the terms of this Agreement.

B. Principals and Personnel of Consultant.

1) Consultant Representative: The following principal of Consultant is hereby designated as being the Consultant Representative authorized to act on Consultant's behalf regarding the Services specified herein and make all decisions in connection therewith:

Name	Title
Richard O'Neill	Associate Principal

It is expressly understood that the experience, knowledge, capability and reputation of the foregoing Consultant Representative were a substantial inducement for City to enter into this Agreement. Therefore, the foregoing Consultant Representative shall be responsible during the term of this Agreement for directing all activities of Consultant and devoting sufficient time to personally supervise the Services hereunder. All personnel of Consultant, and any authorized agents, shall at all times be under the exclusive direction and control of the Consultant Representative. For purposes of this Agreement, the foregoing Consultant Representative may not be replaced nor may their responsibilities be substantially reduced or reassigned by Consultant without the express written approval of City. It shall be Consultant's responsibility to assure that the Contract Officer is kept informed of the progress of the performance of the Services, and Consultant shall refer any decisions which must be made by City to the Contract Officer.

2) Consultant's Personnel: Consultant has, or will secure at its own expense, all personnel required to perform the Services required under this Agreement. All of the Services required under this Agreement shall be performed by Consultant or under its supervision, and all personnel engaged in the Services shall be qualified to perform such Services. Consultant shall make every reasonable effort to maintain the stability and continuity of Consultant's staff and sub-contractors, if any, assigned to perform the Services required under this Agreement. Consultant shall notify City of all changes in Consultant's staff and sub-contractors, if any, assigned to perform the Services required under this Agreement, prior to and during any such performance. In the event that City, in its sole discretion, at any time during the term of this Agreement, desires to reassign any staff or sub-contractor of Consultant, City shall give notice as set forth in Section 8.1. Consultant shall, immediately upon the receipt of the notice to re-assign staff from City, reassign such person or persons.

1.13 Independent Contractor.

A. Consultant is an independent contractor and not an employee of City. Consultant shall have no power to incur any debt, obligation, or liability on behalf of City. All Services provided pursuant to this Agreement shall be performed by Consultant or under its supervision. Consultant will determine the means, methods, and details of performing the Services. Any additional personnel performing Services under this Agreement on behalf of Consultant shall also not be employees of City and shall at all times be under Consultant's exclusive direction and control. Consultant shall pay all wages, salaries, and other amounts due such personnel in connection with their performance of Services under this Agreement and as required by law. Consultant shall be responsible for all reports and obligations respecting such additional personnel, including, but not limited to: social security taxes, income tax withholding, unemployment insurance, disability insurance, and workers' compensation insurance.

B. Consultant shall indemnify and hold harmless City and its elected officials, officers, employees, servants, designated volunteers, and agents serving as independent contractors in the role of City officials, from any and all liability, damages, claims, costs and expenses of any nature to the extent arising from Consultant's personnel practices. City shall have the right to offset against the amount of any fees due to Consultant under this Agreement any amount due to City from Consultant as a result of Consultant's failure to promptly pay to City any reimbursement or indemnification arising under this Section.

1.14 Prohibition Against Subcontracting or Assignment.

The experience, knowledge, capability and reputation of Consultant, the Consultant Representative and employees were a substantial inducement for City to enter into this Agreement. Therefore, Consultant shall not contract with any other entity to perform in whole or in part the Services required hereunder without the express written approval of City. In addition, neither this Agreement nor any interest herein may be transferred, assigned, conveyed, hypothecated or encumbered voluntarily or by operation of law, whether for the benefit of creditors or otherwise, without the prior written approval of City. Transfers restricted hereunder shall include the transfer to any person or group of persons acting in concert of more than twenty-five percent (25%) of the present ownership and/or control of Consultant, taking all transfers into account on a cumulative basis. In the event of any such unapproved transfer, including any bankruptcy proceeding, this

Agreement shall be void. No approved transfer shall release Consultant or any surety of Consultant of any liability hereunder without the express consent of City.

ARTICLE 2. COMPENSATION AND METHOD OF PAYMENT.

2.1 Contract Sum.

Subject to any limitations set forth in this Agreement, as full compensation for Services satisfactorily rendered, City shall pay Consultant at the hourly rates set forth in **Exhibit C-1** and the not-to-exceed sub-budget rates set forth in the "Schedule of Compensation" attached hereto as **Exhibit C** and incorporated herein by this reference. In no event shall Consultant be paid more than One Hundred Fifty-Six Thousand Two Hundred Twenty-Four Dollars and Three Cents ($156,224.03) (the "Contract Sum"). The Contract Sum shall include the attendance of Consultant at all project meetings reasonably deemed necessary by City. Coordination of the performance of the Services with City is a critical component of the Services. If Consultant is required to attend additional meetings to facilitate such coordination, Consultant shall not be entitled to any additional compensation for attending those meetings.

2.2 Method of Compensation.

The method of compensation may include: (i) a lump sum payment upon completion of the Services, (ii) payment in accordance with specified tasks or the percentage of completion of the Services, (iii) payment for time and materials based upon Consultant's rates as specified in the Schedule of Compensation, provided that time estimates are provided for the performance of sub tasks, but not exceeding the Contract Sum or (iv) such other methods as may be specified in the Schedule of Compensation.

2.3 Reimbursable Expenses.

City shall only reimburse Consultant for those actual and necessary expenses expressly set forth in **Exhibit C**. Reimbursable expenses may include reimbursement for actual and necessary expenditures for reproduction costs, telephone expenses, and travel expenses approved by the Contract Officer in advance, or actual sub-contractor expenses of an approved sub-contractor pursuant to Section 1.14, and only if specified in the Schedule of Compensation.

2.4 Unauthorized Services and Expenses.

City will not pay for any Services or reimburse for any expenses incurred which are not specified in the Scope of Services, unless authorized in writing as set forth in Section 1.8 of this Agreement. City shall make payment for such authorized additional Services and expenses in accordance with Article 2 of this Agreement.

2.5 Invoices.

Each month Consultant shall furnish to City an original invoice for all Services performed and expenses incurred during the preceding month. Each such invoice shall contain all of the information set forth in Section III of **Exhibit C** to this Agreement. By submitting an invoice for payment under this Agreement, Consultant is certifying compliance with all provisions of the

Agreement. Consultant shall not invoice City for any duplicate Services performed by more than one person.

City shall independently review each invoice submitted by Consultant to determine whether the Services performed and expenses incurred are in compliance with the provisions of this Agreement. City will use its best efforts to cause Consultant to be paid within thirty (30) days of receipt of Consultant's correct and undisputed invoice, except as to any charges for Services performed or expenses incurred by Consultant which are disputed by City, or as provided in Section 6.3. In the event any charges or expenses are disputed by City, the original invoice shall be returned by City to Consultant for correction and resubmission. Review and payment by City of any invoice provided by Consultant shall not constitute waiver of any rights or remedies provided herein or any applicable law.

2.6 Waiver.

Payment to Consultant for Services performed pursuant to this Agreement shall not be deemed to waive any defects in Services performed by Consultant.

ARTICLE 3. PERFORMANCE SCHEDULE

3.1 Time of Essence.

Time is of the essence in the performance of this Agreement; provided, however, that the foregoing shall not be construed to limit or deprive a Party of the benefits of any grace or use period allowed in this Agreement.

3.2 Schedule of Performance.

Consultant shall commence the Services pursuant to this Agreement upon receipt of a written notice to proceed and shall perform all Services within the time period(s) established in the "Schedule of Performance" attached hereto as **Exhibit D** and incorporated herein by this reference.

3.3 Force Majeure.

The time period(s) specified in the Schedule of Performance for performance of the Services rendered pursuant to this Agreement may be extended because of any delays due to unforeseeable causes beyond the control and without the fault or negligence of Consultant. Such unforeseeable consequences include, but are not restricted to, acts of God or public enemy, unusually severe weather, fires, earthquakes, floods, epidemics, quarantine restrictions, riots, strikes, freight embargoes, wars, litigation, and/or acts of any governmental agency, including City, if Consultant shall within ten (10) days of the commencement of such delay notify the Contract Officer in writing of the causes of the delay. The Contract Officer shall ascertain the facts and the extent of delay, and extend the time for performing the Services for the period of the enforced delay when and if in the judgment of the Contract Officer such delay is justified, subject to the provisions of Section 1.8. The Contract Officer's determination (or the City Council's determination, in the event the period of enforced delay exceeds the period specified in Section 1.8) shall be final and conclusive upon the Parties to this Agreement. In no event shall Consultant

be entitled to recover damages against City for any delay in the performance of this Agreement, however caused; Consultant's sole remedy shall be the extension of the Agreement pursuant to this Section.

3.4 Term.

The Term of this Agreement shall be from the Effective Date through June 30, 2026, unless sooner terminated as provided in Article 6 of this Agreement or extended as provided in Sections 1.8 and 3.3 of this Agreement. Maximum term and any subsequent amendment or modification shall not exceed five (5) years.

ARTICLE 4. INSURANCE AND INDEMNIFICATION

4.1 Minimum Scope and Limits of Insurance.

Consultant shall procure and at all times during the term of this Agreement carry, maintain, and keep in full force and effect, insurance as follows:

A. Commercial General Liability Insurance with a minimum limit of $1,000,000.00 per occurrence for bodily injury, personal injury and property damage and a general aggregate limit of $2,000,000.00 per project or location. If Consultant is a limited liability company, the commercial general liability coverage shall be amended so that Consultant and its managers, members, affiliates, employees, agents and other persons necessary or incidental to its operation are insureds.

B. Automobile Liability Insurance for any owned, non-owned or hired vehicle used in connection with the performance of this Agreement with a combined single limit of $1,000,000.00 per accident for bodily injury and property damage. If Consultant does not use any owned, non-owned or hired vehicles in the performance of Services under this Agreement, Consultant shall obtain a non-owned auto endorsement to the Commercial General Liability policy.

C. Workers' Compensation Insurance as required by the State of California and Employer's Liability Insurance with a minimum limit of $1,000,000.00 per accident for bodily injury or disease. If Consultant has no employees while performing Services under this Agreement, workers' compensation policy is not required; however, Consultant shall execute a declaration that it has no employees.

D. Professional Liability/Errors and Omissions Insurance with minimum limits of $1,000,000.00 per claim and in the aggregate.

4.2 Acceptability of Insurers.

The insurance policies required under this Article shall be issued by an insurer admitted to write insurance in the State of California with a rating of A:VII or better in the latest

edition of the A.M. Best Insurance Rating Guide. Self-insurance shall not be considered to comply with the insurance requirements under this Article.

4.3 Additional Insured.

The commercial general and automobile liability policies shall contain an endorsement naming City, its officers, employees, agents and volunteers as additional insureds.

4.4 Primary and Non-Contributing.

The insurance policies required under this Article shall apply on a primary non-contributing basis in relation to any other insurance or self-insurance available to City. Any insurance or self-insurance maintained by City, its officers, employees, agents or volunteers, shall be in excess of Consultant's insurance and shall not contribute with it.

4.5 Consultant's Waiver of Subrogation.

The insurance policies required under this Article shall not prohibit Consultant and Consultant's employees, agents or sub-contractors from waiving the right of subrogation prior to a loss. Consultant hereby waives all rights of subrogation against City.

4.6 Deductibles and Self-Insured Retentions.

Any deductibles or self-insured retentions must be declared to and approved by City. At City's option, Consultant shall either reduce or eliminate the deductibles or self-insured retentions with respect to City; or Consultant shall procure a bond guaranteeing payment of losses and expenses.

4.7 Cancellations or Modifications to Coverage.

Consultant shall not cancel, reduce or otherwise modify the insurance policies required by this Article during the term of this Agreement. The commercial general and automobile liability policies required under this Agreement shall be endorsed to state that should the issuing insurer cancel the policy before the expiration date, the issuing insurer will endeavor to mail 30 days' prior written notice to City. If any insurance policy required under this Article is canceled or reduced in coverage or limits, Consultant shall, within two (2) Business Days (as defined in Section 8.12) of notice from the insurer, phone, fax or notify City via certified mail, return receipt requested, of the cancellation of or changes to the policy.

4.8 City Remedy for Noncompliance.

If Consultant does not maintain the policies of insurance required under this Article in full force and effect during the term of this Agreement, or in the event any of Consultant's policies do not comply with the requirements under this Article, City may either immediately terminate this Agreement or, if insurance is available at a reasonable cost, City may, but has no duty to, take out the necessary insurance and pay, at Consultant's expense, the premium thereon. Consultant shall promptly reimburse City for any premium paid by City, or City may withhold amounts sufficient to pay the premiums from payments due to Consultant.

4.9 Evidence of Insurance.

Prior to the performance of Services under this Agreement, Consultant shall furnish the City Clerk with a certificate or certificates of insurance and all original endorsements evidencing and effecting the coverages required under this Article. The endorsements are subject to City's approval. Consultant may provide complete, certified copies of all required insurance policies to City. Consultant shall maintain current endorsements on file with the City Clerk. Consultant shall provide proof to the City Clerk that insurance policies expiring during the term of this Agreement have been renewed or replaced with other policies providing at least the same coverage. Consultant shall furnish such proof at least two (2) weeks prior to the expiration of the coverages.

4.10 Indemnity Requirements not Limiting.

Procurement of insurance by Consultant shall not be construed as a limitation of Consultant's liability or as full performance of Consultant's duty to indemnify City under this Agreement.

4.11 Sub-contractor Insurance Requirements.

Consultant shall require each of its sub-contractors that perform Services under this Agreement to maintain insurance coverage that meets all of the requirements of this Article.

4.12 Indemnification, Hold Harmless, and Duty to Defend.

A. Indemnification of City.

1) Indemnity for Design Professional Services. To the fullest extent permitted by law, Consultant shall, at its sole cost and expense, protect, indemnify, and hold harmless City and its elected officials, officers, attorneys, agents, employees, designated volunteers, successors, assigns and those City agents serving as independent contractors in the role of City officials (collectively "Indemnitees"), from and against any and all damages, costs, expenses, liabilities, claims, demands, causes of action, proceedings, judgments, penalties, liens, and losses of any nature whatsoever, including fees of accountants, attorneys, or other professionals and all costs associated therewith, and reimbursement of attorney's fees and costs of defense (collectively "Liabilities"), whether actual, alleged or threatened, which arise out of, are claimed to arise out of, pertain to, or relate to, in whole or in part, the negligence, recklessness or willful misconduct of Consultant, its officers, agents, servants, employees, subcontractors, material men, contractors or their officers, agents, servants or employees (or any entity or individual that Consultant shall bear the legal liability thereof) in the performance of design professional services under this Agreement by a "design professional," as the term is defined under California Civil Code Section 2782.8(c).

2) Other Indemnities. Other than in the performance of design professional services, and to the fullest extent permitted by law, Consultant shall, at its sole cost and expense, defend, hold harmless and indemnify Indemnitees from and against any and all damages, costs, expenses, liabilities, claims, demands, causes of action, proceedings, expenses, judgments, penalties, liens, and losses of any nature whatsoever, including fees of accountants, attorneys, or other professionals and all costs associated therewith and the payment of all consequential

damages (collectively "Claims"), at law or in equity, whether actual, alleged or threatened, which arise out of, are claimed to arise out of, pertain to, or relate to the acts or omissions of Consultant, its officers, agents, servants, employees, sub-contractors, materialmen, consultants or their officers, agents, servants or employees (or any entity or individual that Consultant shall bear the legal liability thereof) in the performance of this Agreement, including the Indemnitees' active or passive negligence, except for Claims arising from the sole negligence or willful misconduct of the Indemnitees as determined by court decision or by the agreement of the Parties. Consultant shall defend the Indemnitees in any action or actions filed in connection with any Claims with counsel of the Indemnitees' choice, and shall pay all costs and expenses, including all attorneys' fees and experts' costs actually incurred in connection with such defense. Consultant shall reimburse the Indemnitees for any and all legal expenses and costs incurred by Indemnitees in connection therewith.

3) Consultant shall pay all required taxes on amounts paid to Consultant under this Agreement, and indemnify and hold City harmless from any and all taxes, assessments, penalties, and interest asserted against City by reason of the independent contractor relationship created by this Agreement. Consultant shall fully comply with the workers' compensation law regarding Consultant and Consultant's employees. Consultant shall indemnify and hold City harmless from any failure of Consultant to comply with applicable workers' compensation laws. City may offset against the amount of any fees due to Consultant under this Agreement any amount due to City from Consultant as a result of Consultant's failure to promptly pay to City any reimbursement or indemnification arising under this subparagraph A.3.

4) Consultant shall obtain executed indemnity agreements with provisions identical to those in this Article from each and every sub-contractor or any other person or entity involved by, for, with or on behalf of Consultant in the performance of this Agreement. If Consultant fails to obtain such indemnities, Consultant shall be fully responsible and indemnify, hold harmless and defend the Indemnitees from and against any and all Liabilities and Claims, in law or in equity, whether actual, alleged or threatened, which arise out of, are claimed to arise out of, pertain to, or relate to the acts or omissions of Consultant's sub-contractor, its officers, agents, servants, employees, sub-contractors, materialmen, contractors or their officers, agents, servants or employees (or any entity or individual that Consultant's sub-contractor shall bear the legal liability thereof) in the performance of this Agreement, including the Indemnitees' active or passive negligence, except for Liabilities and Claims arising from the sole negligence or willful misconduct of the Indemnitees, as determined by court decision or by the agreement of the Parties.

B. Workers' Compensation Acts not Limiting. Consultant's indemnifications and obligations under this Article, or any other provision of this Agreement, shall not be limited by the provisions of any workers' compensation act or similar act. Consultant expressly waives its statutory immunity under such statutes or laws as to City, its officers, agents, employees and volunteers.

C. Insurance Requirements not Limiting. City does not, and shall not, waive any rights that it may possess against Consultant because of the acceptance by City, or the deposit with City, of any insurance policy or certificate required pursuant to this Agreement. The indemnities in this Article shall apply regardless of whether or not any insurance policies are determined to be applicable to the Liabilities, tax, assessment, penalty or interest asserted against City.

D. Survival of Terms. Consultant's indemnifications and obligations under this Article shall survive the expiration or termination of this Agreement.

ARTICLE 5. RECORDS, REPORTS, AND RELEASE OF INFORMATION

5.1 Service Records.

Consultant shall keep, and require sub-contractors to keep, such ledgers, books of accounts, invoices, vouchers, canceled checks, reports, studies or other documents relating to the disbursements charged to City and Services performed hereunder (the "Service Records"), as shall be necessary to perform the Services required by this Agreement and enable the Contract Officer to evaluate the performance of such Services. Any and all such Service Records shall be maintained in accordance with generally accepted accounting principles and shall be complete and detailed. The Contract Officer shall have full and free access to such Service Records at all times during normal business hours of City, including the right to inspect, copy, audit and make copies and transcripts from such Service Records. Such Service Records shall be maintained for a period of three (3) years following completion of the Services hereunder, and City shall have access to such Service Records in the event any audit is required. In the event of dissolution of Consultant's business, custody of the Service Records may be given to City, and access shall be provided by Consultant's successor in interest ("Consultant's Successor"). If custody of the Service Records is given to Consultant's Successor, Consultant shall give written notice to City of the transfer of the Service Records to Consultant's Successor. The notice shall include contact information (address and telephone number) for Consultant's Successor, and access shall be provided to City by Consultant's Successor.

5.2 Reports.

Consultant shall periodically prepare and submit to the Contract Officer such reports concerning the performance of the Services required by this Agreement as the Contract Officer shall require. Consultant hereby acknowledges that City is greatly concerned about the cost of Services to be performed pursuant to this Agreement. For this reason, Consultant agrees that if Consultant becomes aware of any facts, circumstances, techniques, or events that may or will materially increase or decrease the cost of the Services contemplated herein, Consultant shall promptly notify the Contract Officer of that fact, circumstance, technique or event and the estimated increased or decreased cost related thereto.

5.3 Ownership of Documents.

All drawings, specifications, maps, designs, photographs, studies, surveys, data, notes, computer files, reports, records, documents and other materials (the "Consultant Documents") prepared by Consultant, its employees, sub-contractors and agents in the performance of this Agreement shall be the property of City and shall be delivered to City upon request of the Contract Officer or upon the termination of this Agreement. Consultant shall have no claim for further employment or additional compensation as a result of the exercise by City of its full rights of ownership use, reuse, or assignment of the Consultant Documents hereunder. Any use, reuse or assignment of such completed Consultant Documents for other projects and/or use of uncompleted Consultant Documents without specific written authorization by Consultant will be at City's sole

risk and without liability to Consultant, and Consultant's guarantee and warranties shall not extend to such use or assignment. Consultant may retain copies of such Consultant Documents for its own use. Consultant shall have an unrestricted right to use the concepts embodied therein. All sub-contractors shall provide for assignment to City of all Consultant Documents prepared by them; and in the event Consultant fails to secure such assignment, Consultant shall indemnify City for all damages resulting therefrom.

5.4 Confidentiality and Release of Information.

A. All information gained or work product produced by Consultant in performance of this Agreement shall be considered confidential, unless such information is in the public domain or already known to Consultant. Consultant shall not release or disclose any such information or work product to persons or entities other than City without prior written authorization from the Contract Officer.

B. Consultant, its officers, employees, agents or sub-contractors, shall not, without prior written authorization from the Contract Officer or unless requested by the City Attorney, voluntarily provide documents, declarations, letters of support, testimony at depositions, response to interrogatories or other information concerning the Services performed under this Agreement. Response to a subpoena or court order shall not be considered "voluntary" provided Consultant gives City notice of such court order or subpoena.

C. If Consultant, or any officer, employee, agent or sub-contractor of Consultant, provides any information or work product in violation of this Agreement, then City shall have the right to reimbursement and indemnity from Consultant for any damages, costs and fees, including attorneys' fees, caused by or incurred as a result of Consultant's conduct.

D. Consultant shall promptly notify City should Consultant, its officers, employees, agents or sub-contractors be served with any summons, complaint, subpoena, notice of deposition, request for documents, interrogatories, request for admissions or other discovery request, court order or subpoena from any Party regarding this Agreement and the Services performed thereunder. City retains the right, but has no obligation, to represent Consultant or be present at any deposition, hearing or similar proceeding. Consultant agrees to cooperate fully with City and to provide City with the opportunity to review any response to discovery requests provided by Consultant. However, this right to review any such response does not imply or mean the right by City to control, direct, or rewrite the response.

ARTICLE 6. ENFORCEMENT OF AGREEMENT AND TERMINATION

6.1 California Law.

This Agreement, and any dispute arising from the relationship between the Parties to this Agreement, shall be interpreted, construed and governed both as to validity and to performance of the Parties in accordance with the laws of the State of California. Legal actions concerning any dispute, claim or matter arising out of or in relation to this Agreement shall be instituted in the Superior Court of the County of Riverside, State of California, or any other appropriate court in such county, and Consultant covenants and agrees to submit to the personal jurisdiction of such

court in the event of such action. In the event of litigation in a U.S. District Court, venue shall lie exclusively in the Central District of California, in Riverside.

6.2 Disputes; Default.

A. In the event that City determines Consultant is in default under the terms of this Agreement, City shall have no obligation or duty to continue compensating Consultant for any Services performed after the date of default. In addition to the provisions of Section 4.8, and the right to terminate pursuant to Section 6.7, if the City Manager determines that Consultant is in default in the performance of any of the terms or conditions of this Agreement, City may serve Consultant with written notice of the default. Consultant shall have ten (10) calendar days after service upon it of the notice in which to cure the default by rendering a satisfactory performance. In the event that Consultant fails to cure its default within such period of time, City may, notwithstanding any other provision of this Agreement, terminate this Agreement without further notice and without prejudice to any other remedy to which it may be entitled at law, in equity or under this Agreement.

B. In the event of termination pursuant to this Section, City may take over the Services and prosecute the same to completion by contract or otherwise, and Consultant shall be liable to the extent that the total cost for completion of the Services required hereunder exceeds the compensation herein stipulated (provided that City shall use reasonable efforts to mitigate such damages), and City may withhold any payments to Consultant for the purpose of set-off or partial payment of the amounts owed City as provided in Section 6.3.

6.3 Retention of Funds.

Consultant hereby authorizes City to deduct from any amount payable to Consultant (whether or not arising out of this Agreement): (i) any payment amount of which may be in dispute hereunder or which is necessary to compensate City for any losses, costs, liabilities, or damages suffered by City, (ii) all amounts retained pursuant to the provisions of Section 4.8, (iii) all amounts for which City may be liable to third parties, by reason of Consultant's acts or omissions in performing or failing to perform Consultant's obligation under this Agreement, and (iv) all payments due or that become due to Consultant during the period that Consultant or any of its sub-contractors fail to maintain any required insurance in full force and effect, until notice is received by City that the required insurance has been restored to full force and effect and that the premiums therefore have been paid for a period satisfactory to City, as provided in Section 4.9, above. In the event that any claim is made by a third party, the amount or validity of which is disputed by Consultant, or any indebtedness shall exist which shall appear to be the basis for a claim of lien, City may withhold from any payment due, without liability for interest because of such withholding, an amount sufficient to cover such claim. The failure of City to exercise such right to deduct or to withhold shall not, however, affect the obligations of Consultant to insure, indemnify, and protect City as elsewhere provided herein.

6.4 Waiver.

Waiver by any Party to this Agreement of any term, condition, or covenant of this Agreement shall not constitute a waiver of any other term, condition, or covenant. Waiver by any

Party of any breach of the provisions of this Agreement shall not constitute a waiver of any other provision or a waiver of any subsequent breach or violation of any provision of this Agreement. Acceptance by City of any Services by Consultant shall not constitute a waiver of any of the provisions of this Agreement. No delay or omission in the exercise of any right or remedy by a non-defaulting Party on any default shall impair such right or remedy or be construed as a waiver. Any waiver by either Party of any default must be in writing, and shall not be a waiver of any other default concerning the same or any other provision of this Agreement.

6.5 Rights and Remedies are Cumulative.

Except with respect to rights and remedies expressly declared to be exclusive in this Agreement, the rights and remedies of the Parties are cumulative and the exercise by either Party of one or more of such rights or remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default or any other default by the other Party.

6.6 Legal Action.

In addition to any other rights or remedies, either Party may take legal action, in law or in equity, to cure, correct or remedy any default, to recover damages for any default, to compel specific performance of this Agreement, to obtain declaratory or injunctive relief, or to obtain any other remedy consistent with the purposes of this Agreement. Notwithstanding any contrary provision herein, Consultant must file a statutory claim pursuant to Government Code Sections 905 et seq. and 910 et seq., in order to pursue a legal action against City under this Agreement.

6.7 Termination Prior to Expiration of Term.

This Article 6 shall govern any termination of this Agreement except as specifically provided in Section 6.2 for termination for default of Consultant. City reserves the right to terminate this Agreement at any time, with or without cause, upon thirty (30) days' written notice to Consultant, except that where termination is due to the fault of Consultant, the period of notice may be a shorter time as may be determined by the Contract Officer. In addition, Consultant reserves the right to terminate this Agreement at any time, with or without cause, upon sixty (60) days' written notice to City, except that where termination is due to the fault of City, the period of notice may be a shorter time as Consultant may determine. Upon receipt of any notice of termination, Consultant shall immediately cease all Services hereunder except such as may be specifically approved by the Contract Officer. Except where Consultant has initiated termination, Consultant shall be entitled to compensation for all Services rendered prior to the effective date of the notice of termination and for any Services authorized by the Contract Officer thereafter in accordance with the Schedule of Compensation or such as may be approved by the Contract Officer, except as provided in Section 6.3. In the event Consultant has initiated termination, Consultant shall be entitled to compensation only for the reasonable value of the work product actually produced hereunder. In the event of termination without cause pursuant to this Section, the terminating Party need not provide the non-terminating Party with the opportunity to cure pursuant to Section 6.2.

6.8 Attorneys' Fees.

In any litigation or other proceeding by which a Party seeks to enforce its rights under this Agreement (whether in contract, tort or both) or seeks a declaration of any rights or obligations under this Agreement, the prevailing Party in such action or proceeding, in addition to any other relief which may be granted, whether legal or equitable, shall be entitled to reasonable attorneys' fees. Attorneys' fees shall include attorney's fees on any appeal, and in addition the Party entitled to attorneys' fees shall be entitled to all other reasonable costs for investigating such action, taking depositions and discovery and all other necessary costs the court allows which are incurred in such litigation. All such fees shall be deemed to have accrued on commencement of such action and shall be enforceable whether or not such action is prosecuted to judgment.

ARTICLE 7. CITY OFFICERS AND EMPLOYEES: NON-DISCRIMINATION

7.1 Non-liability of City Officers and Employees.

No officer or employee of City shall be personally liable to Consultant, or Consultant's Successor, in the event of any default or breach by City or for any amount which may become due to Consultant or Consultant's Successor, or for breach of any obligation of the terms of this Agreement.

7.2 Conflict of Interest.

Consultant covenants that neither it, nor any officer or principal of its firm, has or shall acquire any interest, directly or indirectly, which would conflict in any manner with the interests of City or which would in any way hinder Consultant's performance of Services under this Agreement. Consultant further covenants that in the performance of this Agreement, no person having any such interest shall be employed by it as an officer, employee, agent or sub-contractor without the express written consent of the Contract Officer. Consultant agrees to at all times avoid conflicts of interest or the appearance of any conflicts of interest with the interests of City in the performance of this Agreement.

No officer or employee of City shall have any direct or indirect financial interest in this Agreement within the scope of Government Code section 1090, nor shall any such officer or employee make, participate in making, or use his or her official position to influence, any City decision relating to the Agreement which has a material financial effect on his or her financial interests or the financial interests of any corporation, partnership or association in which he or she is, directly or indirectly, interested, in violation of any State statute or regulation. Consultant warrants that it has not paid or given, and will not pay or give any third party any money or other consideration for obtaining this Agreement.

Consultant and its officers, employees, associates and sub-contractors, if any, shall comply with all conflict of interest statutes of the State of California applicable to Consultant's Services under this Agreement, including the Political Reform Act (Gov. Code § 81000, et seq.) and Government Code Section 1090. During the term of this Agreement, Consultant may perform similar services for other clients; but Consultant and its officers, employees, associates and sub-contractors shall not, without the Contract Officer's prior written approval, perform services for another person or entity for whom Consultant is not currently performing services that would

require Consultant or one of its officers, employees, associates or sub-contractors to abstain from a decision under this Agreement pursuant to a conflict of interest statute. Consultant shall incorporate a clause substantially similar to this Section into any subcontract that Consultant executes in connection with the performance of this Agreement.

7.3 Covenant Against Discrimination.

Consultant covenants that, by and for itself, its heirs, executors, assigns, and all persons claiming under or through them, that there shall be no discrimination against or segregation of, any person or group of persons on account of race, color, creed, religion, sex, gender, sexual orientation, marital status, national origin, or ancestry in the performance of this Agreement. Consultant shall take affirmative action to insure that applicants are employed, and that employees are treated during employment, without regard to their race, color, creed, religion, sex, marital status, national origin, or ancestry, or other protected class.

7.4 Unauthorized Aliens.

Consultant hereby promises and agrees to comply with all of the provisions of the Federal Immigration and Nationality Act, 8 U.S.C.A. §§ 1101, et seq., as amended, and in connection therewith, shall not employ unauthorized aliens as defined therein. Should Consultant so employ such unauthorized aliens for the performance of Services covered by this Agreement, and should the any liability or sanctions be imposed against City for such use of unauthorized aliens, Consultant hereby agrees to and shall reimburse City for the cost of all such liabilities or sanctions imposed, together with any and all costs, including attorneys' fees, incurred by City.

ARTICLE 8. MISCELLANEOUS PROVISIONS

8.1 Notices.

Any notice, demand, request, document, consent, approval, bill, invoice, report or other communication required or permitted under this Agreement shall be in writing and conclusively deemed effective: (a) on confirmed delivery by courier service or overnight delivery service during Consultant's and City's regular business hours; or (b) three (3) Business Days after deposit in the United States mail, by certified or registered mail, and addressed to the Party to be notified as set forth below:

If to City

Attn: Nathan Smith
Deputy Director of Engineering
City of Banning
99 East Ramsey Street
Banning, California 92220
Email: nsmith@banningca.gov

With a courtesy copy to:	Serita R. Young, City Attorney Richards, Watson & Gershon 350 South Grand Avenue, 37th Floor Los Angeles, California 90071 Email: SYoung@rwglaw.com
If to Consultant:	Attn: Rick O'Neill Rick Engineering Company 1770 Iowa Avenue, Suite 100 Riverside, CA 92507

8.2 Interpretation.

The terms of this Agreement shall be construed in accordance with the meaning of the language used and shall not be construed for or against either Party by reason of the authorship of this Agreement or any other rule of construction which might otherwise apply.

8.3 Counterparts.

This Agreement may be executed in counterparts, each of which shall be deemed to be an original, and such counterparts shall constitute one and the same instrument.

8.4 Integration; Amendment.

This Agreement, and all exhibits referred to in this Agreement, constitute the final, complete and exclusive statement of the terms of the agreement between the Parties pertaining to the subject matter of this Agreement and supersede all other and cancels any and all previous negotiations, arrangements, agreements and understandings, if any, between the Parties, and none shall be used to interpret this Agreement. No Party has been induced to enter into this Agreement by, nor is any Party relying on, any representation or warranty except those expressly set forth in this Agreement. No amendment to or modification of this Agreement, nor any provision or breach hereof waived, shall be valid unless made in writing and approved by Consultant and by City Council. The Parties agree that this requirement for written modifications cannot be waived and that any attempted waiver shall be void.

8.5 Severability.

In the event that any one or more of the phrases, sentences, clauses, paragraphs, or sections contained in this Agreement shall be declared invalid or unenforceable by a valid judgment or decree of a court of competent jurisdiction, such invalidity or unenforceability shall not affect any of the remaining phrases, sentences, clauses, paragraphs, or sections of this Agreement which are hereby declared as severable and shall be interpreted to carry out the intent of the Parties hereunder unless the invalid provision is so material that its invalidity deprives either Party of the basic benefit of their bargain or renders this Agreement meaningless.

8.6 Mutual Cooperation.

A. City's Cooperation. City shall provide Consultant with all pertinent data, documents and other requested information as is reasonably available for Consultant's proper performance of the Services required under this Agreement.

B. Consultant's Cooperation. In the event any claim or action is brought against City relating to Consultant's performance of Services rendered under this Agreement, Consultant shall render any reasonable assistance that City requires.

8.7 No Third Party Beneficiaries Intended.

This Agreement is made solely for the benefit of the Parties to this Agreement and their respective successors and assigns, and no other person or entity may have or acquire a right by virtue of this Agreement.

8.8 Final Payment Acceptance Constitutes Release.

The acceptance by Consultant of the final payment made under this Agreement shall operate as and be a release of City from all claims and liabilities for compensation to Consultant for anything done, furnished or relating to Consultant's Services. Acceptance of payment shall be any negotiation of City's check or the failure to make a written extra compensation claim within ten (10) calendar days of the receipt of that check. However, approval or payment by City shall not constitute, nor be deemed, a release of the responsibility and liability of Consultant, its employees, sub-contractors and agents for the accuracy and competency of the information provided and/or Services performed; nor shall such approval or payment be deemed to be an assumption of such responsibility or liability by City for any defect or error in the Services prepared by Consultant, its employees, sub-contractors and agents.

8.9 Non-Appropriation of Funds.

Payments to be made to Consultant by City for Services performed within the current fiscal year which are within the current fiscal budget and within an available, unexhausted fund. In the event that City does not appropriate sufficient funds for payment of Consultant's Services beyond the current fiscal year, this Agreement shall cover payment for Consultant's Services only to the conclusion of the last fiscal year in which City appropriates sufficient funds and shall automatically terminate at the conclusion of such fiscal year.

8.10 Headings.

The headings in this Agreement are included solely for convenience of reference and shall not affect the interpretation of any provision of this Agreement or any of the rights or obligations of the Parties to this Agreement.

8.11 Word Usage.

Unless the context clearly requires otherwise, (a) the words "shall," "will" and "agrees" are mandatory and "may" is permissive; (b) "or" is not exclusive; and (c) "includes" or "including" are not limiting.

8.12 Business Days.

"Business Days" refers to days that the Banning City Hall is open for business.

8.13 Corporate Authority.

The persons executing this Agreement on behalf of the Parties hereto warrant that (i): such Party is duly organized and existing, (ii) they are duly authorized to execute and deliver this Agreement on behalf of that Party, (iii) by so executing this Agreement, such Party is formally bound to the provisions of this Agreement, and (iv) the entering into this Agreement does not violate any provision of any other Agreement to which that Party is bound. This Agreement shall be binding upon the heirs, executors, administrators, successors and assigns of the Parties.

8.14 Electronic Signatures.

Each Party may adopt as its signature an electronic identification consisting of a symbol or code that is affixed to or contained in each document transmitted by such Party ("electronic signature"). The Parties hereto herby agree that electronic signatures are acceptable, shall have the same force and effect under the law as original wet signatures, and shall be sufficient to verify that the Parties have executed this Agreement and such other documents transmitted by the Parties.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF the Parties hereto have executed this Agreement the day and year first hereinabove written.

CITY OF BANNING

Robert Fisher, Date
Acting City Manager

ATTEST:

Caroline Patton Date
Administrative City Clerk

APPROVED AS TO FORM:
Slovak, Baron, Empey, Murphy & Pinkney LLP

John O. Pinkney Date
City Attorney

CONSULTANT

NAME: Date
TITLE:

NAME: Date
TITLE:

Tax ID No.

Address:

City Council Approval:_____

NOTE: PROOF OF AUTHORITY TO BIND CONTRACTING PARTY REQUIRED. APPROPRIATE ATTESTATIONS SHALL BE INCLUDED AS MAY BE REQUIRED BY THE BYLAWS, ARTICLES OF INCORPORATION, OR OTHER RULES OR REGULATIONS APPLICABLE TO CONSULTANT'S BUSINESS ENTITY.

EXHIBIT "A"
SCOPE OF SERVICES

I. Consultant will perform the following Services in connection with providing Engineer Design Services prepared in connection therewith:

II. As part of the Services, Consultant will prepare and deliver the following tangible work products and services to City:

SCOPE OF WORK

Rick Engineering Company (RICK) will perform the following services in connection with providing the design of a new ductile iron pipe (size TBD by city) water main in Ramsey Street between Sunset Avenue and Highland Home Road based on the following scope of work.

Task 1. Project Management

1.1 Kick-off Meeting and Project Management

After execution of the contract, Rick Engineering Company (RICK) will schedule and attend a kick-off meeting with the City of Banning (City) to discuss the project scope, goals, preliminary findings and alignment selected by the City, finalize the project schedule, and identify available as-built plans and studies. RICK will prepare the meeting agenda and provide the team with meeting minutes following the meeting.

RICK will provide project management of the project that includes preparation and maintenance of a project specific Work Plan. The Work Plan will include details of methodology of design, sequence of tasks lists of deliverables, milestone submittal schedule, summary of organizational responsibilities, and a communication plan with contacts of all team members. Additionally, RICK will provide utility coordination with the utility providers that have utilities along the alignment, and perform quality assurance and quality control prior to each milestone submittal, and in conformance with federal, state, and city standards.

Deliverables – Meeting agenda and minutes, Work Plan

1.2 Progress Meetings

RICK will schedule monthly progress meetings with the City and project team, that will be face to face or virtual, and facilitate additional meetings with the City departments/stakeholders as needed for the project during the project duration. Scope assumes 8 monthly meetings, that includes milestone design review / comment resolution meetings and an additional 3 project meetings.
RICK will prepare agendas and minutes for the meetings, distribute the minutes, and will also provide a monthly progress report to be included with the monthly invoice.

Deliverables – Meeting agendas and minutes

1.3 Invoicing

RICK will develop and provide a monthly invoice to the City. The invoice will include RICK labor costs, subconsultant invoices and direct expenses. Direct expenses will be supported by a copy of the receipt if applicable. Invoices shall include details of billed and remaining budget for each task, and will include the monthly progress report of the tasks completed, identify any outstanding issues to be resolved, and upcoming work to be performed.

Deliverable – Monthly invoices and progress reports

Task 2. Project Development

2.1 Utility Research, Base Mapping, and Site Reconnaissance

RICK will conduct research with the City of Banning, County of Riverside, and other governing agencies and utility companies for existing plans and maps of the adjacent area to be used for the design of the project.

RICK will conduct a field visit to collect visible information of project site. Research will consist of the private water systems that will be reconnected to the new/proposed waterline in Ramsey Street and the affected private properties. RICK will verify existing site data in terms of surrounding street system, geometry, parking, signing and striping, and private improvements and private water system appurtenances on the properties.

RICK will prepare a CAD file based on the boundary survey described below showing the existing utilities discovered in the research.

Deliverables - Photo log for any photos taken, letters to utility companies, utility as-built maps, and an AutoCAD drawing of the existing utilities.

2.1.1 Property Research

RICK will research City of Banning and County of Riverside survey records and record mapping for property and right of way information. RICK will also conduct a field survey to establish street centerline and rights of way of Ramsey Street within the project limits (between Sunset Avenue and Highland Home Road), Omar Street (between Ramsey and W. Jacinto View Road), W. Jacinto View Road (between Omar Street and Winchester Drive), and the property lines of the adjacent private properties and private properties that are affected by the relocation of water services. Survey basis of bearings and coordinates will be California State Plane Coordinates. Survey data and records analysis will be prepared within a CAD file establishing project mapping for centerline and right of

way, including intersecting streets. Base mapping will include existing easements. Easements will be researched to identify their applicability/inapplicability with new waterline alignments.

Deliverables - Field Review notes, photo log for any photos taken, and an AutoCAD drawing of the rights of ways and centerline.

2.1.2 Site Topography and Surveying

RICK will provide a supplemental field topography along the existing water line points of connection and where needed and the effected private properties (where water systems will be reconnected in Ramsey Street). Consultant will locate and dip existing sewer and storm drain manholes. Topography will be vertically controlled by local published benchmarks.

Deliverables – Field Review notes, photo log for any photos taken, and CAD file with survey points.

2.1.3 Aerial Topography

RICK will provide an aerial topography of the project site consisting of surface utility appurtenances and improvements such as curb, edge of pavement, drainage inlets, valve cans, fences, driveways, mailboxes, utility vaults, power poles, signs, lights, traffic signals, sidewalks, pedestrian ramps, and notable grade features.

Deliverables – 40-scale at 1-foot contours

2.2 Potholing

RICK's subconsultant, C Below, will perform potholing for the project. C Below will perform forty (40) potholes as indicated in the RFP. A standard pothole is 12 in. x 12 in, performed to the top of pipe or encasement with sand backfill and a permanent surface patch. Potholes are assumed to be 5' in depth. Potholes include water line tie-in points and underground utility crossings. Potholes will also be used to locate the old Highway 99 concrete by setting alignment of potholes perpendicular to Ramsey Street, spaced 10' on center curb to curb. Alignments will be performed at mid-point of each project phase (3 alignments). C Below will provide a detailed potholing report at the conclusion of the investigation. Service includes Dig Alert Coordination and Delineation, Encroachment permit, vacuum excavation to top of utility, encasement, or stop depth, standard traffic control, 12-inches of hot patching (restored within 30-days of excavation activity), sand backfill, removal of debris, and pothole report. Services not included are slurry backfill, extensive traffic control, flagging for traffic control, sidewalk concrete

panel replacement, and removal of Dig Alert marks.

Standard traffic control includes one lane closure with minimal signage not spanning an intersection.

Prior to potholing, a potholing plan will be developed showing location of potholes for connection points, intermediate points, and location of other underground utilities.

Deliverables – Potholing plan and potholing report

2.3 Geotechnical Study

Geocon is proposing to drill six (6) geotechnical borings up to 15 feet in depth, along portions of the proposed water main alignment, where the subsurface explorations of our 2018 geotechnical investigation cannot supplement. The geotechnical borings will be performed to the observe subsurface soil conditions and collect samples for laboratory testing. We expect that traffic control signage/equipment will be sufficient and flag persons will not be required. Furthermore, we expect that the Banning encroachment permit will be a no fee permit for this project, and that patching of the borings with asphalt concrete cold-patch is acceptable.

RICK's subconsultant, Geocon West, Inc, will consist of:

- Mark the planned boring locations and notify Underground Surface Alert of Southern California to mark any subsurface utility locations near the exploration locations. Additionally, the client should provide plans depicting the locations of all utilities in the project area.
- Prepare no-fee encroachment permits with the City of Banning for our work. We have assumed a traffic control plan utilizing MUTCD or Watchbook details will be sufficient, and an engineered traffic control plan will not be required.
- Provide traffic control setup and breakdown at each boring location. We plan to source traffic control signage/equipment for our work and did not include flag persons in this budget.
- Drill six (6) geotechnical borings along the portion of the proposed water main alignment that our 2018 subsurface explorations cannot supplement. We will collect bulk and ring samples of the subgrade soil for laboratory testing. Borings will be backfilled with soil cuttings and clean sand, and capped with asphalt concrete cold-patch upon completion. We expect borings of up to 15 feet will be sufficient for design of the proposed water main. Borings will be located so that there is an approximate 500-foot interval maintained between the new borings and 2018 borings, along the proposed water main alignment, to ensure an appropriate standard of care. We have budgeted one day of drilling.
- Perform laboratory testing which is expected to include in-situ moisture content and dry density determinations, maximum dry density and optimum moisture

content, grain size analysis, corrosion screening, sand equivalent, and direct shear testing. The laboratory testing program will be based on the conditions encountered during the field investigation with respect to the proposed improvements. Our 2018 laboratory test results will be provided as supplemental information for the portion of the proposed water main alignment able to be covered by our 2018 geotechnical investigation.

- Prepare a geotechnical report presenting our findings in the field, boring logs, a map depicting the boring locations, a discussion of the geotechnical conditions at the site, and geotechnical parameters for storm drain design.

Assumptions:

- The borings can be safely performed in the vicinity of the proposed water main alignment, considering existing utilities are present and to facilitate traffic flow around our drilling operations. Where performing the borings poses a conflict with existing utilities, resulting in an unsafe working environment for property, personnel, and/or motorists/pedestrians, the planned borings will be relocated, as feasible.
- This proposal does not include any costs to re-grade, install hot-mix asphalt concrete patching, re-vegetate, landscape or otherwise repair disturbed areas.

Deliverables – Geotechnical report

Task 3. Preliminary Engineering Design

3.1 Preliminary Design Plans (30% design)

RICK will prepare waterline plans for approximately (7,200 LF) for a proposed Ductile Iron pipe in Ramsey Street between Sunset Avenue and Highland Home Road. Plans will be at 40-scale and include plan and profile. Plans will be setup for 3 construction phases:
Phase 1: The waterline between Sunset Avenue to near the property at 3929 W. Ramsey Street.
Phase 2: The continuation of Phase 1 to Omar Street, then continuing north on Omar to W. Jacinto View Road, and then east to the Winchester Drive intersection.
Phase 3: From Omar Street westerly on Ramsey Avenue to approximately Highland Home Road.

Additionally, RICK will:

a. Collect the data from the utility and property research from scope items above to use as part of the base file for the water plans. Existing utilities will be shown on the plans in locations verified by the potholing above and/or provided by the utility companies. As part of the plan preparation, RICK will contact affected

utility companies to obtain permits if needed (utility fees to be paid by the City of Banning).

b. RICK will arrange and participate in informal meetings as necessary with City staff to review the progress of the project and exchange ideas and information.
c. Meetings with the City of Banning will discuss the key design issues and develop general project criteria for construction, including schedule and possible ways of minimizing problems. RICK will prepare and submit meeting agendas prior to the meetings.
d. RICK will provide data received and assumptions utilized to the city for approval prior to integrating the data into the project's final design.
e. RICK will prepare preliminary water plans (30-percent design) using AutoCAD for approximately 7,200 LF of water line (8-inch to 14-inch) to establish an agreement with the City of Banning on project scope, alignment, easements, parameters, hydraulic requirements, maintenance concerns, constructability and construction phasing, traffic impacts, and general disruption to the area. The preliminary design is to be submitted to the City of Banning for review and approval. The preliminary design shall address the following:
    a. Pipeline alignment/facility locations
    b. Construction schedule and phasing recommendations
    c. Construction Cost Estimate of recommended improvements
    d. Conflicts with other utilities and adjacent facilities in the area
    e. Traffic and pedestrian control
    f. Erosion Control
    g. Preferred materials for construction
    h. Areas where construction work is limited or controlled.
    i. Impacts to City water system.
    j. Impacts to surrounding business and residential areas.
    k. Easements (existing and proposed)
    l. Corrosion protection (if necessary)
f. The preliminary design will be submitted in PDF format through the City's SmartGov platform for the City of Banning's review and concurrence. The design will be at a 30% level of effort. Changes in layout and location of facilities suggested by the city will be investigated. A final layout and location of facilities will then be established.
g. As part of the meetings with the city, discussions and submittals of material will be presented to the city through the preliminary design process to reduce comment time and effort by the city.

It is assumed that the City of Banning will provide the size of the proposed new waterline. A hydraulic analysis is not included with this scope. However, we have provided it as an additional/if needed service.

It is assumed that the majority of the existing waterline will be abandoned in place.

As part of the 30% design, RICK will prepare a traffic control conceptual staging plan for Phase 1 only identifying the assumed stages for each of the phases as noted in the Request for Proposal. The project Phase 1 proposes to construct approximately 2,600' of a water main along Ramsey Street from Sunset Avenue to 3929 W. Ramsey Street. It is anticipated that the traffic control conceptual staging plan will be prepared at 40 scale and will identify the proposed linear footage per stage and a description of the work that will be completed.

Deliverables – (all via the city's SmartGov platform): PDF of the preliminary design plans and the preliminary opinion of probable costs.

3.2 Preliminary Design Plans (60% design)

Rick will prepare plans based on the 30% design and subsequent review comments by the City. Plans include a one (1) cover sheet, two (2) detail sheet, ten (10) plan and profile sheets, two (2) connection detail sheets for private landowners, and one (1) valve shut down sheet if needed, and will show the existing water services and fire hydrants to the new waterline. Due to the existing waterline being at the back of the effected parcels, water meters, backflow devised and related system components shall be moved to front Ramsey off the new proposed waterline. Detail sheets will detail the on-site design connecting to the new line to provide a water system at minimum equal to the existing condition.

RICK's subconsultant, Dexter Wilson Engineering, will assist in preparation of technical specifications, pipeline material design, pipeline deflection calculations, design of thrust restraining systems, details for phased connections, details for connection to the existing pipeline, peer review of replacement plans, and other pipeline design aspects.

Consultant will incorporate any comments received from the City of Banning on the traffic control conceptual staging plan into the 60% design plans. Consultant will prepare 40-scale traffic control plans for the work associated with the Ramsey Street Water Main for Phase 1 only. The traffic control plans will provide work zones that are staged for construction of the water main, appurtenances, laterals, and any required detours. The one stage of traffic control is assumed as follows:

Phase 1: Sunset Avenue to 3929 W. Ramsey Street. There are assumed 5 stages of traffic control; Stage 1A is to 600' west of Sunset Avenue; Stages 1B, 1C, 1D, and 1E will be up to 500' along Ramsey to 3929 W. Ramsey Street.

The traffic control plans will be prepared following the requirements of the California Manual on Uniform Traffic Control Devices (MUTCD) and the City of Banning. Three (3) submittals are assumed – 60%, 90%, and final. Five (5) sheets

of traffic control plans are assumed for Phase 1.

A progress meeting will be coordinated with the City of Banning to discuss the 60% design plans. The meeting will discuss the comments and markups and establish a timeline for the project moving forward.

Deliverables - (all via the city's SmartGov platform): PDF of the preliminary design plans and the preliminary opinion of probable costs.

3.3 Detailed Design Plans (90% Design)

Rick will prepare the 90% detailed design waterline plans and traffic control plans based on the 60% review comments received from the City of Banning and other entities. Plans shall follow the City of Banning standards and policies.

RICK will prepare project specifications following the Standard Specifications for Public Works Construction, SSPWC, "Greenbook", latest edition.

RICK will prepare an opinion of probable cost and bid schedule that has construction items of work, unit of measurement, unit cost, and cost based on the detailed design waterline plans.

Deliverables - (all via the city's SmartGov platform): PDF of the preliminary design plans, the preliminary opinion of probable costs, and the Standards and Specifications

Task 4. Final Design Plans

4.1 Final Water Plans

Upon authorization from the City, RICK will finalize the waterline plans and traffic control plans based on the final comments from the City and other entities. Plans will follow the City of Banning standards and policies. Plans will be signed by a licensed Civil Engineer and provided to the City of Banning on Mylar.

RICK will provide the City of Banning a Final set of Project specifications based on final comments from the City of Banning following the SPPWC. RICK will also provide a final opinion of probable cost and bid schedule based on the signed waterline plans.

Deliverables - (all via the city's SmartGov platform): PDF of the preliminary design plans, the preliminary opinion of probable costs, and the Standards and Specifications

Task 5. Easement Documents

5.1 Easement Documents

RICK will prepare a legal description and plat for each easement for three (3) permanent easements to be granted to the City of Banning and ten (10) temporary construction easements that are required for reconnection of existing private water systems to the new water main. RICK will obtain and review title reports for the thirteen (13) affected properties.

RICK assumes three (3) permanent easements to be granted to the City of Banning and ten (10) Temporary Construction Easements for reconnection of existing private water systems to the new water main.

Assumptions:

- Assumes up to 13 tax parcels owned by 13 unique entities are impacted by temporary construction easements (TCE's) and/or permanent easements.
- Scope does not include any discussions with property owners.
- No appraisal work or negotiations included.
- Consultant is providing legal description and plat for the 13 easements only.

Deliverables - (all via the city's SmartGov platform): Easement documents (legal description and plat) and up to 13 preliminary title reports.

Task 6. Stormwater Pollution Prevention Plan

6.1 Stormwater Pollution Prevention Plan

The Risk Type 1 LUP SWPPP will be prepared in accordance with the requirements of the Appendix E of the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities Order WQ 2022-0057-DWQ NPDES No. CAS000002 (adopted September 8, 2022, effective September 1, 2023).

RICK will prepare a Risk Type 1 LUP SWPPP based on the project's assumed Risk Type.

This task will also include the preparation of a Notice of Intent (NOI) on the Storm Water Multi Application Report Tracking System (SMARTS) database. The Discharger must designate RICK as a Data Entry Person to prepare the NOI. The Discharger/LRP must electronically certify and submit the NOI on SMARTS.

RICK will act as the initial Qualified SWPPP Developer (QSD) for the preparation of the SWPPP, however the Discharger must hire a QSD and a Qualified SWPPP Practitioner (QSP) for implementation of the SWPPP throughout the life of the project.

Based on the provided bid package this project is assumed to be a Risk Type 1 LUP based on the following assumptions:

1. More than 70% of the soil disturbance will occur on paved surfaces; and
2. Areas that are disturbed will be returned to pre-project conditions at the end of each day.

Deliverables - (all via the city's SmartGov platform): SWPPP (erosion control plan submitted via drawing submittals)

Task 7. Construction Surveying and Staking

7.1 Phase One Water Stakes

RICK will maintain horizontal and vertical control for the duration of the surveying work on this project. RICK will also provide required calculations to field crew for each survey request received.

RICK will provide one set of stakes at all primary points of control; beginning and ends of pipe and at not less than 50' on center along tangent sections and 25' on curves to facilitate the construction of approximately 2,600 LF of water mainline. RICK will also provide not more than two (2) stakes each; to facilitate the location of services, fire hydrants, and points of connection.

*Water stakes to be set in three (3) trips.

Deliverables – Construction Staking Cut Sheets

7.2 Phase Two Water Stakes

RICK will provide one set of stakes at all primary points of control; beginning and ends of pipe and at not less than 50' on center along tangent sections and 25' on curves to facilitate the construction of approximately 2,700 LF of water mainline. RICK will also provide not more than two (2) stakes each; to facilitate the location of services, fire hydrants, and points of connection.

*Water stakes to be set in three (3) trips.

Deliverables – Construction Staking Cut Sheets

7.3 Phase Three Water Stakes

RICK will provide one set of stakes at all primary points of control; beginning and ends of pipe and at not less than 50' on center along tangent sections and 25' on curves to facilitate the construction of approximately 1,900 LF of water mainline. RICK will also provide not more than two (2) stakes each; to facilitate the location of services, fire hydrants, and points of connection.

*Water stakes to be set in three (2) trips.

Deliverables – Construction Staking Cut Sheets

Task 8. Bidding/Construction Support – Phase 1 Only

8.1 Bidding

RICK will be available during the advertising and bidding of the project to assist the City of Banning in answering questions/RFI's and the preparation of plan addenda, if needed. RICK will attend one (1) pre-bid meeting for the bidding process.

Deliverables – Meeting attendance, responses to Bidder's RFI's

8.2 Construction Administration

RICK will be available during the construction of the project to answer RFI's and prepare plan addenda, if needed. RICK will attend one (1) pre-construction meeting and eight (8) site visits during construction of the project as requested by the city. RICK will review shop drawings and submittals from the contractor for conformance with the contract plans and specifications, and make recommendations for acceptance, denial or resubmittal.

Deliverables – Meeting attendance, response to Contractor's RFI's, design addenda, submittal reviews

8.3 As-Built Plans

RICK will prepare As-Built Plans and process with the City of Banning, as necessary. Scope assumes RICK will receive as-built letters from the contractors and the contractor's as-built plan markup's. Scope assumes no major changes have occurred and does not include any as-built survey time. As-built plans will be submitted to the City within one month of receiving as-built letters and markup's from the contractor.
Deliverables – As-built Plans

Additional Services (If Needed Services)

Corrosivity Assessment

Rick's subconsultant, RF Yeager will prepare a corrosivity assessment for the proposed waterline, that will include a field resistivity testing, a review of the Geotech/soil chemical analysis data, a review for the potential of stray current interference, and a Corrosivity Assessment Letter Report. This information will be used for the determination of the type of corrosion protection and if any cathodic protection for the pipeline would be required and the corrosion control approach that the City may want to implement.

Deliverable – Corrosivity Assessment Letter Report

Corrosion Control Design

As part of the 90% design plans, RICK's subconsultant, RF Yeager, will provide Corrosion Control Design as part of the plans if Client requires joint bonds, test stations, insulators, and other standard corrosion control facilities. It is recommended the Client to use joint bonds, test stations, and insulators (steel or DIP) such that the pipeline is made electrically continuous and test stations are installed at the side of the road. This allows for monitoring and for adding cathodic protection in the future (should soil conditions/pipeline environment change) and will be much less costly because the pipe is electrically continuous and test stations are already installed. Corrosion control detail sheets, specifications, and cost estimate is included.

Cathodic Protection Design Pipeline

If it is found that Cathodic Protection is required, RICK's subconsultant, RF Yeager, will review the waterline plans, provide comments, and corrosion control design analysis/calculations. Details and specifications will be included. A cathodic protection system cost estimate will be included. RF Yeager will then address the 90% plan comments and provide final 100% design documents. Once approved for final signature, RF Yeager will sign and stamp the final drawings. Cathodic protection detail sheets, specifications, and cost estimates are included.
Deliverables – Corrosion control design analysis/calculations, specifications, and cost estimate.

Hydraulic Analysis

RICK's subconsultant, Dexter Wilson Engineering, will perform hydraulic modeling for the waterline sizing for the project site, if City does not provide the waterline

sizing. It is assumed City will provide the necessary information to run the modeling.

Caltrans Encroachment Permit

RICK will prepare one (1) Caltrans encroachment permit application for the traffic control devices (i.e. advance signage) that are within the Caltrans right-of-way (ROW) along Sunset Avenue in the vicinity of I-10. For the Caltrans encroachment permit application, the traffic control plans are assumed to be submitted to Caltrans in City of Banning format and will include a Caltrans signature block on the plans.

Plan Processing and Coordination (Caltrans)

RICK will submit and process the traffic control plans with Caltrans District 8. It is assumed that up to two (2) sets of plan check review comments will be received, coordinated, and addressed.

Monument Preservation

Pursuant to Section 8771 of the Business and Professions Code, preconstruction corner records will be prepared and filed identifying recovered survey monuments within the proposed construction limits. Post construction corner records will also be filed reflecting replacement monuments.

Deliverables – Pre and Post construction corner records

Monument Replacement

RICK will replace destroyed survey monuments at the completion of the construction with the project limits.

Record of Survey

Pursuant to 8762 of the Business and Professions Code the filing of a Record of Survey shall be filed if the survey discloses “the establishment of one or more points or lines not shown on any subdivision map, official map, or record of survey, the positions of which are not ascertainable from the inspection of the subdivision map official map or record of survey.

III. In addition to the requirements of Parts I and II of this Scope of Services, during the performance of the Services, Consultant will keep City appraised through periodic status reports regarding the performance of the Services under this Agreement as set forth below and in Section 5.2, by the following means:

a. In-person meetings and/or teleconferences.

b. Email updates/questions to applicant team and City while reviews are underway.

c. Conference calls.

IV. All work product is subject to review and acceptance by City, and must be revised by Consultant without additional charge to City until found satisfactory and accepted by City.

EXHIBIT "B"
SPECIAL REQUIREMENTS

TERMS FOR COMPLIANCE WITH CALIFORNIA LABOR LAW REQUIREMENTS

1. This Agreement calls for services that, in whole or in part, constitute "public works" as defined in Division 2, Part 7, Chapter 1 (commencing with Section 1720) of the California Labor Code ("Chapter 1"). Further, Consultant acknowledges that this Agreement is subject to (a) Chapter 1 and (b) the rules and regulations established by the Department of Industrial Relations ("DIR") implementing such statutes. Therefore, as to those Services that are "public works," Consultant shall comply with and be bound by all the terms, rules and regulations described in 1(a) and 1(b) as though set forth in full herein.

2. California law requires the inclusion of specific Labor Code provisions in certain contracts. The inclusion of such specific provisions below, whether or not required by California law, does not alter the meaning or scope of Section 1 above.

3. Consultant shall be registered with the Department of Industrial Relations in accordance with California Labor Code Section 1725.5, and has provided proof of registration to City prior to the Effective Date of this Agreement. Consultant shall not perform work with any subcontractor that is not registered with DIR pursuant to Section 1725.5. Consultant and subcontractors shall maintain their registration with the DIR in effect throughout the duration of this Agreement. If the Consultant or any subcontractor ceases to be registered with DIR at any time during the duration of the project, Consultant shall immediately notify City.

4. Pursuant to Labor Code Section 1771.4, Consultant's Services are subject to compliance monitoring and enforcement by DIR. Consultant shall post job site notices, as prescribed by DIR regulations.

5. Pursuant to Labor Code Section 1773.2, copies of the prevailing rate of per diem wages for each craft, classification, or type of worker needed to perform the Agreement are on file at City Hall and will be made available to any interested party on request. Consultant acknowledges receipt of a copy of the DIR determination of such prevailing rate of per diem wages, and Consultant shall post such rates at each job site covered by this Agreement.

6. Consultant shall comply with and be bound by the provisions of Labor Code Sections 1774 and 1775 concerning the payment of prevailing rates of wages to workers and the penalties for failure to pay prevailing wages. The Consultant shall, as a penalty to City, forfeit $200.00 for each calendar day, or portion thereof, for each worker paid less than the prevailing rates as determined by the DIR for the work or craft in which the worker is employed for any public work done pursuant to this Agreement by Consultant or by any subcontractor.

7. Consultant shall comply with and be bound by the provisions of Labor Code Section 1776, which requires Consultant and each subcontractor to: keep accurate payroll records and verify such records in writing under penalty of perjury, as specified in Section 1776; certify and make such payroll records available for inspection as provided by Section 1776; and inform City of the location of the records.

8. Consultant shall comply with and be bound by the provisions of Labor Code Sections 1777.5, 1777.6 and 1777.7 and California Administrative Code Title 8, Section 200 et seq. concerning the employment of apprentices on public works projects. Consultant shall be responsible for compliance with these aforementioned Sections for all apprenticeable occupations. Prior to commencing work under this Agreement, Consultant shall provide City with a copy of the information submitted to any applicable apprenticeship program. Within 60 days after concluding work pursuant to this Agreement, Consultant and each of its subcontractors shall submit to City a verified statement of the journeyman and apprentice hours performed under this Agreement.

9. The Consultant shall not perform Work with any Subcontractor that has been debarred or suspended pursuant to California Labor Code Section 1777.1 or any other federal or state law providing for the debarment of contractors from public works. The Consultant and Subcontractors shall not be debarred or suspended throughout the duration of this Agreement pursuant to Labor Code Section 1777.1 or any other federal or state law providing for the debarment of contractors from public works. If the Consultant or any subcontractor becomes debarred or suspended during the duration of the project, the Consultant shall immediately notify City.

10. Consultant acknowledges that eight hours labor constitutes a legal day's work. Consultant shall comply with and be bound by Labor Code Section 1810. Consultant shall comply with and be bound by the provisions of Labor Code Section 1813 concerning penalties for workers who work excess hours. The Consultant shall, as a penalty to City, forfeit $25.00 for each worker employed in the performance of this Agreement by the Consultant or by any subcontractor for each calendar day during which such worker is required or permitted to work more than eight hours in any one calendar day and 40 hours in any one calendar week in violation of the provisions of Division 2, Part 7, Chapter 1, Article 3 of the Labor Code. Pursuant to Labor Code section 1815, work performed by employees of Consultant in excess of eight hours per day, and 40 hours during any one week shall be permitted upon public work upon compensation for all hours worked in excess of eight hours per day at not less than one and one-half times the basic rate of pay.

11. California Labor Code Sections 1860 and 3700 provide that every employer will be required to secure the payment of compensation to its employees. In accordance with the provisions of California Labor Code Section 1861, Consultant hereby certifies as follows:

> "I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract."
>
> **Date**_____ **Signature**_____

12. For every subcontractor who will perform work on the project, Consultant shall be responsible for such subcontractor's compliance with Chapter 1 and Labor Code Sections 1860 and 3700, and Consultant shall include in the written contract between it and each subcontractor a copy of those statutory provisions and a requirement that each subcontractor shall comply with those statutory provisions. Consultant shall be required to take all actions necessary to enforce such contractual provisions and ensure subcontractor's compliance, including, without limitation, conducting a periodic review of the certified payroll records of the subcontractor and upon becoming aware of the failure of the subcontractor to pay his or her workers the specified prevailing rate of wages. Consultant shall diligently take corrective action to halt or rectify any failure.

EXHIBIT "C"
SCHEDULE OF COMPENSATION

I. Consultant shall perform the following Scope of Services at the rates stated in Exhibit C-1.

II. Within the budgeted amounts for each Task, and with the approval of the Contract Officer, funds may be shifted from one Task sub-budget to another so long as the Contract Sum is not exceeded per Section 2.1, unless Additional Services are approved per Section 1.8.

III. City will compensate Consultant for the Services performed upon submission of a valid invoice. Each invoice is to include:

A. Line items for all personnel describing the Services performed, the number of hours worked, and the hourly rate.

B. Line items for all materials and equipment properly charged to the Services.

C. Line items for all other approved reimbursable expenses claimed, with supporting documentation.

D. Line items for all approved sub-contractor labor, supplies, equipment, materials, and travel properly charged to the Services.

IV. Consultant's billing rates for all personnel are attached as Exhibit C-1.

EXHIBIT "C-1"
CONSULTANT'S BILLING RATE AND TASK SCHEDULE

RICK ENGINEERING COMPANY

Principal Consultant (Special Projects)	$300.00
Principal	260.00
Associate Principal	240.00
Associate/Manager	225.00
Expert Witness	450.00
Court Appearance per half day or part	1,800.00
Senior Project Manager	$225.00
Principal Project Engineer/Manager	210.00
Associate Project Engineer/Manager	190.00
Assistant Project Engineer/Manager	175.00
Principal Engineering Designer	155.00
Associate Engineering Designer	140.00
Assistant Engineering Designer	130.00
Principal Engineering Drafter	125.00
Associate Engineering Drafter	115.00
Assistant Engineering Drafter	105.00
Senior Transportation/Traffic Engineer	$215.00
Principal Transportation/Traffic Engineer	210.00
Associate Transportation/Traffic Engineer	190.00
Assistant Transportation/Traffic Engineer	175.00
Principal Transportation/Traffic Designer	155.00
Associate Transportation/Traffic Designer	140.00
Assistant Transportation/Traffic Designer	130.00
Principal Community Planner	$215.00
Principal Project Planner/Manager	200.00
Associate Project Planner/Manager	185.00
Senior Planner	175.00
Associate Planner	140.00
Assistant Planner	120.00
Planning Technician	95.00
Principal Project Landscape Architect/Manager	$190.00
Associate Project Landscape Architect/Manager	170.00
Assistant Project Landscape Architect/Manager	150.00
Principal Landscape/Urban Designer	125.00
Associate Landscape/Urban Designer	120.00
Assistant Landscape/Urban Designer	115.00
Principal Environmental Project Manager	$200.00
Associate Environmental Project Manager	170.00
Assistant Environmental Project Manager	150.00
Principal Environmental Specialist	140.00
Associate Environmental Specialist	130.00
Assistant Environmental Specialist	120.00
Environmental Technician	100.00
Senior Water Quality Manager	$240.00
Principal Water Resources Designer	155.00
Associate Water Resources Designer	140.00
Assistant Water Resources Designer	130.00
GIS Manager	$190.00
Principal GIS Project Manager	180.00
Associate GIS Project Manager	165.00
Assistant GIS Project Manager	150.00
Principal GIS Analyst	145.00
Associate GIS Analyst	130.00
Assistant GIS Analyst	120.00
Principal Graphics Designer	130.00
Associate Graphics Designer	125.00
Assistant Graphics Designer	115.00
CAD Manager	180.00
Field Supervisor	$195.00
One-person Survey Party (Prevailing Wage)	270.00
One-person Survey Party w/ Robotics (Prevailing Wage)	270.00
Two-person Survey Party (Prevailing Wage)	350.00
Three-person Survey Party (Prevailing Wage)	390.00
3D Laser Scanning Crew (One-Person)	$235.00
3D Laser Scanning Crew (Two Person)	280.00
Principal 3D Laser Scanning Project Manager	$190.00
Associate 3D Laser Scanning Project Manager	175.00
Assistant 3D Laser Scanning Project Manager	160.00
Principal 3D Laser Scanning Specialist	140.00
Associate 3D Laser Scanning Specialist	130.00
Assistant 3D Laser Scanning Specialist	120.00
Principal 3D Laser Scanning Technician	115.00
Associate 3D Laser Scanning Technician	100.00
Assistant 3D Laser Scanning Technician	90.00
Photogrammetry Supervisor	$185.00
Principal Photogrammetrist	155.00
Associate Photogrammetrist	120.00
Assistant Photogrammetrist	110.00
Principal Survey Analyst	$185.00
Associate Survey Analyst	150.00
Assistant Survey Analyst	125.00
Associate Project Administrator	$80.00
Assistant Project Administrator	70.00
Administrative Assistant/Manager	75.00

Rates subject to change for prevailing wage contracts.
When authorized, overtime shall be charged at the listed rates times 1.5.
Unless otherwise agreed upon, we shall charge for printing, reproduction, deliveries, transportation, and other expenses.
A fifteen (15) percent fee for administration, coordination and handling will be added to all subcontracted services.

Structural Engineer
$185.00 Per Hour

SKS Engineering, Inc.

Position	Hourly Rates
Principal	$205-275
Senior Associate	$150-220
Associate	$110-170
Senior Analyst	$105-135
Analyst	$70-105
Assistant Analyst	$60-115
Administrative Support	$65-105

URBAN CROSSROADS

General

(1) Reimbursable direct costs, such as reproduction, supplies, and messenger service will be billed at cost.
(2) Hourly rates apply to work time, travel time, and time spent at public hearings and meetings. For overtime work, the above rates may be increased 50 percent.
(3) Monthly billing statements are due within thirty (30) days of receipt.

TURNING MOVEMENT COUNTS (TMC)
$226.00 – 2-hour Peak Period Counts – Pedestrian & Bicycles Included
$226.00 – 4-hour Peak Period Counts – Pedestrian & Bicycles Included
$339.00 – 6-hour Peak Period Counts – Pedestrian & Bicycles Included

VeracityTrafficGroup

BI-DIRECTIONAL VOLUME (ADT) – TUBE COUNTS
$100.00 – 24 hours (1-day)
$200.00 – 48 hours (2-day)
$300.00 – 72 hours (3-day)
$400.00 – 96 hours (4-day)
$500.00 – 120 hours (5-day)
$600.00 – 144 hours (6-day)
$700.00 – 168 hours (7-day)

BI-DIRECTIONAL SPEED OR CLASSIFICATION – TUBE COUNTS
$198.00 – 24 hours (1-day)
$396.00 – 48 hours (2-day)
$594.00 – 72 hours (3-day)
$792.00 – 96 hours (4-day)
$990.00 – 120 hours (5-day)
$1,188.00 – 144 hours (6-day)
$1,386.00 – 168 hours (7-day)

OTHER STUDIES – QUOTES BASED ON SCOPE
Pedestrian Gap Studies
Parking Duration Studies
Video Turning Movement Counts
Radar Studies – Non Intrusive
Travel Time Studies – GPS
Many more customized studies available

EXHIBIT "D"
SCHEDULE OF PERFORMANCE

I. Consultant shall perform all Services timely, and deliver the specified tangible work products to City in accordance with the schedule attached as Exhibit D-1.

II. The Contract Officer may approve extensions for performance of the Services in accordance with Sections 1.8 and 3.3.

EXHIBIT "D-1"
PROPOSED PROJECT SCHEDULE

EXHIBIT B

RAMSEY STREET WATER MAIN PROJECT

TASK DESCRIPTION:	Principal	Associate Principal	Associate	Principal Project Engineer	Associate Project Engineer	Principal Designer	Assistant/Associate Designer/Analyst	Field Supervisor	Two-Person Survey Crew	Principal Survey Analyst	RICK FEE	Subconsultants	Expenses	Task Total($):
Hourly Rate	$275.00	$260.00	$240.00	$220.00	$200.00	$165.00	$135.00	$220.00	$360.00	$195.00				
TASK 1 - PROJECT MANAGEMENT														
1.1 Kick-off Meeting and Project Management		2		24							$ 5,800.00			$ 5,800.00
1.2 Progress Meetings		2		33							$ 7,780.00			$ 7,780.00
1.3 Invoicing				8							$ 1,760.00			$ 1,760.00
SUBTOTAL TASK 1:	**0**	**4**	**0**	**65**	**0**	**0**	**0**	**0**	**0**	**0**	**$ 15,340.00**	**$ -**	**$ -**	**$ 15,340.00**
Task 2 - Project Development														
2.1 Utility Research, Base Mapping & Site Reconnaissance				20		32	40				$ 15,080.00			$ 15,080.00
2.1.1 Property Research			8				8		24	40	$ 19,440.00			$ 19,440.00
2.1.2 Supplemental Field Topography									40	2	$ 14,790.00			$ 14,790.00
2.1.3 Aerial Topography									24	6	$ 9,810.00		$ 15,000.00	$ 24,810.00
2.2 Potholing - C Below											$ -	$ 92,195.00		$ 92,195.00
2.3 Geotechnical Study - Geocon											$ -	$ 12,875.00		$ 12,875.00
SUBTOTAL TASK 2:	**0**	**0**	**8**	**20**	**0**	**32**	**48**	**0**	**88**	**48**	**$ 59,120.00**	**$ 105,070.00**	**$ 15,000.00**	**$ 179,190.00**
Task 3 - Preliminary Engineering Design														
3.1 Preliminary Design Plans (30% design) - Civil	2	4		12		50	80				$ 23,280.00	$ 2,990.00		$ 26,270.00
Conceptual Staging Plan - Traffic					4		16				$ 2,960.00			$ 2,960.00
3.2 Preliminary Design Plans (60% design) - Civil, Dexter Wilson	2	4		20		80	100				$ 32,690.00	$ 2,150.00		$ 34,840.00
Preliminary Design Plans (60% design) - Traffic		1			3		36				$ 5,720.00			$ 5,720.00
3.3 Detailed Design Plans (90% design) - Civil, Dexter Wilson	2	4		16		60	88				$ 26,890.00	$ 1,075.00		$ 27,965.00
Detailed Design Plans (90% design) - Traffic		1			2		23				$ 3,765.00			$ 3,765.00
SUBTOTAL TASK 3:	**6**	**14**	**0**	**48**	**9**	**190**	**343**	**0**	**0**	**0**	**$ 95,305.00**	**$ 6,215.00**	**$ -**	**$ 101,520.00**
Task 4 - Final Design Plans, Specifications and Estimate (100% Design)														
4.1 Final Water Plans - Civil, Dexter Wilson	1	4		12		24	40				$ 13,315.00	$ 645.00		$ 13,960.00
Final Water Plans - Traffic		1			3		12				$ 2,480.00			$ 2,480.00
SUBTOTAL TASK 4:	**1**	**5**	**0**	**12**	**3**	**24**	**52**	**0**	**0**	**0**	**$ 15,795.00**	**$ 645.00**	**$ -**	**$ 16,440.00**

EXHIBIT B

RAMSEY STREET WATER MAIN PROJECT

TASK DESCRIPTION:	Principal	Associate Principal	Associate	Principal Project Engineer	Associate Project Engineer	Principal Designer	Assistant Designer/Assistant Analyst	Field Supervisor	Two-Person Survey Crew	Principal Survey Analyst	RICK FEE	Subconsultants	Expenses	Task Total($):
Hourly Rate	$275.00	$260.00	$240.00	$220.00	$200.00	$165.00	$135.00	$220.00	$360.00	$195.00				
Task 5 - Easement Documents														
5.1 Easement Documents			26							130	$ 31,590.00		$ 9,750.00	$ 41,340.00
SUBTOTAL TASK 6:	0	0	26	0	0	0	0	0	0	130	$ 31,590.00	$ -	$ 9,750.00	$ 41,340.00
Task 6 - Stormwater Pollution Prevention Plan														
6.1 Stormwater Pollution Prevention Plan				6		32					$ 6,600.00			$ 6,600.00
SUBTOTAL TASK 6:	0	0	0	6	0	32	0	0	0	0	$ 6,600.00	$ -	$ -	$ 6,600.00
Task 7 - Construction Surveying and Staking														
7.1 Phase One Water Stakes							10	2	24		$ 10,430.00			$ 10,430.00
7.2 Phase Two Water Stakes - 3 staking days											$ -			$ -
7.3 Phase Three Water Stakes - 2 staking days											$ -			$ -
SUBTOTAL TASK 5:	0	0	0	0	0	0	10	2	24	0	$ 10,430.00	$ -	$ -	$ 10,430.00
Task 8 - Bidding/Construction Support - Phase 1 only														
8.1 Bidding				1		4					$ 880.00			$ 880.00
8.2 Construction Administration		2		32		12					$ 9,540.00	$ 1,160.00		$ 10,700.00
8.3 As-Built Plans		1		1		1	6				$ 1,455.00			$ 1,455.00
SUBTOTAL TASK 7:	0	3	0	34	0	17	6	0	0	0	$ 11,875.00	$ 1,160.00	$ -	$ 13,035.00
Reimbursables													$ 3,000.00	$ 3,000.00
	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ 3,000.00	$ 3,000.00
SUBTOTAL TASKS 1-7:	7	26	34	185	12	295	459	2	112	178	$ 246,055.00	$ 113,090.00	$ 27,750.00	$ 386,895.00

Less $230,670.97 revised total $156,224.03

Exhibit "D-1" - 2

EXHIBIT B

RAMSEY STREET WATER MAIN PROJECT

TASK DESCRIPTION:	Principal	Associate Principal	Associate	Principal Project Engineer	Associate Project Engineer	Principal Designer	Assistant Designer/Assistant Analyst	Field Supervisor	Two-Person Survey Crew	Principal Survey Analyst	RICK FEE	Subconsultants	Expenses	Task Total($):
Hourly Rate	$275.00	$260.00	$240.00	$220.00	$200.00	$165.00	$135.00	$220.00	$360.00	$195.00				
Additional Services (if needed)														
Additional Potholing (daily rate) - C Below											$ -	$ 12,725.00		$ 12,725.00
Corrositivity Asssessment - YF Yeager											$ -	$ 4,980.00		$ 4,980.00
Corrosion Control Design - YF Yeager											$ -	$ 12,180.00		$ 12,180.00
Cathodic Protection Design Pipeline - YF Yeager											$ -	$ 18,400.00		$ 18,400.00
Hydraulic Analysis - Dexter Wilson											$ -	$ 3,480.00		$ 3,480.00
Caltrans Encroachment Permit Application											$ 1,480.00			$ 1,480.00
Caltrans Processing and Coordination											$ 2,020.00			$ 2,020.00
Phase 1 Monument Preservation											$ 3,120.00			$ 3,120.00
Phase 1 Monument Replacement											$ 5,980.00			$ 5,980.00
Record of Survey											$ 15,000.00			

RESOLUTION 2022-35

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BANNING, CALIFORNIA, AUTHORIZING THE USE OF FUNDS OF THE TREASURY'S CORONAVIRUS STATE AND LOCAL FISCAL RECOVERY FUNDS (CSLFRF) FUNDED BY THE AMERICAN RESCUE PLAN ACT (ARPA) AS OUTLINED IN EXHIBIT A

WHEREAS, on March 11, 2021 the American Rescue Plan Act (ARPA) was signed into law by the President. Section 9901 of ARPA amended Title VI of the Social Security Act (the Act) to add Section 602, which establishes the Coronavirus State Fiscal Recovery Fund, and Section 603, which establishes the Coronavirus Local Fiscal Recover Fund; and

WHEREAS, the Fiscal Recovery Funds are intended to provide support to State, local, and Tribal governments in responding to the impact of COVID-19 and in their efforts to contain COVID-19 in their communities, residents, and businesses; and

WHEREAS, through the Fiscal Recovery Funds, Congress provided State, local, and Tribal governments with significant resources to respond to the COVID-19 public health emergency and its economic impact through four categories of eligible uses which are:

i. To respond to the public health emergency or its negative economic impacts, including assistance to households, small businesses, and nonprofits, or aid to impacted industries such as tourism, travel, and hospitality.
ii. To respond to workers performing essential work during the COVID-19 public health emergency by providing premium pay to eligible workers.
iii. For the provision of government services to the extent of the reduction of revenue due to COVID-19 public health emergency relative to revenues collected in the most recent full fiscal year prior to the emergency.
iv. To make necessary investments in water, sewer, or broadband infrastructure; and

WHEREAS, the city has designated use of these funds as outlined in Exhibit "A".

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Banning as follows:

SECTION 1. The City Council hereby authorizes the use of funds of the Treasury's Coronavirus State and Local Fiscal Recovery Funds (CSLFF) funded by the American Rescue Plan Act (ARPA) as specified in Exhibit "A."

SECTION 2. The City Council hereby authorizes the City Manager or his designee to make all necessary appropriations, transfers, and budget adjustments related to Resolution 2022-35.

PASSED, APPROVED AND ADOPTED this 12th day of April 2022.

Kyle Pingree, Mayor
City of Banning

ATTEST:

Caroline Patton, Deputy City Clerk
City of Banning

APPROVED AS TO FORM AND LEGAL CONTENT:

Kevin G. Ennis, City Attorney
Richards, Watson & Gershon

CERTIFICATION:

I, Caroline Patton, Deputy City Clerk of the City of Banning, California, do hereby certify that the foregoing Resolution 2022-35, was duly adopted by the City Council of the City of Banning, California, at a regular meeting thereof held on the 12th day of April 2022 by the following vote, to wit:

AYES: Hamlin, Happe, Pingree, Sanchez, and Wallace.

NOES:

ABSENT:

ABSTAIN:

Caroline Patton, Deputy City Clerk
City of Banning, California

Project Name	Project Description	Project Amount
Public Health and Economic Impacts		
Public Safety	To help keep the community safe, an additional five (5) Officers were approved for hire, increase salaries to retain and recruit officers and pay for additional overtime (Council approved May 11, 2021)	1,317,350.00
ZenCity/Civil Space	On-line community engagement platform to help reach more of the community through information sharing and dialogue. Includes collaboration with the Civil Space platform which provides the ability to engage in ongoing dialogue (Council Approved November 9, 2021)	24,000.00
Business grants / Façade improvements	Provide Grants of $5,000 (20) for active small businesses approx $100,000 and/or allocate funds to help with façade improvements $250,000	350,000.00
	Total Public Health and Economic Impacts	**1,691,350.00**
Premium Pay		
Premium Pay Essential Workers (Including taxes)	Provide premium pay for essential workers for the continuity of operations during the COVID-19 public health emergency. (Council approved January 25, 2022, Resolution 2022-07)	1,300,000.00
	Total Premium Pay	**1,300,000.00**
Water, Sewer and Broadband Infrastructure		
Broadband Infrastructure Projects		
PD Interview Room Solution	In car video with blackbox recording. Interview room microphone, w/ cloud plan - Installation services for Interview rooms, 3 rooms.	26,100.00
PD Upgrades (Western Audio Visual 1/25/2022)	Upgrade technology in the Briefing room, conference room and Community Room/EOC	117,000.00
Banning PD 30 ICV - 30 BWC - 3	In Car Cameras and Body Worn Cameras (can be broken down over 5 years) Qty - 30	380,100.00
Cameras at Police Station 5 year Option (AkinsIT) Quote AAAQ9954)	Security cameras for the station (can be broken down over 5 years)	138,500.00
Citywide (except PD) Network Upgrade (Cybertek QuoteC022011) PD Network Upgrade (Cybertek Quote C2022010)	Network and server upgrades citywide; Blade Center, Rack Servers, Nimble & Vmware, WAPS, Switches, UPS, PD Network and server upgrade, Blade Center, Nimble & Wmware, WAPS, Switches, UPS	568,500.00
Computer workstations - Investment in new/replacement mobile workstations for staff	To ensure continutity of city services by ensuring equipment is on hand and staff has the proper equipment to work remotely.	30,000.00
New ERP System - Citywide	Current city ERP system is antiquated and in need of upgrade.	850,000.00
One or two EMBs would allow for an additional outlet for getting information out to the community.	Electronic messaging boards to help communicate city services and messages to the community.	117,176.00
	Total Broadband Infrastructure Projects	**2,227,376.00**
Water and Sewer Infrastructure Projects		
Ramsey Street Water Line	A water line currently does not exist along Ramsey Street from Sunset Avenue to Highland Home Road, which will prevent the commercial zoned properties fronting Ramsey Street from being developed without a condition of approval to construct the waterline. Said condition can be economically infeasible for some developments. This issue is at the forefront with the proposed Wynham Hotel - Phase 1 (This will get water line across Wynham Hotel site)	1,000,000.00
Replace 4" Waterline on Barbour	An existing 4" waterline on Barbour Street from Hargrave to Juarez must be replaced in order to provided needed fire flow for the development of industrial zoned properties on the south side of town, west of Hargrave Street	550,000.00
Sewer line under I-10 at Hathaway	The existing 8" line, which stretches from Ramsey Street to the Lincoln Street is at or near maximum capacity. The sewer line is needing replacement in order to accommodate the future development of projects north of the I-10 and east of Hathaway and also to reduce the likelihood of sewer system overflows (SSOs).	700,000.00
	Total Water and Sewer Infrastructure Projects	**2,250,000.00**
	Total Water, Sewer and Broadband Infrastructure	**4,477,376.00**
Total Project Amount		**7,468,726.00**
American Rescue Plan Act (ARPA) allocation to City of Banning	(2 payments of 3,734,363)	**7,468,726.00**
	Balance available for additional projects	-

RESOLUTION 2023-182

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BANNING, CALIFORNIA, APPROVING A PROFESSIONAL SERVICES AGREEMENT FOR THE DESIGN OF THE RAMSEY STREET WATER MAIN REPLACEMENT TO RICK ENGINEERING, INC. IN THE AMOUNT OF $386,895 AND APPROVING A 10% CONTINGENCY FOR A TOTAL PROJECT BUDGET OF "NOT-TO-EXCEED" $425,584.50

WHEREAS, the City of Banning owns, operates, and maintains water distribution and transmission pipelines that distribute water to residents and businesses; and

WHEREAS, to provide its customers with a reliable supply of water, it is important for the City to continue replacing aging and undersized water distribution infrastructure; and

WHEREAS, the 2018 City of Banning Integrated Master Plan (IMP) identified the existing 4-inch water main on the south side of Ramsey Street as deficient due to its age and conveyance capacity to support commercial development on the south side of Ramsey Street from Sunset Ave to Highland Home Road. The IMP also identified the existing 14-inch water main that runs along the north property lines of properties fronting Ramsey Street to be deficient and difficult to maintain outside of public road right of way; and

WHEREAS, on April 12, 2022 City Council approved Resolution 2022-35 authorizing the use of American Rescue Plan Act (ARPA) funds on certain eligible projects including making the necessary investments in water infrastructure including the installation of a new water main along Ramsey Street; and

WHEREAS, on October 26, 2022 staff released a Request for Proposals (RFP) for the Design of the Rasmey Street Water Main Replacement to five (5) consultants on the on-call Professional Engineering Services list approved by City Council on July 12, 2022 under Resolution 2022-99 and received three (3) proposals; and

WHEREAS, the scope of work will include the design of +/- 7,200 linear feet of a new Ductile Iron Pipe (DIP) water main including reconnection of water services, new fire hydrant connections and abandonment of the existing 4-inch water main in Ramsey Street between Sunset Avenue and Highland Home Road and 14-inch steel water mains north of the existing parcels north of Ramsey Street, and other related tasks. The design will be developed for three construction phases to be constructed as funding becomes available; and

WHEREAS, staff recommends the award of a Professional Services Agreement to Rick Engineering, Inc.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Banning as follows:

SECTION 1. City Council approves the Professional Services Agreement between Rick Engineering, Inc. for the Design of the Ramsey Street Water Main Replacement, to Rick Engineering, Inc. in the amount of $386,895 and approves a 10% contingency for a total project budget of "not-to-exceed" $425,584.50.

SECTION 2. City Council authorizes the City Manager or his designee to make necessary budget adjustments, appropriations, transfers, and to approve change orders within the approved contingency.

SECTION 3. City Council authorizes the City Manager or his designee is authorized to make non-substantive changes to and to execute the Professional Services Agreement with Rick Engineering, Inc..

SECTION 4. The City Clerk shall certify to the adoption of this resolution and shall cause a certified resolution to be filed in the book of original resolutions.

PASSED, APPROVED AND ADOPTED this 14th day of November 2023.

Alberto Sanchez, Mayor
City of Banning

ATTEST:

Caroline Patton, Deputy City Clerk
City of Banning

APPROVED AS TO FORM AND LEGAL CONTENT:

Serita R. Young, City Attorney
Richards, Watson & Gershon

CERTIFICATION:

I, Caroline Patton, Deputy City Clerk of the City of Banning, California, do hereby certify that the foregoing Resolution 2023-182, was duly adopted by the City Council of the City of Banning, California, at a regular meeting thereof held on the 14th day of November 2023 by the following vote, to wit:

AYES: Flynn, Minjares, Sanchez, and Wallace.

NOES:

ABSENT: Gonzales.

ABSTAIN:

Caroline Patton, Deputy City Clerk
City of Banning, California

Exhibit A
Draft Professional Services Agreement with Rick Engineering, Inc.

AGREEMENT FOR PROFESSIONAL SERVICES (C00931) FOR DESIGN OF RAMSEY STREET WATER MAIN BY AND BETWEEN CITY OF BANNING AND GLENN A. RICK ENGINEERING & DEVELOPMENT CO. DBA RICK ENGINEERING COMPANY

THIS AGREEMENT FOR PROFESSIONAL SERVICES (herein "Agreement") is made and entered into this day: _____, ("Effective Date") by and between the **CITY OF BANNING,** a California municipal corporation ("City") and Glenn A. Rick Engineering & Development Co., a California Corporation, dba Rick Engineering Company. ("Consultant"). City and Consultant are sometimes hereinafter individually referred to as "Party" and hereinafter collectively referred to as the "Parties."

RECITALS

A. City has sought by issuance of a Request for Proposals (RFP No. 23-036) from the bench of prequalified Engineers (RFQ-22-007), the performance of the services for the Design of Ramsey Street Water Main and as further defined and described particularly in Article 1 of this Agreement.

B. Consultant, following submission of a proposal for the performance of the services defined and described particularly in Article 1 of this Agreement, was selected by City to perform those services.

C. The Parties desire to formalize the selection of Consultant for performance of those services defined and described particularly in Article 1 of this Agreement and desire that the terms of that performance be as particularly defined and described herein.

D. Pursuant to the City of Banning's Municipal Code, City has authority to enter into this Agreement.

NOW, THEREFORE, in consideration of the mutual promises and covenants made by the Parties and contained herein and other consideration, the value and adequacy of which are hereby acknowledged, the Parties agree as follows:

ARTICLE 1. SERVICES OF CONSULTANT

1.1 Scope of Services.

In compliance with all terms and conditions of this Agreement, Consultant shall provide those services specified in the "Scope of Services" attached hereto as **Exhibit A** and incorporated herein by this reference, which services may be referred to herein as the "Services" hereunder. As a material inducement to City entering into this Agreement, Consultant represents and warrants that it has the qualifications, experience, and facilities necessary to properly perform the Services required under this Agreement in a thorough, competent, and professional manner, and is experienced in performing the Services contemplated herein. Consultant shall at all times faithfully, competently and to the best of its ability, experience and talent, perform all Services described herein. Consultant covenants that it shall follow the highest professional standards in

performing the Services required hereunder and that all materials will be of good quality, and fit for the purpose intended. For purposes of this Agreement, the phrase "highest professional standards" shall mean those standards of practice recognized by one or more first-class firms performing similar work under similar circumstances. This Agreement calls for services that, in whole or in part, constitute "public works" as defined in the California Labor Code. Therefore, as to those services that are "public works," Consultant shall comply in all respects with all applicable provisions of the California Labor Code, including those set forth in Exhibit B hereto.

1.2 Contract Documents and Exhibits.

This Agreement includes the Request for Proposal and Consultant's accepted proposal ("Contract Documents"), both of which are on file with the City and incorporated herein by this general reference as though fully set forth herein. **Exhibit A** (Scope of Services), **Exhibit B** (Special Requirements), **Exhibit C** (Schedule of Compensation), and **Exhibit D** (Schedule of Performance) also constitute a part of this Agreement and are incorporated into this Agreement by this reference. Except as set forth in Section 1.10 regarding **Exhibit B**, this Agreement controls over the Contract Documents and the provisions in **Exhibits A, B** and **C**.

1.3 Compliance with Law.

Consultant shall keep itself informed concerning all ordinances, resolutions, statutes, rules, and regulations of City and any Federal, State or local governmental entity having jurisdiction in effect at the time service is rendered, and shall render all Services hereunder in accordance therewith.

1.4 Licenses, Permits, Fees and Assessments.

Consultant shall obtain and maintain during the term of this Agreement, at its sole cost and expense, all necessary licenses, permits, certificates and approvals required by law for the performance of Services under this Agreement, including a City business license. Consultant shall have the sole obligation to pay for all fees, assessments and taxes, plus applicable penalties and interest, which may be imposed by law and which arise from or are necessary for Consultant's performance of the Services required by this Agreement. Consultant shall indemnify, defend and hold harmless City, its officers, employees or agents, against all such fees, assessments, taxes, penalties or interest levied, assessed or imposed against City hereunder.

1.5 Familiarity with Services.

By executing this Agreement, Consultant warrants that Consultant: (i) has thoroughly investigated and considered the Scope of Services to be performed, (ii) has carefully considered how the Services should be performed, and (iii) fully understands the facilities and any difficulties and restrictions attending performance of the Services under this Agreement. If the Services involve work upon any site, Consultant warrants that Consultant has or will investigate the site and is or will be fully acquainted with the conditions existing therein, prior to commencement of Services hereunder. Should Consultant discover any latent or unknown conditions, which will materially affect the performance of the Services hereunder, Consultant shall immediately inform City of such fact and shall not proceed except at Consultant's risk until written instructions are received from the Contract Officer (defined in Section 1.12. A).

1.6 Prevention of Loss and Damages.

Consultant shall adopt reasonable methods during the Term (defined in Section 3.4) to furnish continuous protection to the work product, and the equipment, materials, papers, documents, plans, studies and/or other components thereof to prevent losses or damages, and shall be responsible for all such damages, to persons or property, until acceptance of the Services by City, except such losses or damages as may be caused by City's own negligence.

1.7 Further Responsibilities of Parties.

Both Parties agree to use reasonable care and diligence to perform their respective obligations under this Agreement. Both Parties agree to act in good faith to execute all instruments, prepare all documents and take all actions as may be reasonable necessary to carry out the purposes of this Agreement. Unless hereafter specified, neither Party shall be responsible to perform the Services of the other.

1.8 Additional Services.

City shall have the right at any time during the performance of the Services, without invalidating this Agreement, to order extra services beyond that specified in the Scope of Services or to make changes by altering, adding to or deducting from the Services. No such extra services may be undertaken unless a written order is first given by the Contract Officer to Consultant, which written order incorporates therein an adjustment in (i) the Contract Sum (as defined in Section 2.1), and/or (ii) the Schedule of Performance, (as defined in Section 3.2), and which written order is approved in writing by Consultant. Any increase in compensation of up to ten percent (10%) of the Contract Sum, or $25,000, whichever is less; or in the Schedule of Performance of up to one hundred eighty (180) days may be approved by the Contract Officer. Any greater increases, taken either separately or cumulatively, must be approved by City Council. It is expressly understood by Consultant that the provisions of this Section shall not apply to Services which are specifically set forth in the Scope of Services or which are reasonably contemplated therein. Consultant hereby acknowledges that it accepts the risk that the Services to be provided pursuant to the Scope of Services may be more costly or time consuming than Consultant anticipates and that Consultant shall not be entitled to additional compensation therefor.

1.9 Facilities and Equipment.

Except as otherwise provided, Consultant shall, at its own cost and expense, provide all facilities and equipment necessary to perform the Services required by this Agreement. City shall make available to Consultant only physical facilities such as desks, filing cabinets, and conference space ("City Facilities"), as City deems, in its sole discretion, to be reasonably necessary for Consultant's use while consulting with City employees and reviewing records and the information in possession of City. The location, quality, and time of furnishing City Facilities shall be in the sole discretion of City. In no event shall City be required to furnish any facilities that may involve incurring any direct expense, including but not limited to a computer, long distance telephone, network data, internet or other communication charges, vehicles and reproduction facilities.

1.10 Special Requirements.

Additional terms and conditions of this Agreement, if any, which are made a part hereof are set forth in the "Special Requirements" attached hereto as **Exhibit B** and incorporated herein by this reference. In the event of a conflict between the provisions of **Exhibit B** and any other provisions of this Agreement, the provisions of **Exhibit B** shall govern.

1.11 Corrections.

In addition to the indemnification obligations set forth in Article 4, and Sections 1.4, 1.13, 5.3, 5.4, and 6.3, Consultant shall correct, at its expense, all errors in the Services which may be disclosed during City's review of Consultant's report or plans. Should Consultant fail to make such correction(s) in a reasonably timely manner, such correction(s) may be made by City, and the cost thereof shall be charged to Consultant. In addition to all other available remedies, City may deduct the cost of such correction(s) from any retention amount held by City, or may withhold payment otherwise owed Consultant under this Agreement up to the amount of the cost of correction(s), as provided in Section 6.3.

1.12 Party Representatives.

A. Contract Officer: For the purposes of this Agreement, the Contract Officer shall be the City Manager, or such other person designated in writing by the City Manager ("Contract Officer"). Unless otherwise specified herein, any approval of City required hereunder shall mean the approval of the Contract Officer. The Contract Officer shall have authority, if specified in writing by the City Manager, to sign all documents on behalf of City required hereunder to carry out the terms of this Agreement.

B. Principals and Personnel of Consultant.

1) Consultant Representative: The following principal of Consultant is hereby designated as being the Consultant Representative authorized to act on Consultant's behalf regarding the Services specified herein and make all decisions in connection therewith:

Name	Title
Richard O'Neill	Associate Principal

It is expressly understood that the experience, knowledge, capability and reputation of the foregoing Consultant Representative were a substantial inducement for City to enter into this Agreement. Therefore, the foregoing Consultant Representative shall be responsible during the term of this Agreement for directing all activities of Consultant and devoting sufficient time to personally supervise the Services hereunder. All personnel of Consultant, and any authorized agents, shall at all times be under the exclusive direction and control of the Consultant Representative. For purposes of this Agreement, the foregoing Consultant Representative may not be replaced nor may their responsibilities be substantially reduced or reassigned by Consultant without the express written approval of City. It shall be Consultant's responsibility to assure that the Contract Officer is kept informed of the progress of the performance of the Services, and Consultant shall refer any decisions which must be made by City to the Contract Officer.

2) Consultant's Personnel: Consultant has, or will secure at its own expense, all personnel required to perform the Services required under this Agreement. All of the Services required under this Agreement shall be performed by Consultant or under its supervision, and all personnel engaged in the Services shall be qualified to perform such Services. Consultant shall make every reasonable effort to maintain the stability and continuity of Consultant's staff and sub-contractors, if any, assigned to perform the Services required under this Agreement. Consultant shall notify City of all changes in Consultant's staff and sub-contractors, if any, assigned to perform the Services required under this Agreement, prior to and during any such performance. In the event that City, in its sole discretion, at any time during the term of this Agreement, desires to reassign any staff or sub-contractor of Consultant, City shall give notice as set forth in Section 8.1. Consultant shall, immediately upon the receipt of the notice to re-assign staff from City, reassign such person or persons.

1.13 Independent Contractor.

A. Consultant is an independent contractor and not an employee of City. Consultant shall have no power to incur any debt, obligation, or liability on behalf of City. All Services provided pursuant to this Agreement shall be performed by Consultant or under its supervision. Consultant will determine the means, methods, and details of performing the Services. Any additional personnel performing Services under this Agreement on behalf of Consultant shall also not be employees of City and shall at all times be under Consultant's exclusive direction and control. Consultant shall pay all wages, salaries, and other amounts due such personnel in connection with their performance of Services under this Agreement and as required by law. Consultant shall be responsible for all reports and obligations respecting such additional personnel, including, but not limited to: social security taxes, income tax withholding, unemployment insurance, disability insurance, and workers' compensation insurance.

B. Consultant shall indemnify and hold harmless City and its elected officials, officers, employees, servants, designated volunteers, and agents serving as independent contractors in the role of City officials, from any and all liability, damages, claims, costs and expenses of any nature to the extent arising from Consultant's personnel practices. City shall have the right to offset against the amount of any fees due to Consultant under this Agreement any amount due to City from Consultant as a result of Consultant's failure to promptly pay to City any reimbursement or indemnification arising under this Section.

1.14 Prohibition Against Subcontracting or Assignment.

The experience, knowledge, capability and reputation of Consultant, the Consultant Representative and employees were a substantial inducement for City to enter into this Agreement. Therefore, Consultant shall not contract with any other entity to perform in whole or in part the Services required hereunder without the express written approval of City. In addition, neither this Agreement nor any interest herein may be transferred, assigned, conveyed, hypothecated or encumbered voluntarily or by operation of law, whether for the benefit of creditors or otherwise, without the prior written approval of City. Transfers restricted hereunder shall include the transfer to any person or group of persons acting in concert of more than twenty-five percent (25%) of the present ownership and/or control of Consultant, taking all transfers into account on a cumulative basis. In the event of any such unapproved transfer, including any bankruptcy proceeding, this

Agreement shall be void. No approved transfer shall release Consultant or any surety of Consultant of any liability hereunder without the express consent of City.

ARTICLE 2. COMPENSATION AND METHOD OF PAYMENT.

2.1 Contract Sum.

Subject to any limitations set forth in this Agreement, as full compensation for Services satisfactorily rendered, City shall pay Consultant at the hourly rates set forth in **Exhibit C-1** and the not-to-exceed sub-budget rates set forth in the "Schedule of Compensation" attached hereto as **Exhibit C** and incorporated herein by this reference. In no event shall Consultant be paid more than Three Hundred Eighty-Six Thousand Eight Hundred Ninety-Five ($386,895.00) (the "Contract Sum"). The Contract Sum shall include the attendance of Consultant at all project meetings reasonably deemed necessary by City. Coordination of the performance of the Services with City is a critical component of the Services. If Consultant is required to attend additional meetings to facilitate such coordination, Consultant shall not be entitled to any additional compensation for attending those meetings.

2.2 Method of Compensation.

The method of compensation may include: (i) a lump sum payment upon completion of the Services, (ii) payment in accordance with specified tasks or the percentage of completion of the Services, (iii) payment for time and materials based upon Consultant's rates as specified in the Schedule of Compensation, provided that time estimates are provided for the performance of sub tasks, but not exceeding the Contract Sum or (iv) such other methods as may be specified in the Schedule of Compensation.

2.3 Reimbursable Expenses.

City shall only reimburse Consultant for those actual and necessary expenses expressly set forth in **Exhibit C**. Reimbursable expenses may include reimbursement for actual and necessary expenditures for reproduction costs, telephone expenses, and travel expenses approved by the Contract Officer in advance, or actual sub-contractor expenses of an approved sub-contractor pursuant to Section 1.14, and only if specified in the Schedule of Compensation.

2.4 Unauthorized Services and Expenses.

City will not pay for any Services or reimburse for any expenses incurred which are not specified in the Scope of Services, unless authorized in writing as set forth in Section 1.8 of this Agreement. City shall make payment for such authorized additional Services and expenses in accordance with Article 2 of this Agreement.

2.5 Invoices.

Each month Consultant shall furnish to City an original invoice for all Services performed and expenses incurred during the preceding month. Each such invoice shall contain all of the information set forth in Section III of **Exhibit C** to this Agreement. By submitting an invoice for payment under this Agreement, Consultant is certifying compliance with all provisions of the

Agreement. Consultant shall not invoice City for any duplicate Services performed by more than one person.

City shall independently review each invoice submitted by Consultant to determine whether the Services performed and expenses incurred are in compliance with the provisions of this Agreement. City will use its best efforts to cause Consultant to be paid within thirty (30) days of receipt of Consultant's correct and undisputed invoice, except as to any charges for Services performed or expenses incurred by Consultant which are disputed by City, or as provided in Section 6.3. In the event any charges or expenses are disputed by City, the original invoice shall be returned by City to Consultant for correction and resubmission. Review and payment by City of any invoice provided by Consultant shall not constitute waiver of any rights or remedies provided herein or any applicable law.

2.6 Waiver.

Payment to Consultant for Services performed pursuant to this Agreement shall not be deemed to waive any defects in Services performed by Consultant.

ARTICLE 3. PERFORMANCE SCHEDULE

3.1 Time of Essence.

Time is of the essence in the performance of this Agreement; provided, however, that the foregoing shall not be construed to limit or deprive a Party of the benefits of any grace or use period allowed in this Agreement.

3.2 Schedule of Performance.

Consultant shall commence the Services pursuant to this Agreement upon receipt of a written notice to proceed and shall perform all Services within the time period(s) established in the "Schedule of Performance" attached hereto as **Exhibit D** and incorporated herein by this reference.

3.3 Force Majeure.

The time period(s) specified in the Schedule of Performance for performance of the Services rendered pursuant to this Agreement may be extended because of any delays due to unforeseeable causes beyond the control and without the fault or negligence of Consultant. Such unforeseeable consequences include, but are not restricted to, acts of God or public enemy, unusually severe weather, fires, earthquakes, floods, epidemics, quarantine restrictions, riots, strikes, freight embargoes, wars, litigation, and/or acts of any governmental agency, including City, if Consultant shall within ten (10) days of the commencement of such delay notify the Contract Officer in writing of the causes of the delay. The Contract Officer shall ascertain the facts and the extent of delay, and extend the time for performing the Services for the period of the enforced delay when and if in the judgment of the Contract Officer such delay is justified, subject to the provisions of Section 1.8. The Contract Officer's determination (or the City Council's determination, in the event the period of enforced delay exceeds the period specified in Section 1.8) shall be final and conclusive upon the Parties to this Agreement. In no event shall Consultant

be entitled to recover damages against City for any delay in the performance of this Agreement, however caused; Consultant's sole remedy shall be the extension of the Agreement pursuant to this Section.

3.4 Term.

The Term of this Agreement shall be from the Effective Date through June 30, 2024, unless sooner terminated as provided in Article 6 of this Agreement or extended as provided in Sections 1.8 and 3.3 of this Agreement. Maximum term and any subsequent amendment or modification shall not exceed five (5) years.

ARTICLE 4. INSURANCE AND INDEMNIFICATION

4.1 Minimum Scope and Limits of Insurance.

Consultant shall procure and at all times during the term of this Agreement carry, maintain, and keep in full force and effect, insurance as follows:

A. Commercial General Liability Insurance with a minimum limit of $1,000,000.00 per occurrence for bodily injury, personal injury and property damage and a general aggregate limit of $2,000,000.00 per project or location. If Consultant is a limited liability company, the commercial general liability coverage shall be amended so that Consultant and its managers, members, affiliates, employees, agents and other persons necessary or incidental to its operation are insureds.

B. Automobile Liability Insurance for any owned, non-owned or hired vehicle used in connection with the performance of this Agreement with a combined single limit of $1,000,000.00 per accident for bodily injury and property damage. If Consultant does not use any owned, non-owned or hired vehicles in the performance of Services under this Agreement, Consultant shall obtain a non-owned auto endorsement to the Commercial General Liability policy.

C. Workers' Compensation Insurance as required by the State of California and Employer's Liability Insurance with a minimum limit of $1,000,000.00 per accident for bodily injury or disease. If Consultant has no employees while performing Services under this Agreement, workers' compensation policy is not required; however, Consultant shall execute a declaration that it has no employees.

D. Professional Liability/Errors and Omissions Insurance with minimum limits of $1,000,000.00 per claim and in the aggregate.

4.2 Acceptability of Insurers.

The insurance policies required under this Article shall be issued by an insurer admitted to write insurance in the State of California with a rating of A:VII or better in the latest

edition of the A.M. Best Insurance Rating Guide. Self-insurance shall not be considered to comply with the insurance requirements under this Article.

4.3 Additional Insured.

The commercial general and automobile liability policies shall contain an endorsement naming City, its officers, employees, agents and volunteers as additional insureds.

4.4 Primary and Non-Contributing.

The insurance policies required under this Article shall apply on a primary non-contributing basis in relation to any other insurance or self-insurance available to City. Any insurance or self-insurance maintained by City, its officers, employees, agents or volunteers, shall be in excess of Consultant's insurance and shall not contribute with it.

4.5 Consultant's Waiver of Subrogation.

The insurance policies required under this Article shall not prohibit Consultant and Consultant's employees, agents or sub-contractors from waiving the right of subrogation prior to a loss. Consultant hereby waives all rights of subrogation against City.

4.6 Deductibles and Self-Insured Retentions.

Any deductibles or self-insured retentions must be declared to and approved by City. At City's option, Consultant shall either reduce or eliminate the deductibles or self-insured retentions with respect to City; or Consultant shall procure a bond guaranteeing payment of losses and expenses.

4.7 Cancellations or Modifications to Coverage.

Consultant shall not cancel, reduce or otherwise modify the insurance policies required by this Article during the term of this Agreement. The commercial general and automobile liability policies required under this Agreement shall be endorsed to state that should the issuing insurer cancel the policy before the expiration date, the issuing insurer will endeavor to mail 30 days' prior written notice to City. If any insurance policy required under this Article is canceled or reduced in coverage or limits, Consultant shall, within two (2) Business Days (as defined in Section 8.12) of notice from the insurer, phone, fax or notify City via certified mail, return receipt requested, of the cancellation of or changes to the policy.

4.8 City Remedy for Noncompliance.

If Consultant does not maintain the policies of insurance required under this Article in full force and effect during the term of this Agreement, or in the event any of Consultant's policies do not comply with the requirements under this Article, City may either immediately terminate this Agreement or, if insurance is available at a reasonable cost, City may, but has no duty to, take out the necessary insurance and pay, at Consultant's expense, the premium thereon. Consultant shall promptly reimburse City for any premium paid by City, or City may withhold amounts sufficient to pay the premiums from payments due to Consultant.

4.9 Evidence of Insurance.

Prior to the performance of Services under this Agreement, Consultant shall furnish the City Clerk with a certificate or certificates of insurance and all original endorsements evidencing and effecting the coverages required under this Article. The endorsements are subject to City's approval. Consultant may provide complete, certified copies of all required insurance policies to City. Consultant shall maintain current endorsements on file with the City Clerk. Consultant shall provide proof to the City Clerk that insurance policies expiring during the term of this Agreement have been renewed or replaced with other policies providing at least the same coverage. Consultant shall furnish such proof at least two (2) weeks prior to the expiration of the coverages.

4.10 Indemnity Requirements not Limiting.

Procurement of insurance by Consultant shall not be construed as a limitation of Consultant's liability or as full performance of Consultant's duty to indemnify City under this Agreement.

4.11 Sub-contractor Insurance Requirements.

Consultant shall require each of its sub-contractors that perform Services under this Agreement to maintain insurance coverage that meets all of the requirements of this Article.

4.12 Indemnification, Hold Harmless, and Duty to Defend.

A. Indemnification of City.

1) Indemnity for Design Professional Services. To the fullest extent permitted by law, Consultant shall, at its sole cost and expense, protect, indemnify, and hold harmless City and its elected officials, officers, attorneys, agents, employees, designated volunteers, successors, assigns and those City agents serving as independent contractors in the role of City officials (collectively "Indemnitees"), from and against any and all damages, costs, expenses, liabilities, claims, demands, causes of action, proceedings, judgments, penalties, liens, and losses of any nature whatsoever, including fees of accountants, attorneys, or other professionals and all costs associated therewith, and reimbursement of attorney's fees and costs of defense (collectively "Liabilities"), whether actual, alleged or threatened, which arise out of, are claimed to arise out of, pertain to, or relate to, in whole or in part, the negligence, recklessness or willful misconduct of Consultant, its officers, agents, servants, employees, subcontractors, material men, contractors or their officers, agents, servants or employees (or any entity or individual that Consultant shall bear the legal liability thereof) in the performance of design professional services under this Agreement by a "design professional," as the term is defined under California Civil Code Section 2782.8(c).

2) Other Indemnities. Other than in the performance of design professional services, and to the fullest extent permitted by law, Consultant shall, at its sole cost and expense, defend, hold harmless and indemnify Indemnitees from and against any and all damages, costs, expenses, liabilities, claims, demands, causes of action, proceedings, expenses, judgments, penalties, liens, and losses of any nature whatsoever, including fees of accountants, attorneys, or other professionals and all costs associated therewith and the payment of all consequential

damages (collectively "Claims"), at law or in equity, whether actual, alleged or threatened, which arise out of, are claimed to arise out of, pertain to, or relate to the acts or omissions of Consultant, its officers, agents, servants, employees, sub-contractors, materialmen, consultants or their officers, agents, servants or employees (or any entity or individual that Consultant shall bear the legal liability thereof) in the performance of this Agreement, including the Indemnitees' active or passive negligence, except for Claims arising from the sole negligence or willful misconduct of the Indemnitees as determined by court decision or by the agreement of the Parties. Consultant shall defend the Indemnitees in any action or actions filed in connection with any Claims with counsel of the Indemnitees' choice, and shall pay all costs and expenses, including all attorneys' fees and experts' costs actually incurred in connection with such defense. Consultant shall reimburse the Indemnitees for any and all legal expenses and costs incurred by Indemnitees in connection therewith.

3) Consultant shall pay all required taxes on amounts paid to Consultant under this Agreement, and indemnify and hold City harmless from any and all taxes, assessments, penalties, and interest asserted against City by reason of the independent contractor relationship created by this Agreement. Consultant shall fully comply with the workers' compensation law regarding Consultant and Consultant's employees. Consultant shall indemnify and hold City harmless from any failure of Consultant to comply with applicable workers' compensation laws. City may offset against the amount of any fees due to Consultant under this Agreement any amount due to City from Consultant as a result of Consultant's failure to promptly pay to City any reimbursement or indemnification arising under this subparagraph A.3.

4) Consultant shall obtain executed indemnity agreements with provisions identical to those in this Article from each and every sub-contractor or any other person or entity involved by, for, with or on behalf of Consultant in the performance of this Agreement. If Consultant fails to obtain such indemnities, Consultant shall be fully responsible and indemnify, hold harmless and defend the Indemnitees from and against any and all Liabilities and Claims, in law or in equity, whether actual, alleged or threatened, which arise out of, are claimed to arise out of, pertain to, or relate to the acts or omissions of Consultant's sub-contractor, its officers, agents, servants, employees, sub-contractors, materialmen, contractors or their officers, agents, servants or employees (or any entity or individual that Consultant's sub-contractor shall bear the legal liability thereof) in the performance of this Agreement, including the Indemnitees' active or passive negligence, except for Liabilities and Claims arising from the sole negligence or willful misconduct of the Indemnitees, as determined by court decision or by the agreement of the Parties.

B. Workers' Compensation Acts not Limiting. Consultant's indemnifications and obligations under this Article, or any other provision of this Agreement, shall not be limited by the provisions of any workers' compensation act or similar act. Consultant expressly waives its statutory immunity under such statutes or laws as to City, its officers, agents, employees and volunteers.

C. Insurance Requirements not Limiting. City does not, and shall not, waive any rights that it may possess against Consultant because of the acceptance by City, or the deposit with City, of any insurance policy or certificate required pursuant to this Agreement. The indemnities in this Article shall apply regardless of whether or not any insurance policies are determined to be applicable to the Liabilities, tax, assessment, penalty or interest asserted against City.

D. Survival of Terms. Consultant's indemnifications and obligations under this Article shall survive the expiration or termination of this Agreement.

ARTICLE 5. RECORDS, REPORTS, AND RELEASE OF INFORMATION

5.1 Service Records.

Consultant shall keep, and require sub-contractors to keep, such ledgers, books of accounts, invoices, vouchers, canceled checks, reports, studies or other documents relating to the disbursements charged to City and Services performed hereunder (the "Service Records"), as shall be necessary to perform the Services required by this Agreement and enable the Contract Officer to evaluate the performance of such Services. Any and all such Service Records shall be maintained in accordance with generally accepted accounting principles and shall be complete and detailed. The Contract Officer shall have full and free access to such Service Records at all times during normal business hours of City, including the right to inspect, copy, audit and make copies and transcripts from such Service Records. Such Service Records shall be maintained for a period of three (3) years following completion of the Services hereunder, and City shall have access to such Service Records in the event any audit is required. In the event of dissolution of Consultant's business, custody of the Service Records may be given to City, and access shall be provided by Consultant's successor in interest ("Consultant's Successor"). If custody of the Service Records is given to Consultant's Successor, Consultant shall give written notice to City of the transfer of the Service Records to Consultant's Successor. The notice shall include contact information (address and telephone number) for Consultant's Successor, and access shall be provided to City by Consultant's Successor.

5.2 Reports.

Consultant shall periodically prepare and submit to the Contract Officer such reports concerning the performance of the Services required by this Agreement as the Contract Officer shall require. Consultant hereby acknowledges that City is greatly concerned about the cost of Services to be performed pursuant to this Agreement. For this reason, Consultant agrees that if Consultant becomes aware of any facts, circumstances, techniques, or events that may or will materially increase or decrease the cost of the Services contemplated herein, Consultant shall promptly notify the Contract Officer of that fact, circumstance, technique or event and the estimated increased or decreased cost related thereto.

5.3 Ownership of Documents.

All drawings, specifications, maps, designs, photographs, studies, surveys, data, notes, computer files, reports, records, documents and other materials (the "Consultant Documents") prepared by Consultant, its employees, sub-contractors and agents in the performance of this Agreement shall be the property of City and shall be delivered to City upon request of the Contract Officer or upon the termination of this Agreement. Consultant shall have no claim for further employment or additional compensation as a result of the exercise by City of its full rights of ownership use, reuse, or assignment of the Consultant Documents hereunder. Any use, reuse or assignment of such completed Consultant Documents for other projects and/or use of uncompleted Consultant Documents without specific written authorization by Consultant will be at City's sole

risk and without liability to Consultant, and Consultant's guarantee and warranties shall not extend to such use or assignment. Consultant may retain copies of such Consultant Documents for its own use. Consultant shall have an unrestricted right to use the concepts embodied therein. All sub-contractors shall provide for assignment to City of all Consultant Documents prepared by them; and in the event Consultant fails to secure such assignment, Consultant shall indemnify City for all damages resulting therefrom.

5.4 Confidentiality and Release of Information.

A. All information gained or work product produced by Consultant in performance of this Agreement shall be considered confidential, unless such information is in the public domain or already known to Consultant. Consultant shall not release or disclose any such information or work product to persons or entities other than City without prior written authorization from the Contract Officer.

B. Consultant, its officers, employees, agents or sub-contractors, shall not, without prior written authorization from the Contract Officer or unless requested by the City Attorney, voluntarily provide documents, declarations, letters of support, testimony at depositions, response to interrogatories or other information concerning the Services performed under this Agreement. Response to a subpoena or court order shall not be considered "voluntary" provided Consultant gives City notice of such court order or subpoena.

C. If Consultant, or any officer, employee, agent or sub-contractor of Consultant, provides any information or work product in violation of this Agreement, then City shall have the right to reimbursement and indemnity from Consultant for any damages, costs and fees, including attorneys' fees, caused by or incurred as a result of Consultant's conduct.

D. Consultant shall promptly notify City should Consultant, its officers, employees, agents or sub-contractors be served with any summons, complaint, subpoena, notice of deposition, request for documents, interrogatories, request for admissions or other discovery request, court order or subpoena from any Party regarding this Agreement and the Services performed thereunder. City retains the right, but has no obligation, to represent Consultant or be present at any deposition, hearing or similar proceeding. Consultant agrees to cooperate fully with City and to provide City with the opportunity to review any response to discovery requests provided by Consultant. However, this right to review any such response does not imply or mean the right by City to control, direct, or rewrite the response.

ARTICLE 6. ENFORCEMENT OF AGREEMENT AND TERMINATION

6.1 California Law.

This Agreement, and any dispute arising from the relationship between the Parties to this Agreement, shall be interpreted, construed and governed both as to validity and to performance of the Parties in accordance with the laws of the State of California. Legal actions concerning any dispute, claim or matter arising out of or in relation to this Agreement shall be instituted in the Superior Court of the County of Riverside, State of California, or any other appropriate court in such county, and Consultant covenants and agrees to submit to the personal jurisdiction of such

court in the event of such action. In the event of litigation in a U.S. District Court, venue shall lie exclusively in the Central District of California, in Riverside.

6.2 Disputes; Default.

A. In the event that City determines Consultant is in default under the terms of this Agreement, City shall have no obligation or duty to continue compensating Consultant for any Services performed after the date of default. In addition to the provisions of Section 4.8, and the right to terminate pursuant to Section 6.7, if the City Manager determines that Consultant is in default in the performance of any of the terms or conditions of this Agreement, City may serve Consultant with written notice of the default. Consultant shall have ten (10) calendar days after service upon it of the notice in which to cure the default by rendering a satisfactory performance. In the event that Consultant fails to cure its default within such period of time, City may, notwithstanding any other provision of this Agreement, terminate this Agreement without further notice and without prejudice to any other remedy to which it may be entitled at law, in equity or under this Agreement.

B. In the event of termination pursuant to this Section, City may take over the Services and prosecute the same to completion by contract or otherwise, and Consultant shall be liable to the extent that the total cost for completion of the Services required hereunder exceeds the compensation herein stipulated (provided that City shall use reasonable efforts to mitigate such damages), and City may withhold any payments to Consultant for the purpose of set-off or partial payment of the amounts owed City as provided in Section 6.3.

6.3 Retention of Funds.

Consultant hereby authorizes City to deduct from any amount payable to Consultant (whether or not arising out of this Agreement): (i) any payment amount of which may be in dispute hereunder or which is necessary to compensate City for any losses, costs, liabilities, or damages suffered by City, (ii) all amounts retained pursuant to the provisions of Section 4.8, (iii) all amounts for which City may be liable to third parties, by reason of Consultant's acts or omissions in performing or failing to perform Consultant's obligation under this Agreement, and (iv) all payments due or that become due to Consultant during the period that Consultant or any of its sub-contractors fail to maintain any required insurance in full force and effect, until notice is received by City that the required insurance has been restored to full force and effect and that the premiums therefore have been paid for a period satisfactory to City, as provided in Section 4.9, above. In the event that any claim is made by a third party, the amount or validity of which is disputed by Consultant, or any indebtedness shall exist which shall appear to be the basis for a claim of lien, City may withhold from any payment due, without liability for interest because of such withholding, an amount sufficient to cover such claim. The failure of City to exercise such right to deduct or to withhold shall not, however, affect the obligations of Consultant to insure, indemnify, and protect City as elsewhere provided herein.

6.4 Waiver.

Waiver by any Party to this Agreement of any term, condition, or covenant of this Agreement shall not constitute a waiver of any other term, condition, or covenant. Waiver by any

Party of any breach of the provisions of this Agreement shall not constitute a waiver of any other provision or a waiver of any subsequent breach or violation of any provision of this Agreement. Acceptance by City of any Services by Consultant shall not constitute a waiver of any of the provisions of this Agreement. No delay or omission in the exercise of any right or remedy by a non-defaulting Party on any default shall impair such right or remedy or be construed as a waiver. Any waiver by either Party of any default must be in writing, and shall not be a waiver of any other default concerning the same or any other provision of this Agreement.

6.5 Rights and Remedies are Cumulative.

Except with respect to rights and remedies expressly declared to be exclusive in this Agreement, the rights and remedies of the Parties are cumulative and the exercise by either Party of one or more of such rights or remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default or any other default by the other Party.

6.6 Legal Action.

In addition to any other rights or remedies, either Party may take legal action, in law or in equity, to cure, correct or remedy any default, to recover damages for any default, to compel specific performance of this Agreement, to obtain declaratory or injunctive relief, or to obtain any other remedy consistent with the purposes of this Agreement. Notwithstanding any contrary provision herein, Consultant must file a statutory claim pursuant to Government Code Sections 905 et seq. and 910 et seq., in order to pursue a legal action against City under this Agreement.

6.7 Termination Prior to Expiration of Term.

This Article 6 shall govern any termination of this Agreement except as specifically provided in Section 6.2 for termination for default of Consultant. City reserves the right to terminate this Agreement at any time, with or without cause, upon thirty (30) days' written notice to Consultant, except that where termination is due to the fault of Consultant, the period of notice may be a shorter time as may be determined by the Contract Officer. In addition, Consultant reserves the right to terminate this Agreement at any time, with or without cause, upon sixty (60) days' written notice to City, except that where termination is due to the fault of City, the period of notice may be a shorter time as Consultant may determine. Upon receipt of any notice of termination, Consultant shall immediately cease all Services hereunder except such as may be specifically approved by the Contract Officer. Except where Consultant has initiated termination, Consultant shall be entitled to compensation for all Services rendered prior to the effective date of the notice of termination and for any Services authorized by the Contract Officer thereafter in accordance with the Schedule of Compensation or such as may be approved by the Contract Officer, except as provided in Section 6.3. In the event Consultant has initiated termination, Consultant shall be entitled to compensation only for the reasonable value of the work product actually produced hereunder. In the event of termination without cause pursuant to this Section, the terminating Party need not provide the non-terminating Party with the opportunity to cure pursuant to Section 6.2.

6.8 Attorneys' Fees.

In any litigation or other proceeding by which a Party seeks to enforce its rights under this Agreement (whether in contract, tort or both) or seeks a declaration of any rights or obligations under this Agreement, the prevailing Party in such action or proceeding, in addition to any other relief which may be granted, whether legal or equitable, shall be entitled to reasonable attorneys' fees. Attorneys' fees shall include attorney's fees on any appeal, and in addition the Party entitled to attorneys' fees shall be entitled to all other reasonable costs for investigating such action, taking depositions and discovery and all other necessary costs the court allows which are incurred in such litigation. All such fees shall be deemed to have accrued on commencement of such action and shall be enforceable whether or not such action is prosecuted to judgment.

ARTICLE 7. CITY OFFICERS AND EMPLOYEES: NON-DISCRIMINATION

7.1 Non-liability of City Officers and Employees.

No officer or employee of City shall be personally liable to Consultant, or Consultant's Successor, in the event of any default or breach by City or for any amount which may become due to Consultant or Consultant's Successor, or for breach of any obligation of the terms of this Agreement.

7.2 Conflict of Interest.

Consultant covenants that neither it, nor any officer or principal of its firm, has or shall acquire any interest, directly or indirectly, which would conflict in any manner with the interests of City or which would in any way hinder Consultant's performance of Services under this Agreement. Consultant further covenants that in the performance of this Agreement, no person having any such interest shall be employed by it as an officer, employee, agent or sub-contractor without the express written consent of the Contract Officer. Consultant agrees to at all times avoid conflicts of interest or the appearance of any conflicts of interest with the interests of City in the performance of this Agreement.

No officer or employee of City shall have any direct or indirect financial interest in this Agreement within the scope of Government Code section 1090, nor shall any such officer or employee make, participate in making, or use his or her official position to influence, any City decision relating to the Agreement which has a material financial effect on his or her financial interests or the financial interests of any corporation, partnership or association in which he or she is, directly or indirectly, interested, in violation of any State statute or regulation. Consultant warrants that it has not paid or given, and will not pay or give any third party any money or other consideration for obtaining this Agreement.

Consultant and its officers, employees, associates and sub-contractors, if any, shall comply with all conflict of interest statutes of the State of California applicable to Consultant's Services under this Agreement, including the Political Reform Act (Gov. Code § 81000, et seq.) and Government Code Section 1090. During the term of this Agreement, Consultant may perform similar services for other clients; but Consultant and its officers, employees, associates and sub-contractors shall not, without the Contract Officer's prior written approval, perform services for another person or entity for whom Consultant is not currently performing services that would

require Consultant or one of its officers, employees, associates or sub-contractors to abstain from a decision under this Agreement pursuant to a conflict of interest statute. Consultant shall incorporate a clause substantially similar to this Section into any subcontract that Consultant executes in connection with the performance of this Agreement.

7.3 Covenant Against Discrimination.

Consultant covenants that, by and for itself, its heirs, executors, assigns, and all persons claiming under or through them, that there shall be no discrimination against or segregation of, any person or group of persons on account of race, color, creed, religion, sex, gender, sexual orientation, marital status, national origin, or ancestry in the performance of this Agreement. Consultant shall take affirmative action to insure that applicants are employed, and that employees are treated during employment, without regard to their race, color, creed, religion, sex, marital status, national origin, or ancestry, or other protected class.

7.4 Unauthorized Aliens.

Consultant hereby promises and agrees to comply with all of the provisions of the Federal Immigration and Nationality Act, 8 U.S.C.A. §§ 1101, et seq., as amended, and in connection therewith, shall not employ unauthorized aliens as defined therein. Should Consultant so employ such unauthorized aliens for the performance of Services covered by this Agreement, and should the any liability or sanctions be imposed against City for such use of unauthorized aliens, Consultant hereby agrees to and shall reimburse City for the cost of all such liabilities or sanctions imposed, together with any and all costs, including attorneys' fees, incurred by City.

ARTICLE 8. MISCELLANEOUS PROVISIONS

8.1 Notices.

Any notice, demand, request, document, consent, approval, bill, invoice, report or other communication required or permitted under this Agreement shall be in writing and conclusively deemed effective: (a) on confirmed delivery by courier service or overnight delivery service during Consultant's and City's regular business hours; or (b) three (3) Business Days after deposit in the United States mail, by certified or registered mail, and addressed to the Party to be notified as set forth below:

If to City

Attn: Nathan Smith
Deputy Director of Engineering
City of Banning
99 East Ramsey Street
Banning, California 92220
Email: nsmith@banningca.gov

With a courtesy copy to:	Serita R. Young, City Attorney Richards, Watson & Gershon 350 South Grand Avenue, 37th Floor Los Angeles, California 90071 Email: SYoung@rwglaw.com
If to Consultant:	Attn: Rick O'Neill Rick Engineering Company 1770 Iowa Avenue, Suite 100 Riverside, CA 92507

8.2 Interpretation.

The terms of this Agreement shall be construed in accordance with the meaning of the language used and shall not be construed for or against either Party by reason of the authorship of this Agreement or any other rule of construction which might otherwise apply.

8.3 Counterparts.

This Agreement may be executed in counterparts, each of which shall be deemed to be an original, and such counterparts shall constitute one and the same instrument.

8.4 Integration; Amendment.

This Agreement, and all exhibits referred to in this Agreement, constitute the final, complete and exclusive statement of the terms of the agreement between the Parties pertaining to the subject matter of this Agreement and supersede all other and cancels any and all previous negotiations, arrangements, agreements and understandings, if any, between the Parties, and none shall be used to interpret this Agreement. No Party has been induced to enter into this Agreement by, nor is any Party relying on, any representation or warranty except those expressly set forth in this Agreement. No amendment to or modification of this Agreement, nor any provision or breach hereof waived, shall be valid unless made in writing and approved by Consultant and by City Council. The Parties agree that this requirement for written modifications cannot be waived and that any attempted waiver shall be void.

8.5 Severability.

In the event that any one or more of the phrases, sentences, clauses, paragraphs, or sections contained in this Agreement shall be declared invalid or unenforceable by a valid judgment or decree of a court of competent jurisdiction, such invalidity or unenforceability shall not affect any of the remaining phrases, sentences, clauses, paragraphs, or sections of this Agreement which are hereby declared as severable and shall be interpreted to carry out the intent of the Parties hereunder unless the invalid provision is so material that its invalidity deprives either Party of the basic benefit of their bargain or renders this Agreement meaningless.

8.6 Mutual Cooperation.

A. City's Cooperation. City shall provide Consultant with all pertinent data, documents and other requested information as is reasonably available for Consultant's proper performance of the Services required under this Agreement.

B. Consultant's Cooperation. In the event any claim or action is brought against City relating to Consultant's performance of Services rendered under this Agreement, Consultant shall render any reasonable assistance that City requires.

8.7 No Third Party Beneficiaries Intended.

This Agreement is made solely for the benefit of the Parties to this Agreement and their respective successors and assigns, and no other person or entity may have or acquire a right by virtue of this Agreement.

8.8 Final Payment Acceptance Constitutes Release.

The acceptance by Consultant of the final payment made under this Agreement shall operate as and be a release of City from all claims and liabilities for compensation to Consultant for anything done, furnished or relating to Consultant's Services. Acceptance of payment shall be any negotiation of City's check or the failure to make a written extra compensation claim within ten (10) calendar days of the receipt of that check. However, approval or payment by City shall not constitute, nor be deemed, a release of the responsibility and liability of Consultant, its employees, sub-contractors and agents for the accuracy and competency of the information provided and/or Services performed; nor shall such approval or payment be deemed to be an assumption of such responsibility or liability by City for any defect or error in the Services prepared by Consultant, its employees, sub-contractors and agents.

8.9 Non-Appropriation of Funds.

Payments to be made to Consultant by City for Services performed within the current fiscal year which are within the current fiscal budget and within an available, unexhausted fund. In the event that City does not appropriate sufficient funds for payment of Consultant's Services beyond the current fiscal year, this Agreement shall cover payment for Consultant's Services only to the conclusion of the last fiscal year in which City appropriates sufficient funds and shall automatically terminate at the conclusion of such fiscal year.

8.10 Headings.

The headings in this Agreement are included solely for convenience of reference and shall not affect the interpretation of any provision of this Agreement or any of the rights or obligations of the Parties to this Agreement.

8.11 Word Usage.

Unless the context clearly requires otherwise, (a) the words "shall," "will" and "agrees" are mandatory and "may" is permissive; (b) "or" is not exclusive; and (c) "includes" or "including" are not limiting.

8.12 Business Days.

"Business Days" refers to days that the Banning City Hall is open for business.

8.13 Corporate Authority.

The persons executing this Agreement on behalf of the Parties hereto warrant that (i): such Party is duly organized and existing, (ii) they are duly authorized to execute and deliver this Agreement on behalf of that Party, (iii) by so executing this Agreement, such Party is formally bound to the provisions of this Agreement, and (iv) the entering into this Agreement does not violate any provision of any other Agreement to which that Party is bound. This Agreement shall be binding upon the heirs, executors, administrators, successors and assigns of the Parties.

8.14 Electronic Signatures.

Each Party may adopt as its signature an electronic identification consisting of a symbol or code that is affixed to or contained in each document transmitted by such Party ("electronic signature"). The Parties hereto herby agree that electronic signatures are acceptable, shall have the same force and effect under the law as original wet signatures, and shall be sufficient to verify that the Parties have executed this Agreement and such other documents transmitted by the Parties.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF the Parties hereto have executed this Agreement the day and year first hereinabove written.

CITY OF BANNING

Douglas Schulze, Date
City Manager

ATTEST:

Caroline Patton Date
Deputy City Clerk

APPROVED AS TO FORM:
Richards, Watson & Gershon

Serita R. Young Date
City Attorney

CONSULTANT

NAME: Date
TITLE:

NAME: Date
TITLE:

Tax ID No.

Address:

City Council Approval:_____

NOTE: PROOF OF AUTHORITY TO BIND CONTRACTING PARTY REQUIRED. APPROPRIATE ATTESTATIONS SHALL BE INCLUDED AS MAY BE REQUIRED BY THE BYLAWS, ARTICLES OF INCORPORATION, OR OTHER RULES OR REGULATIONS APPLICABLE TO CONSULTANT'S BUSINESS ENTITY.

EXHIBIT "A"
SCOPE OF SERVICES

I. Consultant will perform the following Services in connection with providing Engineer Design Services prepared in connection therewith:

II. As part of the Services, Consultant will prepare and deliver the following tangible work products and services to City:

SCOPE OF WORK

Rick Engineering Company (RICK) will perform the following services in connection with providing the design of a new ductile iron pipe (size TBD by city) water main in Ramsey Street between Sunset Avenue and Highland Home Road based on the following scope of work.

Task 1. Project Management

1.1 Kick-off Meeting and Project Management

After execution of the contract, Rick Engineering Company (RICK) will schedule and attend a kick-off meeting with the City of Banning (City) to discuss the project scope, goals, preliminary findings and alignment selected by the City, finalize the project schedule, and identify available as-built plans and studies. RICK will prepare the meeting agenda and provide the team with meeting minutes following the meeting.

RICK will provide project management of the project that includes preparation and maintenance of a project specific Work Plan. The Work Plan will include details of methodology of design, sequence of tasks lists of deliverables, milestone submittal schedule, summary of organizational responsibilities, and a communication plan with contacts of all team members. Additionally, RICK will provide utility coordination with the utility providers that have utilities along the alignment, and perform quality assurance and quality control prior to each milestone submittal, and in conformance with federal, state, and city standards.

Deliverables – Meeting agenda and minutes, Work Plan

1.2 Progress Meetings

RICK will schedule monthly progress meetings with the City and project team, that will be face to face or virtual, and facilitate additional meetings with the City departments/stakeholders as needed for the project during the project duration. Scope assumes 8 monthly meetings, that includes milestone design review / comment resolution meetings and an additional 3 project meetings.
RICK will prepare agendas and minutes for the meetings, distribute the minutes, and will also provide a monthly progress report to be included with the monthly invoice.

Deliverables – Meeting agendas and minutes

1.3 Invoicing

RICK will develop and provide a monthly invoice to the City. The invoice will include RICK labor costs, subconsultant invoices and direct expenses. Direct expenses will be supported by a copy of the receipt if applicable. Invoices shall include details of billed and remaining budget for each task, and will include the monthly progress report of the tasks completed, identify any outstanding issues to be resolved, and upcoming work to be performed.

Deliverable – Monthly invoices and progress reports

Task 2. Project Development

2.1 Utility Research, Base Mapping, and Site Reconnaissance

RICK will conduct research with the City of Banning, County of Riverside, and other governing agencies and utility companies for existing plans and maps of the adjacent area to be used for the design of the project.

RICK will conduct a field visit to collect visible information of project site. Research will consist of the private water systems that will be reconnected to the new/proposed waterline in Ramsey Street and the affected private properties. RICK will verify existing site data in terms of surrounding street system, geometry, parking, signing and striping, and private improvements and private water system appurtenances on the properties.

RICK will prepare a CAD file based on the boundary survey described below showing the existing utilities discovered in the research.

Deliverables - Photo log for any photos taken, letters to utility companies, utility as-built maps, and an AutoCAD drawing of the existing utilities.

2.1.1 Property Research

RICK will research City of Banning and County of Riverside survey records and record mapping for property and right of way information. RICK will also conduct a field survey to establish street centerline and rights of way of Ramsey Street within the project limits (between Sunset Avenue and Highland Home Road), Omar Street (between Ramsey and W. Jacinto View Road), W. Jacinto View Road (between Omar Street and Winchester Drive), and the property lines of the adjacent private properties and private properties that are affected by the relocation of water services. Survey basis of bearings and coordinates will be California State Plane Coordinates. Survey data and records analysis will be prepared within a CAD file establishing project mapping for centerline and right of

way, including intersecting streets. Base mapping will include existing easements. Easements will be researched to identify their applicability/inapplicability with new waterline alignments.

Deliverables - Field Review notes, photo log for any photos taken, and an AutoCAD drawing of the rights of ways and centerline.

2.1.2 Site Topography and Surveying

RICK will provide a supplemental field topography along the existing water line points of connection and where needed and the effected private properties (where water systems will be reconnected in Ramsey Street). Consultant will locate and dip existing sewer and storm drain manholes. Topography will be vertically controlled by local published benchmarks.

Deliverables – Field Review notes, photo log for any photos taken, and CAD file with survey points.

2.1.3 Aerial Topography

RICK will provide an aerial topography of the project site consisting of surface utility appurtenances and improvements such as curb, edge of pavement, drainage inlets, valve cans, fences, driveways, mailboxes, utility vaults, power poles, signs, lights, traffic signals, sidewalks, pedestrian ramps, and notable grade features.

Deliverables – 40-scale at 1-foot contours

2.2 Potholing

RICK's subconsultant, C Below, will perform potholing for the project. C Below will perform forty (40) potholes as indicated in the RFP. A standard pothole is 12 in. x 12 in, performed to the top of pipe or encasement with sand backfill and a permanent surface patch. Potholes are assumed to be 5' in depth. Potholes include water line tie-in points and underground utility crossings. Potholes will also be used to locate the old Highway 99 concrete by setting alignment of potholes perpendicular to Ramsey Street, spaced 10' on center curb to curb. Alignments will be performed at mid-point of each project phase (3 alignments). C Below will provide a detailed potholing report at the conclusion of the investigation. Service includes Dig Alert Coordination and Delineation, Encroachment permit, vacuum excavation to top of utility, encasement, or stop depth, standard traffic control, 12-inches of hot patching (restored within 30-days of excavation activity), sand backfill, removal of debris, and pothole report. Services not included are slurry backfill, extensive traffic control, flagging for traffic control, sidewalk concrete

panel replacement, and removal of Dig Alert marks.

Standard traffic control includes one lane closure with minimal signage not spanning an intersection.

Prior to potholing, a potholing plan will be developed showing location of potholes for connection points, intermediate points, and location of other underground utilities.

Deliverables – Potholing plan and potholing report

2.3 Geotechnical Study

Geocon is proposing to drill six (6) geotechnical borings up to 15 feet in depth, along portions of the proposed water main alignment, where the subsurface explorations of our 2018 geotechnical investigation cannot supplement. The geotechnical borings will be performed to the observe subsurface soil conditions and collect samples for laboratory testing. We expect that traffic control signage/equipment will be sufficient and flag persons will not be required. Furthermore, we expect that the Banning encroachment permit will be a no fee permit for this project, and that patching of the borings with asphalt concrete cold-patch is acceptable.

RICK's subconsultant, Geocon West, Inc, will consist of:

- Mark the planned boring locations and notify Underground Surface Alert of Southern California to mark any subsurface utility locations near the exploration locations. Additionally, the client should provide plans depicting the locations of all utilities in the project area.
- Prepare no-fee encroachment permits with the City of Banning for our work. We have assumed a traffic control plan utilizing MUTCD or Watchbook details will be sufficient, and an engineered traffic control plan will not be required.
- Provide traffic control setup and breakdown at each boring location. We plan to source traffic control signage/equipment for our work and did not include flag persons in this budget.
- Drill six (6) geotechnical borings along the portion of the proposed water main alignment that our 2018 subsurface explorations cannot supplement. We will collect bulk and ring samples of the subgrade soil for laboratory testing. Borings will be backfilled with soil cuttings and clean sand, and capped with asphalt concrete cold-patch upon completion. We expect borings of up to 15 feet will be sufficient for design of the proposed water main. Borings will be located so that there is an approximate 500-foot interval maintained between the new borings and 2018 borings, along the proposed water main alignment, to ensure an appropriate standard of care. We have budgeted one day of drilling.
- Perform laboratory testing which is expected to include in-situ moisture content and dry density determinations, maximum dry density and optimum moisture

content, grain size analysis, corrosion screening, sand equivalent, and direct shear testing. The laboratory testing program will be based on the conditions encountered during the field investigation with respect to the proposed improvements. Our 2018 laboratory test results will be provided as supplemental information for the portion of the proposed water main alignment able to be covered by our 2018 geotechnical investigation.

- Prepare a geotechnical report presenting our findings in the field, boring logs, a map depicting the boring locations, a discussion of the geotechnical conditions at the site, and geotechnical parameters for storm drain design.

Assumptions:

- The borings can be safely performed in the vicinity of the proposed water main alignment, considering existing utilities are present and to facilitate traffic flow around our drilling operations. Where performing the borings poses a conflict with existing utilities, resulting in an unsafe working environment for property, personnel, and/or motorists/pedestrians, the planned borings will be relocated, as feasible.
- This proposal does not include any costs to re-grade, install hot-mix asphalt concrete patching, re-vegetate, landscape or otherwise repair disturbed areas.

Deliverables – Geotechnical report

Task 3. Preliminary Engineering Design

3.1 Preliminary Design Plans (30% design)

RICK will prepare waterline plans for approximately (7,200 LF) for a proposed Ductile Iron pipe in Ramsey Street between Sunset Avenue and Highland Home Road. Plans will be at 40-scale and include plan and profile. Plans will be setup for 3 construction phases:
Phase 1: The waterline between Sunset Avenue to near the property at 3929 W. Ramsey Street.
Phase 2: The continuation of Phase 1 to Omar Street, then continuing north on Omar to W. Jacinto View Road, and then east to the Winchester Drive intersection.
Phase 3: From Omar Street westerly on Ramsey Avenue to approximately Highland Home Road.

Additionally, RICK will:

a. Collect the data from the utility and property research from scope items above to use as part of the base file for the water plans. Existing utilities will be shown on the plans in locations verified by the potholing above and/or provided by the utility companies. As part of the plan preparation, RICK will contact affected

utility companies to obtain permits if needed (utility fees to be paid by the City of Banning).

b. RICK will arrange and participate in informal meetings as necessary with City staff to review the progress of the project and exchange ideas and information.
c. Meetings with the City of Banning will discuss the key design issues and develop general project criteria for construction, including schedule and possible ways of minimizing problems. RICK will prepare and submit meeting agendas prior to the meetings.
d. RICK will provide data received and assumptions utilized to the city for approval prior to integrating the data into the project's final design.
e. RICK will prepare preliminary water plans (30-percent design) using AutoCAD for approximately 7,200 LF of water line (8-inch to 14-inch) to establish an agreement with the City of Banning on project scope, alignment, easements, parameters, hydraulic requirements, maintenance concerns, constructability and construction phasing, traffic impacts, and general disruption to the area. The preliminary design is to be submitted to the City of Banning for review and approval. The preliminary design shall address the following:
    a. Pipeline alignment/facility locations
    b. Construction schedule and phasing recommendations
    c. Construction Cost Estimate of recommended improvements
    d. Conflicts with other utilities and adjacent facilities in the area
    e. Traffic and pedestrian control
    f. Erosion Control
    g. Preferred materials for construction
    h. Areas where construction work is limited or controlled.
    i. Impacts to City water system.
    j. Impacts to surrounding business and residential areas.
    k. Easements (existing and proposed)
    l. Corrosion protection (if necessary)
f. The preliminary design will be submitted in PDF format through the City's SmartGov platform for the City of Banning's review and concurrence. The design will be at a 30% level of effort. Changes in layout and location of facilities suggested by the city will be investigated. A final layout and location of facilities will then be established.
g. As part of the meetings with the city, discussions and submittals of material will be presented to the city through the preliminary design process to reduce comment time and effort by the city.

It is assumed that the City of Banning will provide the size of the proposed new waterline. A hydraulic analysis is not included with this scope. However, we have provided it as an additional/if needed service.

It is assumed that the majority of the existing waterline will be abandoned in place.

As part of the 30% design, RICK will prepare a traffic control conceptual staging plan for Phase 1 only identifying the assumed stages for each of the phases as noted in the Request for Proposal. The project Phase 1 proposes to construct approximately 2,600' of a water main along Ramsey Street from Sunset Avenue to 3929 W. Ramsey Street. It is anticipated that the traffic control conceptual staging plan will be prepared at 40 scale and will identify the proposed linear footage per stage and a description of the work that will be completed.

Deliverables – (all via the city's SmartGov platform): PDF of the preliminary design plans and the preliminary opinion of probable costs.

3.2 Preliminary Design Plans (60% design)

Rick will prepare plans based on the 30% design and subsequent review comments by the City. Plans include a one (1) cover sheet, two (2) detail sheet, ten (10) plan and profile sheets, two (2) connection detail sheets for private landowners, and one (1) valve shut down sheet if needed, and will show the existing water services and fire hydrants to the new waterline. Due to the existing waterline being at the back of the effected parcels, water meters, backflow devised and related system components shall be moved to front Ramsey off the new proposed waterline. Detail sheets will detail the on-site design connecting to the new line to provide a water system at minimum equal to the existing condition.

RICK's subconsultant, Dexter Wilson Engineering, will assist in preparation of technical specifications, pipeline material design, pipeline deflection calculations, design of thrust restraining systems, details for phased connections, details for connection to the existing pipeline, peer review of replacement plans, and other pipeline design aspects.

Consultant will incorporate any comments received from the City of Banning on the traffic control conceptual staging plan into the 60% design plans. Consultant will prepare 40-scale traffic control plans for the work associated with the Ramsey Street Water Main for Phase 1 only. The traffic control plans will provide work zones that are staged for construction of the water main, appurtenances, laterals, and any required detours. The one stage of traffic control is assumed as follows:

Phase 1: Sunset Avenue to 3929 W. Ramsey Street. There are assumed 5 stages of traffic control; Stage 1A is to 600' west of Sunset Avenue; Stages 1B, 1C, 1D, and 1E will be up to 500' along Ramsey to 3929 W. Ramsey Street.

The traffic control plans will be prepared following the requirements of the California Manual on Uniform Traffic Control Devices (MUTCD) and the City of Banning. Three (3) submittals are assumed – 60%, 90%, and final. Five (5) sheets

of traffic control plans are assumed for Phase 1.

A progress meeting will be coordinated with the City of Banning to discuss the 60% design plans. The meeting will discuss the comments and markups and establish a timeline for the project moving forward.

Deliverables - (all via the city's SmartGov platform): PDF of the preliminary design plans and the preliminary opinion of probable costs.

3.3 Detailed Design Plans (90% Design)

Rick will prepare the 90% detailed design waterline plans and traffic control plans based on the 60% review comments received from the City of Banning and other entities. Plans shall follow the City of Banning standards and policies.

RICK will prepare project specifications following the Standard Specifications for Public Works Construction, SSPWC, "Greenbook", latest edition.

RICK will prepare an opinion of probable cost and bid schedule that has construction items of work, unit of measurement, unit cost, and cost based on the detailed design waterline plans.

Deliverables - (all via the city's SmartGov platform): PDF of the preliminary design plans, the preliminary opinion of probable costs, and the Standards and Specifications

Task 4. Final Design Plans

4.1 Final Water Plans

Upon authorization from the City, RICK will finalize the waterline plans and traffic control plans based on the final comments from the City and other entities. Plans will follow the City of Banning standards and policies. Plans will be signed by a licensed Civil Engineer and provided to the City of Banning on Mylar.

RICK will provide the City of Banning a Final set of Project specifications based on final comments from the City of Banning following the SPPWC. RICK will also provide a final opinion of probable cost and bid schedule based on the signed waterline plans.

Deliverables - (all via the city's SmartGov platform): PDF of the preliminary design plans, the preliminary opinion of probable costs, and the Standards and Specifications

Task 5. Easement Documents

5.1 Easement Documents

RICK will prepare a legal description and plat for each easement for three (3) permanent easements to be granted to the City of Banning and ten (10) temporary construction easements that are required for reconnection of existing private water systems to the new water main. RICK will obtain and review title reports for the thirteen (13) affected properties.

RICK assumes three (3) permanent easements to be granted to the City of Banning and ten (10) Temporary Construction Easements for reconnection of existing private water systems to the new water main.

Assumptions:

- Assumes up to 13 tax parcels owned by 13 unique entities are impacted by temporary construction easements (TCE's) and/or permanent easements.
- Scope does not include any discussions with property owners.
- No appraisal work or negotiations included.
- Consultant is providing legal description and plat for the 13 easements only.

Deliverables - (all via the city's SmartGov platform): Easement documents (legal description and plat) and up to 13 preliminary title reports.

Task 6. Stormwater Pollution Prevention Plan

6.1 Stormwater Pollution Prevention Plan

The Risk Type 1 LUP SWPPP will be prepared in accordance with the requirements of the Appendix E of the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities Order WQ 2022-0057-DWQ NPDES No. CAS000002 (adopted September 8, 2022, effective September 1, 2023).

RICK will prepare a Risk Type 1 LUP SWPPP based on the project's assumed Risk Type.

This task will also include the preparation of a Notice of Intent (NOI) on the Storm Water Multi Application Report Tracking System (SMARTS) database. The Discharger must designate RICK as a Data Entry Person to prepare the NOI. The Discharger/LRP must electronically certify and submit the NOI on SMARTS.

RICK will act as the initial Qualified SWPPP Developer (QSD) for the preparation of the SWPPP, however the Discharger must hire a QSD and a Qualified SWPPP Practitioner (QSP) for implementation of the SWPPP throughout the life of the project.

Based on the provided bid package this project is assumed to be a Risk Type 1 LUP based on the following assumptions:

1. More than 70% of the soil disturbance will occur on paved surfaces; and
2. Areas that are disturbed will be returned to pre-project conditions at the end of each day.

Deliverables - (all via the city's SmartGov platform): SWPPP (erosion control plan submitted via drawing submittals)

Task 7. Construction Surveying and Staking

7.1 Phase One Water Stakes

RICK will maintain horizontal and vertical control for the duration of the surveying work on this project. RICK will also provide required calculations to field crew for each survey request received.

RICK will provide one set of stakes at all primary points of control; beginning and ends of pipe and at not less than 50' on center along tangent sections and 25' on curves to facilitate the construction of approximately 2,600 LF of water mainline. RICK will also provide not more than two (2) stakes each; to facilitate the location of services, fire hydrants, and points of connection.

*Water stakes to be set in three (3) trips.

Deliverables – Construction Staking Cut Sheets

7.2 Phase Two Water Stakes

RICK will provide one set of stakes at all primary points of control; beginning and ends of pipe and at not less than 50' on center along tangent sections and 25' on curves to facilitate the construction of approximately 2,700 LF of water mainline. RICK will also provide not more than two (2) stakes each; to facilitate the location of services, fire hydrants, and points of connection.

*Water stakes to be set in three (3) trips.

Deliverables – Construction Staking Cut Sheets

7.3 Phase Three Water Stakes

RICK will provide one set of stakes at all primary points of control; beginning and ends of pipe and at not less than 50' on center along tangent sections and 25' on curves to facilitate the construction of approximately 1,900 LF of water mainline. RICK will also provide not more than two (2) stakes each; to facilitate the location of services, fire hydrants, and points of connection.

*Water stakes to be set in three (2) trips.

Deliverables – Construction Staking Cut Sheets

Task 8. Bidding/Construction Support – Phase 1 Only

8.1 Bidding

RICK will be available during the advertising and bidding of the project to assist the City of Banning in answering questions/RFI's and the preparation of plan addenda, if needed. RICK will attend one (1) pre-bid meeting for the bidding process.

Deliverables – Meeting attendance, responses to Bidder's RFI's

8.2 Construction Administration

RICK will be available during the construction of the project to answer RFI's and prepare plan addenda, if needed. RICK will attend one (1) pre-construction meeting and eight (8) site visits during construction of the project as requested by the city. RICK will review shop drawings and submittals from the contractor for conformance with the contract plans and specifications, and make recommendations for acceptance, denial or resubmittal.

Deliverables – Meeting attendance, response to Contractor's RFI's, design addenda, submittal reviews

8.3 As-Built Plans

RICK will prepare As-Built Plans and process with the City of Banning, as necessary. Scope assumes RICK will receive as-built letters from the contractors and the contractor's as-built plan markup's. Scope assumes no major changes have occurred and does not include any as-built survey time. As-built plans will be submitted to the City within one month of receiving as-built letters and markup's from the contractor.
Deliverables – As-built Plans

Additional Services (If Needed Services)

Corrosivity Assessment

Rick's subconsultant, RF Yeager will prepare a corrosivity assessment for the proposed waterline, that will include a field resistivity testing, a review of the Geotech/soil chemical analysis data, a review for the potential of stray current interference, and a Corrosivity Assessment Letter Report. This information will be used for the determination of the type of corrosion protection and if any cathodic protection for the pipeline would be required and the corrosion control approach that the City may want to implement.

Deliverable – Corrosivity Assessment Letter Report

Corrosion Control Design

As part of the 90% design plans, RICK's subconsultant, RF Yeager, will provide Corrosion Control Design as part of the plans if Client requires joint bonds, test stations, insulators, and other standard corrosion control facilities. It is recommended the Client to use joint bonds, test stations, and insulators (steel or DIP) such that the pipeline is made electrically continuous and test stations are installed at the side of the road. This allows for monitoring and for adding cathodic protection in the future (should soil conditions/pipeline environment change) and will be much less costly because the pipe is electrically continuous and test stations are already installed. Corrosion control detail sheets, specifications, and cost estimate is included.

Cathodic Protection Design Pipeline

If it is found that Cathodic Protection is required, RICK's subconsultant, RF Yeager, will review the waterline plans, provide comments, and corrosion control design analysis/calculations. Details and specifications will be included. A cathodic protection system cost estimate will be included. RF Yeager will then address the 90% plan comments and provide final 100% design documents. Once approved for final signature, RF Yeager will sign and stamp the final drawings. Cathodic protection detail sheets, specifications, and cost estimates are included.
Deliverables – Corrosion control design analysis/calculations, specifications, and cost estimate.

Hydraulic Analysis

RICK's subconsultant, Dexter Wilson Engineering, will perform hydraulic modeling for the waterline sizing for the project site, if City does not provide the waterline

sizing. It is assumed City will provide the necessary information to run the modeling.

Caltrans Encroachment Permit

RICK will prepare one (1) Caltrans encroachment permit application for the traffic control devices (i.e. advance signage) that are within the Caltrans right-of-way (ROW) along Sunset Avenue in the vicinity of I-10. For the Caltrans encroachment permit application, the traffic control plans are assumed to be submitted to Caltrans in City of Banning format and will include a Caltrans signature block on the plans.

Plan Processing and Coordination (Caltrans)

RICK will submit and process the traffic control plans with Caltrans District 8. It is assumed that up to two (2) sets of plan check review comments will be received, coordinated, and addressed.

Monument Preservation

Pursuant to Section 8771 of the Business and Professions Code, preconstruction corner records will be prepared and filed identifying recovered survey monuments within the proposed construction limits. Post construction corner records will also be filed reflecting replacement monuments.

Deliverables – Pre and Post construction corner records

Monument Replacement

RICK will replace destroyed survey monuments at the completion of the construction with the project limits.

Record of Survey

Pursuant to 8762 of the Business and Professions Code the filing of a Record of Survey shall be filed if the survey discloses "the establishment of one or more points or lines not shown on any subdivision map, official map, or record of survey, the positions of which are not ascertainable from the inspection of the subdivision map official map or record of survey.

III. In addition to the requirements of Parts I and II of this Scope of Services, during the performance of the Services, Consultant will keep City appraised through periodic status reports regarding the performance of the Services under this Agreement as set forth below and in Section 5.2, by the following means:

a. In-person meetings and/or teleconferences.

b. Email updates/questions to applicant team and City while reviews are underway.

c. Conference calls.

IV. All work product is subject to review and acceptance by City, and must be revised by Consultant without additional charge to City until found satisfactory and accepted by City.

EXHIBIT "B"
SPECIAL REQUIREMENTS

TERMS FOR COMPLIANCE WITH CALIFORNIA LABOR LAW REQUIREMENTS

1. This Agreement calls for services that, in whole or in part, constitute "public works" as defined in Division 2, Part 7, Chapter 1 (commencing with Section 1720) of the California Labor Code ("Chapter 1"). Further, Consultant acknowledges that this Agreement is subject to (a) Chapter 1 and (b) the rules and regulations established by the Department of Industrial Relations ("DIR") implementing such statutes. Therefore, as to those Services that are "public works," Consultant shall comply with and be bound by all the terms, rules and regulations described in 1(a) and 1(b) as though set forth in full herein.

2. California law requires the inclusion of specific Labor Code provisions in certain contracts. The inclusion of such specific provisions below, whether or not required by California law, does not alter the meaning or scope of Section 1 above.

3. Consultant shall be registered with the Department of Industrial Relations in accordance with California Labor Code Section 1725.5, and has provided proof of registration to City prior to the Effective Date of this Agreement. Consultant shall not perform work with any subcontractor that is not registered with DIR pursuant to Section 1725.5. Consultant and subcontractors shall maintain their registration with the DIR in effect throughout the duration of this Agreement. If the Consultant or any subcontractor ceases to be registered with DIR at any time during the duration of the project, Consultant shall immediately notify City.

4. Pursuant to Labor Code Section 1771.4, Consultant's Services are subject to compliance monitoring and enforcement by DIR. Consultant shall post job site notices, as prescribed by DIR regulations.

5. Pursuant to Labor Code Section 1773.2, copies of the prevailing rate of per diem wages for each craft, classification, or type of worker needed to perform the Agreement are on file at City Hall and will be made available to any interested party on request. Consultant acknowledges receipt of a copy of the DIR determination of such prevailing rate of per diem wages, and Consultant shall post such rates at each job site covered by this Agreement.

6. Consultant shall comply with and be bound by the provisions of Labor Code Sections 1774 and 1775 concerning the payment of prevailing rates of wages to workers and the penalties for failure to pay prevailing wages. The Consultant shall, as a penalty to City, forfeit $200.00 for each calendar day, or portion thereof, for each worker paid less than the prevailing rates as determined by the DIR for the work or craft in which the worker is employed for any public work done pursuant to this Agreement by Consultant or by any subcontractor.

7. Consultant shall comply with and be bound by the provisions of Labor Code Section 1776, which requires Consultant and each subcontractor to: keep accurate payroll records and verify such records in writing under penalty of perjury, as specified in Section 1776; certify and make such payroll records available for inspection as provided by Section 1776; and inform City of the location of the records.

8. Consultant shall comply with and be bound by the provisions of Labor Code Sections 1777.5, 1777.6 and 1777.7 and California Administrative Code Title 8, Section 200 et seq. concerning the employment of apprentices on public works projects. Consultant shall be responsible for compliance with these aforementioned Sections for all apprenticeable occupations. Prior to commencing work under this Agreement, Consultant shall provide City with a copy of the information submitted to any applicable apprenticeship program. Within 60 days after concluding work pursuant to this Agreement, Consultant and each of its subcontractors shall submit to City a verified statement of the journeyman and apprentice hours performed under this Agreement.

9. The Consultant shall not perform Work with any Subcontractor that has been debarred or suspended pursuant to California Labor Code Section 1777.1 or any other federal or state law providing for the debarment of contractors from public works. The Consultant and Subcontractors shall not be debarred or suspended throughout the duration of this Agreement pursuant to Labor Code Section 1777.1 or any other federal or state law providing for the debarment of contractors from public works. If the Consultant or any subcontractor becomes debarred or suspended during the duration of the project, the Consultant shall immediately notify City.

10. Consultant acknowledges that eight hours labor constitutes a legal day's work. Consultant shall comply with and be bound by Labor Code Section 1810. Consultant shall comply with and be bound by the provisions of Labor Code Section 1813 concerning penalties for workers who work excess hours. The Consultant shall, as a penalty to City, forfeit $25.00 for each worker employed in the performance of this Agreement by the Consultant or by any subcontractor for each calendar day during which such worker is required or permitted to work more than eight hours in any one calendar day and 40 hours in any one calendar week in violation of the provisions of Division 2, Part 7, Chapter 1, Article 3 of the Labor Code. Pursuant to Labor Code section 1815, work performed by employees of Consultant in excess of eight hours per day, and 40 hours during any one week shall be permitted upon public work upon compensation for all hours worked in excess of eight hours per day at not less than one and one-half times the basic rate of pay.

11. California Labor Code Sections 1860 and 3700 provide that every employer will be required to secure the payment of compensation to its employees. In accordance with the provisions of California Labor Code Section 1861, Consultant hereby certifies as follows:

> "I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract."

Date_____ **Signature**_____

12. For every subcontractor who will perform work on the project, Consultant shall be responsible for such subcontractor's compliance with Chapter 1 and Labor Code Sections 1860 and 3700, and Consultant shall include in the written contract between it and each subcontractor a copy of those statutory provisions and a requirement that each subcontractor shall comply with those statutory provisions. Consultant shall be required to take all actions necessary to enforce such contractual provisions and ensure subcontractor's compliance, including, without limitation, conducting a periodic review of the certified payroll records of the subcontractor and upon becoming aware of the failure of the subcontractor to pay his or her workers the specified prevailing rate of wages. Consultant shall diligently take corrective action to halt or rectify any failure.

EXHIBIT "C"
SCHEDULE OF COMPENSATION

I. Consultant shall perform the following Scope of Services at the rates stated in Exhibit C-1.

II. Within the budgeted amounts for each Task, and with the approval of the Contract Officer, funds may be shifted from one Task sub-budget to another so long as the Contract Sum is not exceeded per Section 2.1, unless Additional Services are approved per Section 1.8.

III. City will compensate Consultant for the Services performed upon submission of a valid invoice. Each invoice is to include:

A. Line items for all personnel describing the Services performed, the number of hours worked, and the hourly rate.

B. Line items for all materials and equipment properly charged to the Services.

C. Line items for all other approved reimbursable expenses claimed, with supporting documentation.

D. Line items for all approved sub-contractor labor, supplies, equipment, materials, and travel properly charged to the Services.

IV. Consultant's billing rates for all personnel are attached as Exhibit C-1.

EXHIBIT "C-1"
CONSULTANT'S BILLING RATE AND TASK SCHEDULE

RICK
ENGINEERING COMPANY

Principal Consultant (Special Projects)	$300.00
Principal	260.00
Associate Principal	240.00
Associate/Manager	225.00
Expert Witness	450.00
Court Appearance per half day or part	1,800.00
Senior Project Manager	$225.00
Principal Project Engineer/Manager	210.00
Associate Project Engineer/Manager	190.00
Assistant Project Engineer/Manager	175.00
Principal Engineering Designer	155.00
Associate Engineering Designer	140.00
Assistant Engineering Designer	130.00
Principal Engineering Drafter	125.00
Associate Engineering Drafter	115.00
Assistant Engineering Drafter	105.00
Senior Transportation/Traffic Engineer	$215.00
Principal Transportation/Traffic Engineer	210.00
Associate Transportation/Traffic Engineer	190.00
Assistant Transportation/Traffic Engineer	175.00
Principal Transportation/Traffic Designer	155.00
Associate Transportation/Traffic Designer	140.00
Assistant Transportation/Traffic Designer	130.00
Principal Community Planner	$215.00
Principal Project Planner/Manager	200.00
Associate Project Planner/Manager	185.00
Senior Planner	175.00
Associate Planner	140.00
Assistant Planner	120.00
Planning Technician	95.00
Principal Project Landscape Architect/Manager	$190.00
Associate Project Landscape Architect/Manager	170.00
Assistant Project Landscape Architect/Manager	150.00
Principal Landscape/Urban Designer	125.00
Associate Landscape/Urban Designer	120.00
Assistant Landscape/Urban Designer	115.00
Principal Environmental Project Manager	$200.00
Associate Environmental Project Manager	170.00
Assistant Environmental Project Manager	150.00
Principal Environmental Specialist	140.00
Associate Environmental Specialist	130.00
Assistant Environmental Specialist	120.00
Environmental Technician	100.00
Senior Water Quality Manager	$240.00
Principal Water Resources Designer	155.00
Associate Water Resources Designer	140.00
Assistant Water Resources Designer	130.00
GIS Manager	$190.00
Principal GIS Project Manager	180.00
Associate GIS Project Manager	165.00
Assistant GIS Project Manager	150.00
Principal GIS Analyst	145.00
Associate GIS Analyst	130.00
Assistant GIS Analyst	120.00
Principal Graphics Designer	130.00
Associate Graphics Designer	125.00
Assistant Graphics Designer	115.00
CAD Manager	180.00
Field Supervisor	$195.00
One-person Survey Party (Prevailing Wage)	270.00
One-person Survey Party w/ Robotics (Prevailing Wage)	270.00
Two-person Survey Party (Prevailing Wage)	350.00
Three-person Survey Party (Prevailing Wage)	390.00
3D Laser Scanning Crew (One-Person)	$235.00
3D Laser Scanning Crew (Two Person)	280.00
Principal 3D Laser Scanning Project Manager	$190.00
Associate 3D Laser Scanning Project Manager	175.00
Assistant 3D Laser Scanning Project Manager	160.00
Principal 3D Laser Scanning Specialist	140.00
Associate 3D Laser Scanning Specialist	130.00
Assistant 3D Laser Scanning Specialist	120.00
Principal 3D Laser Scanning Technician	115.00
Associate 3D Laser Scanning Technician	100.00
Assistant 3D Laser Scanning Technician	90.00
Photogrammetry Supervisor	$185.00
Principal Photogrammetrist	155.00
Associate Photogrammetrist	120.00
Assistant Photogrammetrist	110.00
Principal Survey Analyst	$185.00
Associate Survey Analyst	150.00
Assistant Survey Analyst	125.00
Associate Project Administrator	$80.00
Assistant Project Administrator	70.00
Administrative Assistant/Manager	75.00

Rates subject to change for prevailing wage contracts.
When authorized, overtime shall be charged at the listed rates times 1.5.
Unless otherwise agreed upon, we shall charge for printing, reproduction, deliveries, transportation, and other expenses.
A fifteen (15) percent fee for administration, coordination and handling will be added to all subcontracted services.

Structural Engineer
$185.00 Per Hour

SKS Engineering, Inc.

Position	Hourly Rates
Principal	$205-275
Senior Associate	$150-220
Associate	$110-170
Senior Analyst	$105-135
Analyst	$70-105
Assistant Analyst	$60-115
Administrative Support	$65-105

URBAN CROSSROADS

General

(1) Reimbursable direct costs, such as reproduction, supplies, and messenger service will be billed at cost.

(2) Hourly rates apply to work time, travel time, and time spent at public hearings and meetings. For overtime work, the above rates may be increased 50 percent.

(3) Monthly billing statements are due within thirty (30) days of receipt.

TURNING MOVEMENT COUNTS (TMC)
$226.00 – 2-hour Peak Period Counts – Pedestrian & Bicycles Included
$226.00 – 4-hour Peak Period Counts – Pedestrian & Bicycles Included
$339.00 – 6-hour Peak Period Counts – Pedestrian & Bicycles Included

VeracityTrafficGroup

BI-DIRECTIONAL VOLUME (ADT) – TUBE COUNTS
$100.00 – 24 hours (1-day)
$200.00 – 48 hours (2-day)
$300.00 – 72 hours (3-day)
$400.00 – 96 hours (4-day)
$500.00 – 120 hours (5-day)
$600.00 – 144 hours (6-day)
$700.00 – 168 hours (7-day)

BI-DIRECTIONAL SPEED OR CLASSIFICATION – TUBE COUNTS
$198.00 – 24 hours (1-day)
$396.00 – 48 hours (2-day)
$594.00 – 72 hours (3-day)
$792.00 – 96 hours (4-day)
$990.00 – 120 hours (5-day)
$1,188.00 – 144 hours (6-day)
$1,386.00 – 168 hours (7-day)

OTHER STUDIES – QUOTES BASED ON SCOPE
Pedestrian Gap Studies
Parking Duration Studies
Video Turning Movement Counts
Radar Studies – Non Intrusive
Travel Time Studies – GPS
Many more customized studies available

Exhibit "C-1"-2

EXHIBIT "D"
SCHEDULE OF PERFORMANCE

I. Consultant shall perform all Services timely, and deliver the specified tangible work products to City in accordance with the schedule attached as Exhibit D-1.

II. The Contract Officer may approve extensions for performance of the Services in accordance with Sections 1.8 and 3.3.

EXHIBIT B
RAMSEY STREET WATER MAIN PROJECT

TASK DESCRIPTION:	Principal	Associate Principal	Associate	Principal Project Engineer	Associate Project Engineer	Principal Designer	Assistant Designer/Assistant Analyst	Field Supervisor	Two-Person Survey Crew	Principal Survey Analyst	RICK FEE	Subconsultants	Expenses	Task Total($):
Hourly Rate	$275.00	$260.00	$240.00	$220.00	$200.00	$165.00	$135.00	$220.00	$360.00	$195.00				
TASK 1 - PROJECT MANAGEMENT														
1.1 Kick-off Meeting and Project Management		2		24							$ 5,800.00			$ 5,800.00
1.2 Progress Meetings		2		33							$ 7,780.00			$ 7,780.00
1.3 Invoicing				8							$ 1,760.00			$ 1,760.00
SUBTOTAL TASK 1:	**0**	**4**	**0**	**65**	**0**	**0**	**0**	**0**	**0**	**0**	**$ 15,340.00**	**$ -**	**$ -**	**$ 15,340.00**
Task 2 - Project Development														
2.1 Utility Research, Base Mapping & Site Reconnaissance				20		32	40				$ 15,080.00			$ 15,080.00
2.1.1 Property Research			8				8		24	40	$ 19,440.00			$ 19,440.00
2.1.2 Supplemental Field Topography									40	2	$ 14,790.00			$ 14,790.00
2.1.3 Aerial Topography									24	6	$ 9,810.00		$ 15,000.00	$ 24,810.00
2.2 Potholing - C Below											$ -	$ 92,195.00		$ 92,195.00
2.3 Geotechnical Study - Geocon											$ -	$ 12,875.00		$ 12,875.00
SUBTOTAL TASK 2:	**0**	**0**	**8**	**20**	**0**	**32**	**48**	**0**	**88**	**48**	**$ 59,120.00**	**$ 105,070.00**	**$ 15,000.00**	**$ 179,190.00**
Task 3 - Preliminary Engineering Design														
3.1 Preliminary Design Plans (30% design) - Civil	2	4		12		50	80				$ 23,280.00	$ 2,990.00		$ 26,270.00
Conceptual Staging Plan - Traffic					4		16				$ 2,960.00			$ 2,960.00
3.2 Preliminary Design Plans (60% design) - Civil, Dexter Wilson	2	4		20		80	100				$ 32,690.00	$ 2,150.00		$ 34,840.00
Preliminary Design Plans (60% design) - Traffic		1			3		36				$ 5,720.00			$ 5,720.00
3.3 Detailed Design Plans (90% design) - Civil, Dexter Wilson	2	4		16		60	88				$ 26,890.00	$ 1,075.00		$ 27,965.00
Detailed Design Plans (90% design) - Traffic		1			2		23				$ 3,765.00			$ 3,765.00
SUBTOTAL TASK 3:	**6**	**14**	**0**	**48**	**9**	**190**	**343**	**0**	**0**	**0**	**$ 95,305.00**	**$ 6,215.00**	**$ -**	**$ 101,520.00**
Task 4 - Final Design Plans, Specifications and Estimate (100% Design)														
4.1 Final Water Plans - Civil, Dexter Wilson	1	4		12		24	40				$ 13,315.00	$ 645.00		$ 13,960.00
Final Water Plans - Traffic		1			3		12				$ 2,480.00			$ 2,480.00
SUBTOTAL TASK 4:	**1**	**5**	**0**	**12**	**3**	**24**	**52**	**0**	**0**	**0**	**$ 15,795.00**	**$ 645.00**	**$ -**	**$ 16,440.00**

EXHIBIT "D-1"
PROPOSED PROJECT SCHEDULE

EXHIBIT B

RAMSEY STREET WATER MAIN PROJECT

TASK DESCRIPTION:	Principal	Associate Principal	Associate	Principal Project Engineer	Associate Project Engineer	Principal Designer	Assistant Designer/A ssistant Analyst	Field Supervisor	Two-Person Survey Crew	Principal Survey Analyst	RICK FEE	Subconsultants	Expenses	Task Total($):
Hourly Rate	$275.00	$260.00	$240.00	$220.00	$200.00	$165.00	$135.00	$220.00	$360.00	$195.00				
Task 5 - Easement Documents														
5.1 Easement Documents			26							130	$ 31,590.00		$ 9,750.00	$ 41,340.00
SUBTOTAL TASK 6:	0	0	26	0	0	0	0	0	0	130	$ 31,590.00	$ -	$ 9,750.00	$ 41,340.00
Task 6 - Stormwater Pollution Prevention Plan														
6.1 Stormwater Pollution Prevention Plan				6		32					$ 6,600.00			$ 6,600.00
SUBTOTAL TASK 6:	0	0	0	6	0	32	0	0	0	0	$ 6,600.00	$ -	$ -	$ 6,600.00
Task 7 - Construction Surveying and Staking														
7.1 Phase One Water Stakes							10	2	24		$ 10,430.00			$ 10,430.00
7.2 Phase Two Water Stakes - 3 staking days											$ -			$ -
7.3 Phase Three Water Stakes - 2 staking days											$ -			$ -
SUBTOTAL TASK 5:	0	0	0	0	0	0	10	2	24	0	$ 10,430.00	$ -	$ -	$ 10,430.00
Task 8 - Bidding/Construction Support - Phase 1 only														
8.1 Bidding				1		4					$ 880.00			$ 880.00
8.2 Construction Administration		2		32		12					$ 9,540.00	$ 1,160.00		$ 10,700.00
8.3 As-Built Plans		1		1		1	6				$ 1,455.00			$ 1,455.00
SUBTOTAL TASK 7:	0	3	0	34	0	17	6	0	0	0	$ 11,875.00	$ 1,160.00	$ -	$ 13,035.00
Reimbursables													$ 3,000.00	$ 3,000.00
	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ 3,000.00	$ 3,000.00
SUBTOTAL TASKS 1-7:	7	26	34	185	12	295	459	2	112	178	$ 246,055.00	$ 113,090.00	$ 27,750.00	$ 386,895.00

EXHIBIT B

RAMSEY STREET WATER MAIN PROJECT

TASK DESCRIPTION:	Principal	Associate Principal	Associate	Principal Project Engineer	Associate Project Engineer	Principal Designer	Assistant Designer/Assistant Analyst	Field Supervisor	Two-Person Survey Crew	Principal Survey Analyst	PICK FEE	Subconsultants	Expenses	Task Total($):
Hourly Rate	$275.00	$260.00	$240.00	$220.00	$200.00	$165.00	$135.00	$220.00	$360.00	$195.00				
Additional Services (if needed)														
Additional Potholing (daily rate) - C Below											$ -	$ 12,725.00		$ 12,725.00
Corrositivity Asssessment - YF Yeager											$ -	$ 4,980.00		$ 4,980.00
Corrosion Control Design - YF Yeager											$ -	$ 12,180.00		$ 12,180.00
Cathodic Protection Design Pipeline - YF Yeager											$ -	$ 18,400.00		$ 18,400.00
Hydraulic Analysis - Dexter Wilson											$ -	$ 3,480.00		$ 3,480.00
Caltrans Encroachment Permit Application											$ 1,480.00			$ 1,480.00
Caltrans Processing and Coordination											$ 2,020.00			$ 2,020.00
Phase 1 Monument Preservation											$ 3,120.00			$ 3,120.00
Phase 1 Monument Replacement											$ 5,980.00			$ 5,980.00
Record of Survey											$ 15,000.00			

SOLE SOURCE/EMERGENCY PURCHASE JUSTIFICATION

Date: 2/13/25 Dept./Div.: PW Phone: 951-922-3168

Contact: Patrick Safari

Vendor: Rick Engineering, Inc.

Address: 1770 Iowa Ave Ste 100 Riverside, CA 92507 Phone: 951-782-0707

Check reason for sole source/emergency purchase request:

[X] **Sole Source:** ~~No other items are known to exist which~~ perform the same function. Previously bid out under RFP 23-036, reapproving original contract that was expired.

[ ] **Standardization:** The City requires the item(s) to standardize parts, design, quality, etc. (explain in more detail below)

[ ] **Scarce Commodity:** To procure a commodity that is in critical short supply, such as fuel, potable water, MRE's porta-potties, etc. and the vendor will be out of inventory if the bid process is followed. (This option is not permitted once inventories begin to normalize.

[ ] **Emergency Protective Measures:** This classification is for extraordinary measures that may be needed when life, public health or improved property are in imminent danger. For instance, during the winter season, the purchase of sand and sand bags would not constitute an extraordinary measure. Purchases of sand and sandbags should be a normal purchase and anticipated before the winter season arrives. An extraordinary protective measure could be the rental of temporary fencing to cordon off structures in imminent danger of collapse.

[ ] **Emergency Consulting Services:** The procurement is for a technical consulting service of an immediate nature, such as inspection of a heavily damaged structure to determine if a collapse is imminent or inspection of a slope to determine the nature and extent of landslide potential.

[ ] **Emergency Road Clearance:** Services needed to clear roads to provide access for emergency service vehicles. This is not used for general debris removal.

[ ] **Other Emergency Requirement:** Purchase necessary for the preservation of life, public health or improved property due to imminent danger. Provide a brief explanation of the immediate problem and include the potential consequences if left unaddressed

[ ] **Non-Responsive Bids:** Bids were solicited, but no responsive bid has been received from requested bidders. A copy of all bids and a list of other solicited vendors must be attached.

[✓] **Pre-Existing Contract:** The purchase was made under terms of a pre-existing competitively bid ~~disaster services, materials, or supplies~~ contract. RFP 23-036-Bid #

[ ] **Patent or Copyright:** The item is patented or copyrighted and vendor has exclusive sales rights.

[ ] **Legal Monopoly:** The item or product or service of a legal monopoly.

[ ] **Captive Replacement Part:** The item is a captive replacement part. Use of a generic part will void a warranty, or use of a generic part will require extensive modifications to existing equipment which would be cost prohibitive.

[ ] **Sole Distributor:** The vendor is the only authorized distributor of this item.

Narrative Justification – Explain the following. Be very precise when filling in this section.

- Describe what is being purchased or rented.
- Describe where the equipment, material or services will be used.

- Specify the immediate hazard or threat that poses imminent danger. (The phase "earthquake damage" is insufficient. Provide detail: "A three story unreinforced masonry building is severely damaged and appears to be in imminent danger of collapse onto the public right of way."
- Describe the minimum acceptable actions that can be taken to reduce or eliminate the hazard i.e., "Install temporary chain link fencing around the structure at a distance of 20 feet from the building."
- Describe consequences if left unaddressed. "The building may collapse injuring bystanders."

Product or service to be purchased or rented:

Professional Design Services

Location of product or service use:

Ramsey Street

Specific Hazard or Threat (complete for emergency justification):

N/A

Minimum action to reduce threat (complete for emergency justification):

N/A

Consequences if unaddressed (complete for emergency justification):

N/A

Cost Rationality – The cost of the equipment, supplies or services procured are deemed to be rational by virtue of the following circumstances. Check the appropriate box(es) below. Attach any documentation to support you rational.

- [X] The prices charged are comparable with the prices paid for similar goods or services within the last 12 months.
- [ ] Using readily available catalogs or price lists, and/or internet sources, it's determined that the cost are reasonable within the circumstances at hand. (Attach copies)
- [ ] The prices paid for the goods or services exceed normative pricing, but the circumstances required their purchase, and only enough of the goods or services were purchased to deal with the specific emergency at hand. All additional purchases of the same goods or services will be made through normal procedures.
- [ ] There are no available sources for market cost rationale due to the above mentioned sole source, non-responsive bids, patent or copyright, legal monopoly and sole distributor classification.

Authorizations:

Dept. Head's Signature: Nathan C Smith Date: 02/14/25

Purchasing Officer's Signature: Date: 2/14/25

City Manager's Signature: Robert Fisher Robert Fisher (Feb 19, 2025 13:53 PST) Date: 19/02/2025

ATTACH TO THE SOLE SOURCE FORM
DETAILED JUSTIFICATION FOR SOLE SOURCE:
(widen text boxes as necessary)

The requestor shall clearly provide:

a. A detailed description of the type of contract to be established;

Purchase Order for the continuation of design services previously contracted with Rick Engineering under C00931 .

b. A detailed description of services and/or commodities to be provided by the vendor;

Professional Design Services for the Design of Ramsey St Water Main.

c. An explanation of why the recommended vendor is the only one capable of providing the required services and/or commodities and include back-up information to support the justification;

Rick Engineering as an engineer of record has prepared the plans for this project from the beginning of this project. Since the original contract has expired and the tasks in the original contract have not been completed, it is necessary to rehire Rick to finish the contract tasks due to familiarity with the complexities of the project

d. The identity of other sources that have been contacted and explain in detail why they cannot fulfill the City's requirements;

N/A ~~An~~. RFP was conducted 9/5/23. Due to COB was not lead agency, the County Flood agency was the lead agency and COB must comply with their timelines and therefore extension was necessary.

e. An explanation of how the recommended vendor's prices or fees compare to the general market and attach quotes for comparable services and supplies, if available (limited competition);

The price is what is expected for the remaining task as original proposed by Rick. No change will be made to the original contract price of scope of work.

f. An explanation of how the City would accomplish this particular task if the recommended vendor could not provide the product or service.

The City would have to solicit new proposals to finish the work that Rick started. It is expected that the new proposals would cost more since the new consultant would have to review the previous work done by Rick Engineering. The new consultant would have to take responsibility and liability for work done by Rick Engineering.

Rick Engineering SS

Final Audit Report 2025-02-19

Created:	2025-02-18
By:	Maribel Munoz (mmunoz@banningca.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAAW-h71h2wpLFnjwZrMYVznGTVTEyIv6aT

"Rick Engineering SS" History

Document created by Maribel Munoz (mmunoz@banningca.gov)
2025-02-18 - 8:46:36 PM GMT

Document emailed to rfisher@banningca.gov for signature
2025-02-18 - 8:46:44 PM GMT

Email viewed by rfisher@banningca.gov
2025-02-19 - 9:51:23 PM GMT

Signer rfisher@banningca.gov entered name at signing as Robert Fisher
2025-02-19 - 9:53:01 PM GMT

Document e-signed by Robert Fisher (rfisher@banningca.gov)
Signature Date: 2025-02-19 - 9:53:03 PM GMT - Time Source: server

Agreement completed.
2025-02-19 - 9:53:03 PM GMT

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AGREEMENT FOR PROFESSIONAL SERVICES (C00931) FOR DESIGN OF RAMSEY STREET WATER MAIN BY AND BETWEEN CITY OF BANNING AND GLENN A. RICK ENGINEERING & DEVELOPMENT CO. DBA RICK ENGINEERING COMPANY

THIS AGREEMENT FOR PROFESSIONAL SERVICES (herein "Agreement") is made and entered into this day: November 14, 2023, ("Effective Date") by and between the **CITY OF BANNING,** a California municipal corporation ("City") and Glenn A. Rick Engineering & Development Co., a California Corporation, dba Rick Engineering Company. ("Consultant"). City and Consultant are sometimes hereinafter individually referred to as "Party" and hereinafter collectively referred to as the "Parties."

RECITALS

A. City has sought by issuance of a Request for Proposals (RFP No. 23-036) from the bench of prequalified Engineers (RFQ-22-007), the performance of the services for the Design of Ramsey Street Water Main and as further defined and described particularly in Article 1 of this Agreement.

B. Consultant, following submission of a proposal for the performance of the services defined and described particularly in Article 1 of this Agreement, was selected by City to perform those services.

C. The Parties desire to formalize the selection of Consultant for performance of those services defined and described particularly in Article 1 of this Agreement and desire that the terms of that performance be as particularly defined and described herein.

D. Pursuant to the City of Banning's Municipal Code, City has authority to enter into this Agreement.

NOW, THEREFORE, in consideration of the mutual promises and covenants made by the Parties and contained herein and other consideration, the value and adequacy of which are hereby acknowledged, the Parties agree as follows:

ARTICLE 1. SERVICES OF CONSULTANT

1.1 Scope of Services.

In compliance with all terms and conditions of this Agreement, Consultant shall provide those services specified in the "Scope of Services" attached hereto as **Exhibit A** and incorporated herein by this reference, which services may be referred to herein as the "Services" hereunder. As a material inducement to City entering into this Agreement, Consultant represents and warrants that it has the qualifications, experience, and facilities necessary to properly perform the Services required under this Agreement in a thorough, competent, and professional manner, and is experienced in performing the Services contemplated herein. Consultant shall at all times faithfully, competently and to the best of its ability, experience and talent, perform all Services described herein. Consultant covenants that it shall follow the highest professional standards in

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performing the Services required hereunder and that all materials will be of good quality, and fit for the purpose intended. For purposes of this Agreement, the phrase "highest professional standards" shall mean those standards of practice recognized by one or more first-class firms performing similar work under similar circumstances. This Agreement calls for services that, in whole or in part, constitute "public works" as defined in the California Labor Code. Therefore, as to those services that are "public works," Consultant shall comply in all respects with all applicable provisions of the California Labor Code, including those set forth in Exhibit B hereto.

1.2 Contract Documents and Exhibits.

This Agreement includes the Request for Proposal and Consultant's accepted proposal ("Contract Documents"), both of which are on file with the City and incorporated herein by this general reference as though fully set forth herein. **Exhibit A** (Scope of Services), **Exhibit B** (Special Requirements), **Exhibit C** (Schedule of Compensation), and **Exhibit D** (Schedule of Performance) also constitute a part of this Agreement and are incorporated into this Agreement by this reference. Except as set forth in Section 1.10 regarding **Exhibit B**, this Agreement controls over the Contract Documents and the provisions in **Exhibits A, B** and **C**.

1.3 Compliance with Law.

Consultant shall keep itself informed concerning all ordinances, resolutions, statutes, rules, and regulations of City and any Federal, State or local governmental entity having jurisdiction in effect at the time service is rendered, and shall render all Services hereunder in accordance therewith.

1.4 Licenses, Permits, Fees and Assessments.

Consultant shall obtain and maintain during the term of this Agreement, at its sole cost and expense, all necessary licenses, permits, certificates and approvals required by law for the performance of Services under this Agreement, including a City business license. Consultant shall have the sole obligation to pay for all fees, assessments and taxes, plus applicable penalties and interest, which may be imposed by law and which arise from or are necessary for Consultant's performance of the Services required by this Agreement. Consultant shall indemnify, defend and hold harmless City, its officers, employees or agents, against all such fees, assessments, taxes, penalties or interest levied, assessed or imposed against City hereunder.

1.5 Familiarity with Services.

By executing this Agreement, Consultant warrants that Consultant: (i) has thoroughly investigated and considered the Scope of Services to be performed, (ii) has carefully considered how the Services should be performed, and (iii) fully understands the facilities and any difficulties and restrictions attending performance of the Services under this Agreement. If the Services involve work upon any site, Consultant warrants that Consultant has or will investigate the site and is or will be fully acquainted with the conditions existing therein, prior to commencement of Services hereunder. Should Consultant discover any latent or unknown conditions, which will materially affect the performance of the Services hereunder, Consultant shall immediately inform City of such fact and shall not proceed except at Consultant's risk until written instructions are received from the Contract Officer (defined in Section 1.12. A).

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1.6 Prevention of Loss and Damages.

Consultant shall adopt reasonable methods during the Term (defined in Section 3.4) to furnish continuous protection to the work product, and the equipment, materials, papers, documents, plans, studies and/or other components thereof to prevent losses or damages, and shall be responsible for all such damages, to persons or property, until acceptance of the Services by City, except such losses or damages as may be caused by City's own negligence.

1.7 Further Responsibilities of Parties.

Both Parties agree to use reasonable care and diligence to perform their respective obligations under this Agreement. Both Parties agree to act in good faith to execute all instruments, prepare all documents and take all actions as may be reasonable necessary to carry out the purposes of this Agreement. Unless hereafter specified, neither Party shall be responsible to perform the Services of the other.

1.8 Additional Services.

City shall have the right at any time during the performance of the Services, without invalidating this Agreement, to order extra services beyond that specified in the Scope of Services or to make changes by altering, adding to or deducting from the Services. No such extra services may be undertaken unless a written order is first given by the Contract Officer to Consultant, which written order incorporates therein an adjustment in (i) the Contract Sum (as defined in Section 2.1), and/or (ii) the Schedule of Performance, (as defined in Section 3.2), and which written order is approved in writing by Consultant. Any increase in compensation of up to ten percent (10%) of the Contract Sum, or $25,000, whichever is less; or in the Schedule of Performance of up to one hundred eighty (180) days may be approved by the Contract Officer. Any greater increases, taken either separately or cumulatively, must be approved by City Council. It is expressly understood by Consultant that the provisions of this Section shall not apply to Services which are specifically set forth in the Scope of Services or which are reasonably contemplated therein. Consultant hereby acknowledges that it accepts the risk that the Services to be provided pursuant to the Scope of Services may be more costly or time consuming than Consultant anticipates and that Consultant shall not be entitled to additional compensation therefor.

1.9 Facilities and Equipment.

Except as otherwise provided, Consultant shall, at its own cost and expense, provide all facilities and equipment necessary to perform the Services required by this Agreement. City shall make available to Consultant only physical facilities such as desks, filing cabinets, and conference space ("City Facilities"), as City deems, in its sole discretion, to be reasonably necessary for Consultant's use while consulting with City employees and reviewing records and the information in possession of City. The location, quality, and time of furnishing City Facilities shall be in the sole discretion of City. In no event shall City be required to furnish any facilities that may involve incurring any direct expense, including but not limited to a computer, long distance telephone, network data, internet or other communication charges, vehicles and reproduction facilities.

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1.10 Special Requirements.

Additional terms and conditions of this Agreement, if any, which are made a part hereof are set forth in the "Special Requirements" attached hereto as **Exhibit B** and incorporated herein by this reference. In the event of a conflict between the provisions of **Exhibit B** and any other provisions of this Agreement, the provisions of **Exhibit B** shall govern.

1.11 Corrections.

In addition to the indemnification obligations set forth in Article 4, and Sections 1.4, 1.13, 5.3, 5.4, and 6.3, Consultant shall correct, at its expense, all errors in the Services which may be disclosed during City's review of Consultant's report or plans. Should Consultant fail to make such correction(s) in a reasonably timely manner, such correction(s) may be made by City, and the cost thereof shall be charged to Consultant. In addition to all other available remedies, City may deduct the cost of such correction(s) from any retention amount held by City, or may withhold payment otherwise owed Consultant under this Agreement up to the amount of the cost of correction(s), as provided in Section 6.3.

1.12 Party Representatives.

A. Contract Officer: For the purposes of this Agreement, the Contract Officer shall be the City Manager, or such other person designated in writing by the City Manager ("Contract Officer"). Unless otherwise specified herein, any approval of City required hereunder shall mean the approval of the Contract Officer. The Contract Officer shall have authority, if specified in writing by the City Manager, to sign all documents on behalf of City required hereunder to carry out the terms of this Agreement.

B. Principals and Personnel of Consultant.

1) Consultant Representative: The following principal of Consultant is hereby designated as being the Consultant Representative authorized to act on Consultant's behalf regarding the Services specified herein and make all decisions in connection therewith:

Name	Title
Richard O'Neill	Associate Principal

It is expressly understood that the experience, knowledge, capability and reputation of the foregoing Consultant Representative were a substantial inducement for City to enter into this Agreement. Therefore, the foregoing Consultant Representative shall be responsible during the term of this Agreement for directing all activities of Consultant and devoting sufficient time to personally supervise the Services hereunder. All personnel of Consultant, and any authorized agents, shall at all times be under the exclusive direction and control of the Consultant Representative. For purposes of this Agreement, the foregoing Consultant Representative may not be replaced nor may their responsibilities be substantially reduced or reassigned by Consultant without the express written approval of City. It shall be Consultant's responsibility to assure that the Contract Officer is kept informed of the progress of the performance of the Services, and Consultant shall refer any decisions which must be made by City to the Contract Officer.

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2) Consultant's Personnel: Consultant has, or will secure at its own expense, all personnel required to perform the Services required under this Agreement. All of the Services required under this Agreement shall be performed by Consultant or under its supervision, and all personnel engaged in the Services shall be qualified to perform such Services. Consultant shall make every reasonable effort to maintain the stability and continuity of Consultant's staff and sub-contractors, if any, assigned to perform the Services required under this Agreement. Consultant shall notify City of all changes in Consultant's staff and sub-contractors, if any, assigned to perform the Services required under this Agreement, prior to and during any such performance. In the event that City, in its sole discretion, at any time during the term of this Agreement, desires to reassign any staff or sub-contractor of Consultant, City shall give notice as set forth in Section 8.1. Consultant shall, immediately upon the receipt of the notice to re-assign staff from City, reassign such person or persons.

1.13 Independent Contractor.

A. Consultant is an independent contractor and not an employee of City. Consultant shall have no power to incur any debt, obligation, or liability on behalf of City. All Services provided pursuant to this Agreement shall be performed by Consultant or under its supervision. Consultant will determine the means, methods, and details of performing the Services. Any additional personnel performing Services under this Agreement on behalf of Consultant shall also not be employees of City and shall at all times be under Consultant's exclusive direction and control. Consultant shall pay all wages, salaries, and other amounts due such personnel in connection with their performance of Services under this Agreement and as required by law. Consultant shall be responsible for all reports and obligations respecting such additional personnel, including, but not limited to: social security taxes, income tax withholding, unemployment insurance, disability insurance, and workers' compensation insurance.

B. Consultant shall indemnify and hold harmless City and its elected officials, officers, employees, servants, designated volunteers, and agents serving as independent contractors in the role of City officials, from any and all liability, damages, claims, costs and expenses of any nature to the extent arising from Consultant's personnel practices. City shall have the right to offset against the amount of any fees due to Consultant under this Agreement any amount due to City from Consultant as a result of Consultant's failure to promptly pay to City any reimbursement or indemnification arising under this Section.

1.14 Prohibition Against Subcontracting or Assignment.

The experience, knowledge, capability and reputation of Consultant, the Consultant Representative and employees were a substantial inducement for City to enter into this Agreement. Therefore, Consultant shall not contract with any other entity to perform in whole or in part the Services required hereunder without the express written approval of City. In addition, neither this Agreement nor any interest herein may be transferred, assigned, conveyed, hypothecated or encumbered voluntarily or by operation of law, whether for the benefit of creditors or otherwise, without the prior written approval of City. Transfers restricted hereunder shall include the transfer to any person or group of persons acting in concert of more than twenty-five percent (25%) of the present ownership and/or control of Consultant, taking all transfers into account on a cumulative basis. In the event of any such unapproved transfer, including any bankruptcy proceeding, this

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Agreement shall be void. No approved transfer shall release Consultant or any surety of Consultant of any liability hereunder without the express consent of City.

ARTICLE 2. COMPENSATION AND METHOD OF PAYMENT.

2.1 Contract Sum.

Subject to any limitations set forth in this Agreement, as full compensation for Services satisfactorily rendered, City shall pay Consultant at the hourly rates set forth in **Exhibit C-1** and the not-to-exceed sub-budget rates set forth in the "Schedule of Compensation" attached hereto as **Exhibit C** and incorporated herein by this reference. In no event shall Consultant be paid more than Three Hundred Eighty-Six Thousand Eight Hundred Ninety-Five ($386,895.00) (the "Contract Sum"). The Contract Sum shall include the attendance of Consultant at all project meetings reasonably deemed necessary by City. Coordination of the performance of the Services with City is a critical component of the Services. If Consultant is required to attend additional meetings to facilitate such coordination, Consultant shall not be entitled to any additional compensation for attending those meetings.

2.2 Method of Compensation.

The method of compensation may include: (i) a lump sum payment upon completion of the Services, (ii) payment in accordance with specified tasks or the percentage of completion of the Services, (iii) payment for time and materials based upon Consultant's rates as specified in the Schedule of Compensation, provided that time estimates are provided for the performance of sub tasks, but not exceeding the Contract Sum or (iv) such other methods as may be specified in the Schedule of Compensation.

2.3 Reimbursable Expenses.

City shall only reimburse Consultant for those actual and necessary expenses expressly set forth in **Exhibit C**. Reimbursable expenses may include reimbursement for actual and necessary expenditures for reproduction costs, telephone expenses, and travel expenses approved by the Contract Officer in advance, or actual sub-contractor expenses of an approved sub-contractor pursuant to Section 1.14, and only if specified in the Schedule of Compensation.

2.4 Unauthorized Services and Expenses.

City will not pay for any Services or reimburse for any expenses incurred which are not specified in the Scope of Services, unless authorized in writing as set forth in Section 1.8 of this Agreement. City shall make payment for such authorized additional Services and expenses in accordance with Article 2 of this Agreement.

2.5 Invoices.

Each month Consultant shall furnish to City an original invoice for all Services performed and expenses incurred during the preceding month. Each such invoice shall contain all of the information set forth in Section III of **Exhibit C** to this Agreement. By submitting an invoice for payment under this Agreement, Consultant is certifying compliance with all provisions of the

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Agreement. Consultant shall not invoice City for any duplicate Services performed by more than one person.

City shall independently review each invoice submitted by Consultant to determine whether the Services performed and expenses incurred are in compliance with the provisions of this Agreement. City will use its best efforts to cause Consultant to be paid within thirty (30) days of receipt of Consultant's correct and undisputed invoice, except as to any charges for Services performed or expenses incurred by Consultant which are disputed by City, or as provided in Section 6.3. In the event any charges or expenses are disputed by City, the original invoice shall be returned by City to Consultant for correction and resubmission. Review and payment by City of any invoice provided by Consultant shall not constitute waiver of any rights or remedies provided herein or any applicable law.

2.6 Waiver.

Payment to Consultant for Services performed pursuant to this Agreement shall not be deemed to waive any defects in Services performed by Consultant.

ARTICLE 3. PERFORMANCE SCHEDULE

3.1 Time of Essence.

Time is of the essence in the performance of this Agreement; provided, however, that the foregoing shall not be construed to limit or deprive a Party of the benefits of any grace or use period allowed in this Agreement.

3.2 Schedule of Performance.

Consultant shall commence the Services pursuant to this Agreement upon receipt of a written notice to proceed and shall perform all Services within the time period(s) established in the "Schedule of Performance" attached hereto as **Exhibit D** and incorporated herein by this reference.

3.3 Force Majeure.

The time period(s) specified in the Schedule of Performance for performance of the Services rendered pursuant to this Agreement may be extended because of any delays due to unforeseeable causes beyond the control and without the fault or negligence of Consultant. Such unforeseeable consequences include, but are not restricted to, acts of God or public enemy, unusually severe weather, fires, earthquakes, floods, epidemics, quarantine restrictions, riots, strikes, freight embargoes, wars, litigation, and/or acts of any governmental agency, including City, if Consultant shall within ten (10) days of the commencement of such delay notify the Contract Officer in writing of the causes of the delay. The Contract Officer shall ascertain the facts and the extent of delay, and extend the time for performing the Services for the period of the enforced delay when and if in the judgment of the Contract Officer such delay is justified, subject to the provisions of Section 1.8. The Contract Officer's determination (or the City Council's determination, in the event the period of enforced delay exceeds the period specified in Section 1.8) shall be final and conclusive upon the Parties to this Agreement. In no event shall Consultant

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be entitled to recover damages against City for any delay in the performance of this Agreement, however caused; Consultant's sole remedy shall be the extension of the Agreement pursuant to this Section.

3.4 Term.

The Term of this Agreement shall be from the Effective Date through June 30, 2024, unless sooner terminated as provided in Article 6 of this Agreement or extended as provided in Sections 1.8 and 3.3 of this Agreement. Maximum term and any subsequent amendment or modification shall not exceed five (5) years.

ARTICLE 4. INSURANCE AND INDEMNIFICATION

4.1 Minimum Scope and Limits of Insurance.

Consultant shall procure and at all times during the term of this Agreement carry, maintain, and keep in full force and effect, insurance as follows:

A. Commercial General Liability Insurance with a minimum limit of $1,000,000.00 per occurrence for bodily injury, personal injury and property damage and a general aggregate limit of $2,000,000.00 per project or location. If Consultant is a limited liability company, the commercial general liability coverage shall be amended so that Consultant and its managers, members, affiliates, employees, agents and other persons necessary or incidental to its operation are insureds.

B. Automobile Liability Insurance for any owned, non-owned or hired vehicle used in connection with the performance of this Agreement with a combined single limit of $1,000,000.00 per accident for bodily injury and property damage. If Consultant does not use any owned, non-owned or hired vehicles in the performance of Services under this Agreement, Consultant shall obtain a non-owned auto endorsement to the Commercial General Liability policy.

C. Workers' Compensation Insurance as required by the State of California and Employer's Liability Insurance with a minimum limit of $1,000,000.00 per accident for bodily injury or disease. If Consultant has no employees while performing Services under this Agreement, workers' compensation policy is not required; however, Consultant shall execute a declaration that it has no employees.

D. Professional Liability/Errors and Omissions Insurance with minimum limits of $1,000,000.00 per claim and in the aggregate.

4.2 Acceptability of Insurers.

The insurance policies required under this Article shall be issued by an insurer admitted to write insurance in the State of California with a rating of A:VII or better in the latest

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edition of the A.M. Best Insurance Rating Guide. Self-insurance shall not be considered to comply with the insurance requirements under this Article.

4.3 Additional Insured.

The commercial general and automobile liability policies shall contain an endorsement naming City, its officers, employees, agents and volunteers as additional insureds.

4.4 Primary and Non-Contributing.

The insurance policies required under this Article shall apply on a primary non-contributing basis in relation to any other insurance or self-insurance available to City. Any insurance or self-insurance maintained by City, its officers, employees, agents or volunteers, shall be in excess of Consultant's insurance and shall not contribute with it.

4.5 Consultant's Waiver of Subrogation.

The insurance policies required under this Article shall not prohibit Consultant and Consultant's employees, agents or sub-contractors from waiving the right of subrogation prior to a loss. Consultant hereby waives all rights of subrogation against City.

4.6 Deductibles and Self-Insured Retentions.

Any deductibles or self-insured retentions must be declared to and approved by City. At City's option, Consultant shall either reduce or eliminate the deductibles or self-insured retentions with respect to City; or Consultant shall procure a bond guaranteeing payment of losses and expenses.

4.7 Cancellations or Modifications to Coverage.

Consultant shall not cancel, reduce or otherwise modify the insurance policies required by this Article during the term of this Agreement. The commercial general and automobile liability policies required under this Agreement shall be endorsed to state that should the issuing insurer cancel the policy before the expiration date, the issuing insurer will endeavor to mail 30 days' prior written notice to City. If any insurance policy required under this Article is canceled or reduced in coverage or limits, Consultant shall, within two (2) Business Days (as defined in Section 8.12) of notice from the insurer, phone, fax or notify City via certified mail, return receipt requested, of the cancellation of or changes to the policy.

4.8 City Remedy for Noncompliance.

If Consultant does not maintain the policies of insurance required under this Article in full force and effect during the term of this Agreement, or in the event any of Consultant's policies do not comply with the requirements under this Article, City may either immediately terminate this Agreement or, if insurance is available at a reasonable cost, City may, but has no duty to, take out the necessary insurance and pay, at Consultant's expense, the premium thereon. Consultant shall promptly reimburse City for any premium paid by City, or City may withhold amounts sufficient to pay the premiums from payments due to Consultant.

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4.9 Evidence of Insurance.

Prior to the performance of Services under this Agreement, Consultant shall furnish the City Clerk with a certificate or certificates of insurance and all original endorsements evidencing and effecting the coverages required under this Article. The endorsements are subject to City's approval. Consultant may provide complete, certified copies of all required insurance policies to City. Consultant shall maintain current endorsements on file with the City Clerk. Consultant shall provide proof to the City Clerk that insurance policies expiring during the term of this Agreement have been renewed or replaced with other policies providing at least the same coverage. Consultant shall furnish such proof at least two (2) weeks prior to the expiration of the coverages.

4.10 Indemnity Requirements not Limiting.

Procurement of insurance by Consultant shall not be construed as a limitation of Consultant's liability or as full performance of Consultant's duty to indemnify City under this Agreement.

4.11 Sub-contractor Insurance Requirements.

Consultant shall require each of its sub-contractors that perform Services under this Agreement to maintain insurance coverage that meets all of the requirements of this Article.

4.12 Indemnification, Hold Harmless, and Duty to Defend.

A. Indemnification of City.

1) Indemnity for Design Professional Services. To the fullest extent permitted by law, Consultant shall, at its sole cost and expense, protect, indemnify, and hold harmless City and its elected officials, officers, attorneys, agents, employees, designated volunteers, successors, assigns and those City agents serving as independent contractors in the role of City officials (collectively "Indemnitees"), from and against any and all damages, costs, expenses, liabilities, claims, demands, causes of action, proceedings, judgments, penalties, liens, and losses of any nature whatsoever, including fees of accountants, attorneys, or other professionals and all costs associated therewith, and reimbursement of attorney's fees and costs of defense (collectively "Liabilities"), whether actual, alleged or threatened, which arise out of, are claimed to arise out of, pertain to, or relate to, in whole or in part, the negligence, recklessness or willful misconduct of Consultant, its officers, agents, servants, employees, subcontractors, material men, contractors or their officers, agents, servants or employees (or any entity or individual that Consultant shall bear the legal liability thereof) in the performance of design professional services under this Agreement by a "design professional," as the term is defined under California Civil Code Section 2782.8(c).

2) Other Indemnities. Other than in the performance of design professional services, and to the fullest extent permitted by law, Consultant shall, at its sole cost and expense, defend, hold harmless and indemnify Indemnitees from and against any and all damages, costs, expenses, liabilities, claims, demands, causes of action, proceedings, expenses, judgments, penalties, liens, and losses of any nature whatsoever, including fees of accountants, attorneys, or other professionals and all costs associated therewith and the payment of all consequential

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damages (collectively "Claims"), at law or in equity, whether actual, alleged or threatened, which arise out of, are claimed to arise out of, pertain to, or relate to the acts or omissions of Consultant, its officers, agents, servants, employees, sub-contractors, materialmen, consultants or their officers, agents, servants or employees (or any entity or individual that Consultant shall bear the legal liability thereof) in the performance of this Agreement, including the Indemnitees' active or passive negligence, except for Claims arising from the sole negligence or willful misconduct of the Indemnitees as determined by court decision or by the agreement of the Parties. Consultant shall defend the Indemnitees in any action or actions filed in connection with any Claims with counsel of the Indemnitees' choice, and shall pay all costs and expenses, including all attorneys' fees and experts' costs actually incurred in connection with such defense. Consultant shall reimburse the Indemnitees for any and all legal expenses and costs incurred by Indemnitees in connection therewith.

3) Consultant shall pay all required taxes on amounts paid to Consultant under this Agreement, and indemnify and hold City harmless from any and all taxes, assessments, penalties, and interest asserted against City by reason of the independent contractor relationship created by this Agreement. Consultant shall fully comply with the workers' compensation law regarding Consultant and Consultant's employees. Consultant shall indemnify and hold City harmless from any failure of Consultant to comply with applicable workers' compensation laws. City may offset against the amount of any fees due to Consultant under this Agreement any amount due to City from Consultant as a result of Consultant's failure to promptly pay to City any reimbursement or indemnification arising under this subparagraph A.3.

4) Consultant shall obtain executed indemnity agreements with provisions identical to those in this Article from each and every sub-contractor or any other person or entity involved by, for, with or on behalf of Consultant in the performance of this Agreement. If Consultant fails to obtain such indemnities, Consultant shall be fully responsible and indemnify, hold harmless and defend the Indemnitees from and against any and all Liabilities and Claims, in law or in equity, whether actual, alleged or threatened, which arise out of, are claimed to arise out of, pertain to, or relate to the acts or omissions of Consultant's sub-contractor, its officers, agents, servants, employees, sub-contractors, materialmen, contractors or their officers, agents, servants or employees (or any entity or individual that Consultant's sub-contractor shall bear the legal liability thereof) in the performance of this Agreement, including the Indemnitees' active or passive negligence, except for Liabilities and Claims arising from the sole negligence or willful misconduct of the Indemnitees, as determined by court decision or by the agreement of the Parties.

B. Workers' Compensation Acts not Limiting. Consultant's indemnifications and obligations under this Article, or any other provision of this Agreement, shall not be limited by the provisions of any workers' compensation act or similar act. Consultant expressly waives its statutory immunity under such statutes or laws as to City, its officers, agents, employees and volunteers.

C. Insurance Requirements not Limiting. City does not, and shall not, waive any rights that it may possess against Consultant because of the acceptance by City, or the deposit with City, of any insurance policy or certificate required pursuant to this Agreement. The indemnities in this Article shall apply regardless of whether or not any insurance policies are determined to be applicable to the Liabilities, tax, assessment, penalty or interest asserted against City.

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D. Survival of Terms. Consultant's indemnifications and obligations under this Article shall survive the expiration or termination of this Agreement.

ARTICLE 5. RECORDS, REPORTS, AND RELEASE OF INFORMATION

5.1 Service Records.

Consultant shall keep, and require sub-contractors to keep, such ledgers, books of accounts, invoices, vouchers, canceled checks, reports, studies or other documents relating to the disbursements charged to City and Services performed hereunder (the "Service Records"), as shall be necessary to perform the Services required by this Agreement and enable the Contract Officer to evaluate the performance of such Services. Any and all such Service Records shall be maintained in accordance with generally accepted accounting principles and shall be complete and detailed. The Contract Officer shall have full and free access to such Service Records at all times during normal business hours of City, including the right to inspect, copy, audit and make copies and transcripts from such Service Records. Such Service Records shall be maintained for a period of three (3) years following completion of the Services hereunder, and City shall have access to such Service Records in the event any audit is required. In the event of dissolution of Consultant's business, custody of the Service Records may be given to City, and access shall be provided by Consultant's successor in interest ("Consultant's Successor"). If custody of the Service Records is given to Consultant's Successor, Consultant shall give written notice to City of the transfer of the Service Records to Consultant's Successor. The notice shall include contact information (address and telephone number) for Consultant's Successor, and access shall be provided to City by Consultant's Successor.

5.2 Reports.

Consultant shall periodically prepare and submit to the Contract Officer such reports concerning the performance of the Services required by this Agreement as the Contract Officer shall require. Consultant hereby acknowledges that City is greatly concerned about the cost of Services to be performed pursuant to this Agreement. For this reason, Consultant agrees that if Consultant becomes aware of any facts, circumstances, techniques, or events that may or will materially increase or decrease the cost of the Services contemplated herein, Consultant shall promptly notify the Contract Officer of that fact, circumstance, technique or event and the estimated increased or decreased cost related thereto.

5.3 Ownership of Documents.

All drawings, specifications, maps, designs, photographs, studies, surveys, data, notes, computer files, reports, records, documents and other materials (the "Consultant Documents") prepared by Consultant, its employees, sub-contractors and agents in the performance of this Agreement shall be the property of City and shall be delivered to City upon request of the Contract Officer or upon the termination of this Agreement. Consultant shall have no claim for further employment or additional compensation as a result of the exercise by City of its full rights of ownership use, reuse, or assignment of the Consultant Documents hereunder. Any use, reuse or assignment of such completed Consultant Documents for other projects and/or use of uncompleted Consultant Documents without specific written authorization by Consultant will be at City's sole

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risk and without liability to Consultant, and Consultant's guarantee and warranties shall not extend to such use or assignment. Consultant may retain copies of such Consultant Documents for its own use. Consultant shall have an unrestricted right to use the concepts embodied therein. All sub-contractors shall provide for assignment to City of all Consultant Documents prepared by them; and in the event Consultant fails to secure such assignment, Consultant shall indemnify City for all damages resulting therefrom.

5.4 Confidentiality and Release of Information.

A. All information gained or work product produced by Consultant in performance of this Agreement shall be considered confidential, unless such information is in the public domain or already known to Consultant. Consultant shall not release or disclose any such information or work product to persons or entities other than City without prior written authorization from the Contract Officer.

B. Consultant, its officers, employees, agents or sub-contractors, shall not, without prior written authorization from the Contract Officer or unless requested by the City Attorney, voluntarily provide documents, declarations, letters of support, testimony at depositions, response to interrogatories or other information concerning the Services performed under this Agreement. Response to a subpoena or court order shall not be considered "voluntary" provided Consultant gives City notice of such court order or subpoena.

C. If Consultant, or any officer, employee, agent or sub-contractor of Consultant, provides any information or work product in violation of this Agreement, then City shall have the right to reimbursement and indemnity from Consultant for any damages, costs and fees, including attorneys' fees, caused by or incurred as a result of Consultant's conduct.

D. Consultant shall promptly notify City should Consultant, its officers, employees, agents or sub-contractors be served with any summons, complaint, subpoena, notice of deposition, request for documents, interrogatories, request for admissions or other discovery request, court order or subpoena from any Party regarding this Agreement and the Services performed thereunder. City retains the right, but has no obligation, to represent Consultant or be present at any deposition, hearing or similar proceeding. Consultant agrees to cooperate fully with City and to provide City with the opportunity to review any response to discovery requests provided by Consultant. However, this right to review any such response does not imply or mean the right by City to control, direct, or rewrite the response.

ARTICLE 6. ENFORCEMENT OF AGREEMENT AND TERMINATION

6.1 California Law.

This Agreement, and any dispute arising from the relationship between the Parties to this Agreement, shall be interpreted, construed and governed both as to validity and to performance of the Parties in accordance with the laws of the State of California. Legal actions concerning any dispute, claim or matter arising out of or in relation to this Agreement shall be instituted in the Superior Court of the County of Riverside, State of California, or any other appropriate court in such county, and Consultant covenants and agrees to submit to the personal jurisdiction of such

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court in the event of such action. In the event of litigation in a U.S. District Court, venue shall lie exclusively in the Central District of California, in Riverside.

6.2 Disputes; Default.

A. In the event that City determines Consultant is in default under the terms of this Agreement, City shall have no obligation or duty to continue compensating Consultant for any Services performed after the date of default. In addition to the provisions of Section 4.8, and the right to terminate pursuant to Section 6.7, if the City Manager determines that Consultant is in default in the performance of any of the terms or conditions of this Agreement, City may serve Consultant with written notice of the default. Consultant shall have ten (10) calendar days after service upon it of the notice in which to cure the default by rendering a satisfactory performance. In the event that Consultant fails to cure its default within such period of time, City may, notwithstanding any other provision of this Agreement, terminate this Agreement without further notice and without prejudice to any other remedy to which it may be entitled at law, in equity or under this Agreement.

B. In the event of termination pursuant to this Section, City may take over the Services and prosecute the same to completion by contract or otherwise, and Consultant shall be liable to the extent that the total cost for completion of the Services required hereunder exceeds the compensation herein stipulated (provided that City shall use reasonable efforts to mitigate such damages), and City may withhold any payments to Consultant for the purpose of set-off or partial payment of the amounts owed City as provided in Section 6.3.

6.3 Retention of Funds.

Consultant hereby authorizes City to deduct from any amount payable to Consultant (whether or not arising out of this Agreement): (i) any payment amount of which may be in dispute hereunder or which is necessary to compensate City for any losses, costs, liabilities, or damages suffered by City, (ii) all amounts retained pursuant to the provisions of Section 4.8, (iii) all amounts for which City may be liable to third parties, by reason of Consultant's acts or omissions in performing or failing to perform Consultant's obligation under this Agreement, and (iv) all payments due or that become due to Consultant during the period that Consultant or any of its sub-contractors fail to maintain any required insurance in full force and effect, until notice is received by City that the required insurance has been restored to full force and effect and that the premiums therefore have been paid for a period satisfactory to City, as provided in Section 4.9, above. In the event that any claim is made by a third party, the amount or validity of which is disputed by Consultant, or any indebtedness shall exist which shall appear to be the basis for a claim of lien, City may withhold from any payment due, without liability for interest because of such withholding, an amount sufficient to cover such claim. The failure of City to exercise such right to deduct or to withhold shall not, however, affect the obligations of Consultant to insure, indemnify, and protect City as elsewhere provided herein.

6.4 Waiver.

Waiver by any Party to this Agreement of any term, condition, or covenant of this Agreement shall not constitute a waiver of any other term, condition, or covenant. Waiver by any

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Party of any breach of the provisions of this Agreement shall not constitute a waiver of any other provision or a waiver of any subsequent breach or violation of any provision of this Agreement. Acceptance by City of any Services by Consultant shall not constitute a waiver of any of the provisions of this Agreement. No delay or omission in the exercise of any right or remedy by a non-defaulting Party on any default shall impair such right or remedy or be construed as a waiver. Any waiver by either Party of any default must be in writing, and shall not be a waiver of any other default concerning the same or any other provision of this Agreement.

6.5 Rights and Remedies are Cumulative.

Except with respect to rights and remedies expressly declared to be exclusive in this Agreement, the rights and remedies of the Parties are cumulative and the exercise by either Party of one or more of such rights or remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default or any other default by the other Party.

6.6 Legal Action.

In addition to any other rights or remedies, either Party may take legal action, in law or in equity, to cure, correct or remedy any default, to recover damages for any default, to compel specific performance of this Agreement, to obtain declaratory or injunctive relief, or to obtain any other remedy consistent with the purposes of this Agreement. Notwithstanding any contrary provision herein, Consultant must file a statutory claim pursuant to Government Code Sections 905 et seq. and 910 et seq., in order to pursue a legal action against City under this Agreement.

6.7 Termination Prior to Expiration of Term.

This Article 6 shall govern any termination of this Agreement except as specifically provided in Section 6.2 for termination for default of Consultant. City reserves the right to terminate this Agreement at any time, with or without cause, upon thirty (30) days' written notice to Consultant, except that where termination is due to the fault of Consultant, the period of notice may be a shorter time as may be determined by the Contract Officer. In addition, Consultant reserves the right to terminate this Agreement at any time, with or without cause, upon sixty (60) days' written notice to City, except that where termination is due to the fault of City, the period of notice may be a shorter time as Consultant may determine. Upon receipt of any notice of termination, Consultant shall immediately cease all Services hereunder except such as may be specifically approved by the Contract Officer. Except where Consultant has initiated termination, Consultant shall be entitled to compensation for all Services rendered prior to the effective date of the notice of termination and for any Services authorized by the Contract Officer thereafter in accordance with the Schedule of Compensation or such as may be approved by the Contract Officer, except as provided in Section 6.3. In the event Consultant has initiated termination, Consultant shall be entitled to compensation only for the reasonable value of the work product actually produced hereunder. In the event of termination without cause pursuant to this Section, the terminating Party need not provide the non-terminating Party with the opportunity to cure pursuant to Section 6.2.

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6.8 Attorneys' Fees.

In any litigation or other proceeding by which a Party seeks to enforce its rights under this Agreement (whether in contract, tort or both) or seeks a declaration of any rights or obligations under this Agreement, the prevailing Party in such action or proceeding, in addition to any other relief which may be granted, whether legal or equitable, shall be entitled to reasonable attorneys' fees. Attorneys' fees shall include attorney's fees on any appeal, and in addition the Party entitled to attorneys' fees shall be entitled to all other reasonable costs for investigating such action, taking depositions and discovery and all other necessary costs the court allows which are incurred in such litigation. All such fees shall be deemed to have accrued on commencement of such action and shall be enforceable whether or not such action is prosecuted to judgment.

ARTICLE 7. CITY OFFICERS AND EMPLOYEES: NON-DISCRIMINATION

7.1 Non-liability of City Officers and Employees.

No officer or employee of City shall be personally liable to Consultant, or Consultant's Successor, in the event of any default or breach by City or for any amount which may become due to Consultant or Consultant's Successor, or for breach of any obligation of the terms of this Agreement.

7.2 Conflict of Interest.

Consultant covenants that neither it, nor any officer or principal of its firm, has or shall acquire any interest, directly or indirectly, which would conflict in any manner with the interests of City or which would in any way hinder Consultant's performance of Services under this Agreement. Consultant further covenants that in the performance of this Agreement, no person having any such interest shall be employed by it as an officer, employee, agent or sub-contractor without the express written consent of the Contract Officer. Consultant agrees to at all times avoid conflicts of interest or the appearance of any conflicts of interest with the interests of City in the performance of this Agreement.

No officer or employee of City shall have any direct or indirect financial interest in this Agreement within the scope of Government Code section 1090, nor shall any such officer or employee make, participate in making, or use his or her official position to influence, any City decision relating to the Agreement which has a material financial effect on his or her financial interests or the financial interests of any corporation, partnership or association in which he or she is, directly or indirectly, interested, in violation of any State statute or regulation. Consultant warrants that it has not paid or given, and will not pay or give any third party any money or other consideration for obtaining this Agreement.

Consultant and its officers, employees, associates and sub-contractors, if any, shall comply with all conflict of interest statutes of the State of California applicable to Consultant's Services under this Agreement, including the Political Reform Act (Gov. Code § 81000, et seq.) and Government Code Section 1090. During the term of this Agreement, Consultant may perform similar services for other clients; but Consultant and its officers, employees, associates and sub-contractors shall not, without the Contract Officer's prior written approval, perform services for another person or entity for whom Consultant is not currently performing services that would

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require Consultant or one of its officers, employees, associates or sub-contractors to abstain from a decision under this Agreement pursuant to a conflict of interest statute. Consultant shall incorporate a clause substantially similar to this Section into any subcontract that Consultant executes in connection with the performance of this Agreement.

7.3 Covenant Against Discrimination.

Consultant covenants that, by and for itself, its heirs, executors, assigns, and all persons claiming under or through them, that there shall be no discrimination against or segregation of, any person or group of persons on account of race, color, creed, religion, sex, gender, sexual orientation, marital status, national origin, or ancestry in the performance of this Agreement. Consultant shall take affirmative action to insure that applicants are employed, and that employees are treated during employment, without regard to their race, color, creed, religion, sex, marital status, national origin, or ancestry, or other protected class.

7.4 Unauthorized Aliens.

Consultant hereby promises and agrees to comply with all of the provisions of the Federal Immigration and Nationality Act, 8 U.S.C.A. §§ 1101, et seq., as amended, and in connection therewith, shall not employ unauthorized aliens as defined therein. Should Consultant so employ such unauthorized aliens for the performance of Services covered by this Agreement, and should the any liability or sanctions be imposed against City for such use of unauthorized aliens, Consultant hereby agrees to and shall reimburse City for the cost of all such liabilities or sanctions imposed, together with any and all costs, including attorneys' fees, incurred by City.

ARTICLE 8. MISCELLANEOUS PROVISIONS

8.1 Notices.

Any notice, demand, request, document, consent, approval, bill, invoice, report or other communication required or permitted under this Agreement shall be in writing and conclusively deemed effective: (a) on confirmed delivery by courier service or overnight delivery service during Consultant's and City's regular business hours; or (b) three (3) Business Days after deposit in the United States mail, by certified or registered mail, and addressed to the Party to be notified as set forth below:

If to City

Attn: Nathan Smith
Deputy Director of Engineering
City of Banning
99 East Ramsey Street
Banning, California 92220
Email: nsmith@banningca.gov

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With a courtesy copy to:	Serita R. Young, City Attorney Richards, Watson & Gershon 350 South Grand Avenue, 37th Floor Los Angeles, California 90071 Email: SYoung@rwglaw.com
If to Consultant:	Attn: Rick O'Neill Rick Engineering Company 1770 Iowa Avenue, Suite 100 Riverside, CA 92507

8.2 Interpretation.

The terms of this Agreement shall be construed in accordance with the meaning of the language used and shall not be construed for or against either Party by reason of the authorship of this Agreement or any other rule of construction which might otherwise apply.

8.3 Counterparts.

This Agreement may be executed in counterparts, each of which shall be deemed to be an original, and such counterparts shall constitute one and the same instrument.

8.4 Integration; Amendment.

This Agreement, and all exhibits referred to in this Agreement, constitute the final, complete and exclusive statement of the terms of the agreement between the Parties pertaining to the subject matter of this Agreement and supersede all other and cancels any and all previous negotiations, arrangements, agreements and understandings, if any, between the Parties, and none shall be used to interpret this Agreement. No Party has been induced to enter into this Agreement by, nor is any Party relying on, any representation or warranty except those expressly set forth in this Agreement. No amendment to or modification of this Agreement, nor any provision or breach hereof waived, shall be valid unless made in writing and approved by Consultant and by City Council. The Parties agree that this requirement for written modifications cannot be waived and that any attempted waiver shall be void.

8.5 Severability.

In the event that any one or more of the phrases, sentences, clauses, paragraphs, or sections contained in this Agreement shall be declared invalid or unenforceable by a valid judgment or decree of a court of competent jurisdiction, such invalidity or unenforceability shall not affect any of the remaining phrases, sentences, clauses, paragraphs, or sections of this Agreement which are hereby declared as severable and shall be interpreted to carry out the intent of the Parties hereunder unless the invalid provision is so material that its invalidity deprives either Party of the basic benefit of their bargain or renders this Agreement meaningless.

8.6 Mutual Cooperation.

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A. City's Cooperation. City shall provide Consultant with all pertinent data, documents and other requested information as is reasonably available for Consultant's proper performance of the Services required under this Agreement.

B. Consultant's Cooperation. In the event any claim or action is brought against City relating to Consultant's performance of Services rendered under this Agreement, Consultant shall render any reasonable assistance that City requires.

8.7 No Third Party Beneficiaries Intended.

This Agreement is made solely for the benefit of the Parties to this Agreement and their respective successors and assigns, and no other person or entity may have or acquire a right by virtue of this Agreement.

8.8 Final Payment Acceptance Constitutes Release.

The acceptance by Consultant of the final payment made under this Agreement shall operate as and be a release of City from all claims and liabilities for compensation to Consultant for anything done, furnished or relating to Consultant's Services. Acceptance of payment shall be any negotiation of City's check or the failure to make a written extra compensation claim within ten (10) calendar days of the receipt of that check. However, approval or payment by City shall not constitute, nor be deemed, a release of the responsibility and liability of Consultant, its employees, sub-contractors and agents for the accuracy and competency of the information provided and/or Services performed; nor shall such approval or payment be deemed to be an assumption of such responsibility or liability by City for any defect or error in the Services prepared by Consultant, its employees, sub-contractors and agents.

8.9 Non-Appropriation of Funds.

Payments to be made to Consultant by City for Services performed within the current fiscal year which are within the current fiscal budget and within an available, unexhausted fund. In the event that City does not appropriate sufficient funds for payment of Consultant's Services beyond the current fiscal year, this Agreement shall cover payment for Consultant's Services only to the conclusion of the last fiscal year in which City appropriates sufficient funds and shall automatically terminate at the conclusion of such fiscal year.

8.10 Headings.

The headings in this Agreement are included solely for convenience of reference and shall not affect the interpretation of any provision of this Agreement or any of the rights or obligations of the Parties to this Agreement.

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8.11 Word Usage.

Unless the context clearly requires otherwise, (a) the words "shall," "will" and "agrees" are mandatory and "may" is permissive; (b) "or" is not exclusive; and (c) "includes" or "including" are not limiting.

8.12 Business Days.

"Business Days" refers to days that the Banning City Hall is open for business.

8.13 Corporate Authority.

The persons executing this Agreement on behalf of the Parties hereto warrant that (i): such Party is duly organized and existing, (ii) they are duly authorized to execute and deliver this Agreement on behalf of that Party, (iii) by so executing this Agreement, such Party is formally bound to the provisions of this Agreement, and (iv) the entering into this Agreement does not violate any provision of any other Agreement to which that Party is bound. This Agreement shall be binding upon the heirs, executors, administrators, successors and assigns of the Parties.

8.14 Electronic Signatures.

Each Party may adopt as its signature an electronic identification consisting of a symbol or code that is affixed to or contained in each document transmitted by such Party ("electronic signature"). The Parties hereto herby agree that electronic signatures are acceptable, shall have the same force and effect under the law as original wet signatures, and shall be sufficient to verify that the Parties have executed this Agreement and such other documents transmitted by the Parties.

[SIGNATURES ON FOLLOWING PAGE]

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IN WITNESS WHEREOF the Parties hereto have executed this Agreement the day and year first hereinabove written.

CITY OF BANNING

11/15/2023

Douglas Schulze, Date
City Manager

ATTEST:

11/15/2023

Caroline Patton Date
Deputy City Clerk

APPROVED AS TO FORM:
Richards, Watson & Gershon

Serita Young 11/8/2023

Serita R. Young Date
City Attorney

CONSULTANT

Richard O'Neill 11/10/2023

NAME: Richard O'Neill Date
TITLE: Associate Principal

NAME: Date
TITLE:

95-1859899

Tax ID No.

Address:
Rick Engineering Company
1770 Iowa Ave, Suite 100
Riverside, CA 92507

City Council Approval: 11/14/2023

NOTE: PROOF OF AUTHORITY TO BIND CONTRACTING PARTY REQUIRED. APPROPRIATE ATTESTATIONS SHALL BE INCLUDED AS MAY BE REQUIRED BY THE BYLAWS, ARTICLES OF INCORPORATION, OR OTHER RULES OR REGULATIONS APPLICABLE TO CONSULTANT'S BUSINESS ENTITY.

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EXHIBIT "A"
SCOPE OF SERVICES

I. Consultant will perform the following Services in connection with providing Engineer Design Services prepared in connection therewith:

II. As part of the Services, Consultant will prepare and deliver the following tangible work products and services to City:

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SCOPE OF WORK

Rick Engineering Company (RICK) will perform the following services in connection with providing the design of a new ductile iron pipe (size TBD by city) water main in Ramsey Street between Sunset Avenue and Highland Home Road based on the following scope of work.

Task 1. Project Management

1.1 Kick-off Meeting and Project Management

After execution of the contract, Rick Engineering Company (RICK) will schedule and attend a kick-off meeting with the City of Banning (City) to discuss the project scope, goals, preliminary findings and alignment selected by the City, finalize the project schedule, and identify available as-built plans and studies. RICK will prepare the meeting agenda and provide the team with meeting minutes following the meeting.

RICK will provide project management of the project that includes preparation and maintenance of a project specific Work Plan. The Work Plan will include details of methodology of design, sequence of tasks lists of deliverables, milestone submittal schedule, summary of organizational responsibilities, and a communication plan with contacts of all team members. Additionally, RICK will provide utility coordination with the utility providers that have utilities along the alignment, and perform quality assurance and quality control prior to each milestone submittal, and in conformance with federal, state, and city standards.

Deliverables – Meeting agenda and minutes, Work Plan

1.2 Progress Meetings

RICK will schedule monthly progress meetings with the City and project team, that will be face to face or virtual, and facilitate additional meetings with the City departments/stakeholders as needed for the project during the project duration. Scope assumes 8 monthly meetings, that includes milestone design review / comment resolution meetings and an additional 3 project meetings.
RICK will prepare agendas and minutes for the meetings, distribute the minutes, and will also provide a monthly progress report to be included with the monthly invoice.

Deliverables – Meeting agendas and minutes

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1.3 Invoicing

RICK will develop and provide a monthly invoice to the City. The invoice will include RICK labor costs, subconsultant invoices and direct expenses. Direct expenses will be supported by a copy of the receipt if applicable. Invoices shall include details of billed and remaining budget for each task, and will include the monthly progress report of the tasks completed, identify any outstanding issues to be resolved, and upcoming work to be performed.

Deliverable – Monthly invoices and progress reports

Task 2. Project Development

2.1 Utility Research, Base Mapping, and Site Reconnaissance

RICK will conduct research with the City of Banning, County of Riverside, and other governing agencies and utility companies for existing plans and maps of the adjacent area to be used for the design of the project.

RICK will conduct a field visit to collect visible information of project site. Research will consist of the private water systems that will be reconnected to the new/proposed waterline in Ramsey Street and the affected private properties. RICK will verify existing site data in terms of surrounding street system, geometry, parking, signing and striping, and private improvements and private water system appurtenances on the properties.

RICK will prepare a CAD file based on the boundary survey described below showing the existing utilities discovered in the research.

Deliverables - Photo log for any photos taken, letters to utility companies, utility as-built maps, and an AutoCAD drawing of the existing utilities.

2.1.1 Property Research

RICK will research City of Banning and County of Riverside survey records and record mapping for property and right of way information. RICK will also conduct a field survey to establish street centerline and rights of way of Ramsey Street within the project limits (between Sunset Avenue and Highland Home Road), Omar Street (between Ramsey and W. Jacinto View Road), W. Jacinto View Road (between Omar Street and Winchester Drive), and the property lines of the adjacent private properties and private properties that are affected by the relocation of water services. Survey basis of bearings and coordinates will be California State Plane Coordinates. Survey data and records analysis will be prepared within a CAD file establishing project mapping for centerline and right of

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way, including intersecting streets. Base mapping will include existing easements. Easements will be researched to identify their applicability/inapplicability with new waterline alignments.

Deliverables - Field Review notes, photo log for any photos taken, and an AutoCAD drawing of the rights of ways and centerline.

2.1.2 Site Topography and Surveying

RICK will provide a supplemental field topography along the existing water line points of connection and where needed and the effected private properties (where water systems will be reconnected in Ramsey Street). Consultant will locate and dip existing sewer and storm drain manholes. Topography will be vertically controlled by local published benchmarks.

Deliverables – Field Review notes, photo log for any photos taken, and CAD file with survey points.

2.1.3 Aerial Topography

RICK will provide an aerial topography of the project site consisting of surface utility appurtenances and improvements such as curb, edge of pavement, drainage inlets, valve cans, fences, driveways, mailboxes, utility vaults, power poles, signs, lights, traffic signals, sidewalks, pedestrian ramps, and notable grade features.

Deliverables – 40-scale at 1-foot contours

2.2 Potholing

RICK's subconsultant, C Below, will perform potholing for the project. C Below will perform forty (40) potholes as indicated in the RFP. A standard pothole is 12 in. x 12 in, performed to the top of pipe or encasement with sand backfill and a permanent surface patch. Potholes are assumed to be 5' in depth. Potholes include water line tie-in points and underground utility crossings. Potholes will also be used to locate the old Highway 99 concrete by setting alignment of potholes perpendicular to Ramsey Street, spaced 10' on center curb to curb. Alignments will be performed at mid-point of each project phase (3 alignments). C Below will provide a detailed potholing report at the conclusion of the investigation. Service includes Dig Alert Coordination and Delineation, Encroachment permit, vacuum excavation to top of utility, encasement, or stop depth, standard traffic control, 12-inches of hot patching (restored within 30-days of excavation activity), sand backfill, removal of debris, and pothole report. Services not included are slurry backfill, extensive traffic control, flagging for traffic control, sidewalk concrete

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panel replacement, and removal of Dig Alert marks.

Standard traffic control includes one lane closure with minimal signage not spanning an intersection.

Prior to potholing, a potholing plan will be developed showing location of potholes for connection points, intermediate points, and location of other underground utilities.

Deliverables – Potholing plan and potholing report

2.3 Geotechnical Study

Geocon is proposing to drill six (6) geotechnical borings up to 15 feet in depth, along portions of the proposed water main alignment, where the subsurface explorations of our 2018 geotechnical investigation cannot supplement. The geotechnical borings will be performed to the observe subsurface soil conditions and collect samples for laboratory testing. We expect that traffic control signage/equipment will be sufficient and flag persons will not be required. Furthermore, we expect that the Banning encroachment permit will be a no fee permit for this project, and that patching of the borings with asphalt concrete cold-patch is acceptable.

RICK's subconsultant, Geocon West, Inc, will consist of:

- Mark the planned boring locations and notify Underground Surface Alert of Southern California to mark any subsurface utility locations near the exploration locations. Additionally, the client should provide plans depicting the locations of all utilities in the project area.
- Prepare no-fee encroachment permits with the City of Banning for our work. We have assumed a traffic control plan utilizing MUTCD or Watchbook details will be sufficient, and an engineered traffic control plan will not be required.
- Provide traffic control setup and breakdown at each boring location. We plan to source traffic control signage/equipment for our work and did not include flag persons in this budget.
- Drill six (6) geotechnical borings along the portion of the proposed water main alignment that our 2018 subsurface explorations cannot supplement. We will collect bulk and ring samples of the subgrade soil for laboratory testing. Borings will be backfilled with soil cuttings and clean sand, and capped with asphalt concrete cold-patch upon completion. We expect borings of up to 15 feet will be sufficient for design of the proposed water main. Borings will be located so that there is an approximate 500-foot interval maintained between the new borings and 2018 borings, along the proposed water main alignment, to ensure an appropriate standard of care. We have budgeted one day of drilling.
- Perform laboratory testing which is expected to include in-situ moisture content and dry density determinations, maximum dry density and optimum moisture

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content, grain size analysis, corrosion screening, sand equivalent, and direct shear testing. The laboratory testing program will be based on the conditions encountered during the field investigation with respect to the proposed improvements. Our 2018 laboratory test results will be provided as supplemental information for the portion of the proposed water main alignment able to be covered by our 2018 geotechnical investigation.

- Prepare a geotechnical report presenting our findings in the field, boring logs, a map depicting the boring locations, a discussion of the geotechnical conditions at the site, and geotechnical parameters for storm drain design.

Assumptions:

- The borings can be safely performed in the vicinity of the proposed water main alignment, considering existing utilities are present and to facilitate traffic flow around our drilling operations. Where performing the borings poses a conflict with existing utilities, resulting in an unsafe working environment for property, personnel, and/or motorists/pedestrians, the planned borings will be relocated, as feasible.
- This proposal does not include any costs to re-grade, install hot-mix asphalt concrete patching, re-vegetate, landscape or otherwise repair disturbed areas.

Deliverables – Geotechnical report

Task 3. Preliminary Engineering Design

3.1 Preliminary Design Plans (30% design)

RICK will prepare waterline plans for approximately (7,200 LF) for a proposed Ductile Iron pipe in Ramsey Street between Sunset Avenue and Highland Home Road. Plans will be at 40-scale and include plan and profile. Plans will be setup for 3 construction phases:
Phase 1: The waterline between Sunset Avenue to near the property at 3929 W. Ramsey Street.
Phase 2: The continuation of Phase 1 to Omar Street, then continuing north on Omar to W. Jacinto View Road, and then east to the Winchester Drive intersection.
Phase 3: From Omar Street westerly on Ramsey Avenue to approximately Highland Home Road.

Additionally, RICK will:

a. Collect the data from the utility and property research from scope items above to use as part of the base file for the water plans. Existing utilities will be shown on the plans in locations verified by the potholing above and/or provided by the utility companies. As part of the plan preparation, RICK will contact affected

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utility companies to obtain permits if needed (utility fees to be paid by the City of Banning).

b. RICK will arrange and participate in informal meetings as necessary with City staff to review the progress of the project and exchange ideas and information.
c. Meetings with the City of Banning will discuss the key design issues and develop general project criteria for construction, including schedule and possible ways of minimizing problems. RICK will prepare and submit meeting agendas prior to the meetings.
d. RICK will provide data received and assumptions utilized to the city for approval prior to integrating the data into the project's final design.
e. RICK will prepare preliminary water plans (30-percent design) using AutoCAD for approximately 7,200 LF of water line (8-inch to 14-inch) to establish an agreement with the City of Banning on project scope, alignment, easements, parameters, hydraulic requirements, maintenance concerns, constructability and construction phasing, traffic impacts, and general disruption to the area. The preliminary design is to be submitted to the City of Banning for review and approval. The preliminary design shall address the following:
    a. Pipeline alignment/facility locations
    b. Construction schedule and phasing recommendations
    c. Construction Cost Estimate of recommended improvements
    d. Conflicts with other utilities and adjacent facilities in the area
    e. Traffic and pedestrian control
    f. Erosion Control
    g. Preferred materials for construction
    h. Areas where construction work is limited or controlled.
    i. Impacts to City water system.
    j. Impacts to surrounding business and residential areas.
    k. Easements (existing and proposed)
    l. Corrosion protection (if necessary)
f. The preliminary design will be submitted in PDF format through the City's SmartGov platform for the City of Banning's review and concurrence. The design will be at a 30% level of effort. Changes in layout and location of facilities suggested by the city will be investigated. A final layout and location of facilities will then be established.
g. As part of the meetings with the city, discussions and submittals of material will be presented to the city through the preliminary design process to reduce comment time and effort by the city.

It is assumed that the City of Banning will provide the size of the proposed new waterline. A hydraulic analysis is not included with this scope. However, we have provided it as an additional/if needed service.

It is assumed that the majority of the existing waterline will be abandoned in place.

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As part of the 30% design, RICK will prepare a traffic control conceptual staging plan for Phase 1 only identifying the assumed stages for each of the phases as noted in the Request for Proposal. The project Phase 1 proposes to construct approximately 2,600' of a water main along Ramsey Street from Sunset Avenue to 3929 W. Ramsey Street. It is anticipated that the traffic control conceptual staging plan will be prepared at 40 scale and will identify the proposed linear footage per stage and a description of the work that will be completed.

Deliverables – (all via the city's SmartGov platform): PDF of the preliminary design plans and the preliminary opinion of probable costs.

3.2 Preliminary Design Plans (60% design)

Rick will prepare plans based on the 30% design and subsequent review comments by the City. Plans include a one (1) cover sheet, two (2) detail sheet, ten (10) plan and profile sheets, two (2) connection detail sheets for private landowners, and one (1) valve shut down sheet if needed, and will show the existing water services and fire hydrants to the new waterline. Due to the existing waterline being at the back of the effected parcels, water meters, backflow devised and related system components shall be moved to front Ramsey off the new proposed waterline. Detail sheets will detail the on-site design connecting to the new line to provide a water system at minimum equal to the existing condition.

RICK's subconsultant, Dexter Wilson Engineering, will assist in preparation of technical specifications, pipeline material design, pipeline deflection calculations, design of thrust restraining systems, details for phased connections, details for connection to the existing pipeline, peer review of replacement plans, and other pipeline design aspects.

Consultant will incorporate any comments received from the City of Banning on the traffic control conceptual staging plan into the 60% design plans. Consultant will prepare 40-scale traffic control plans for the work associated with the Ramsey Street Water Main for Phase 1 only. The traffic control plans will provide work zones that are staged for construction of the water main, appurtenances, laterals, and any required detours. The one stage of traffic control is assumed as follows:

Phase 1: Sunset Avenue to 3929 W. Ramsey Street. There are assumed 5 stages of traffic control; Stage 1A is to 600' west of Sunset Avenue; Stages 1B, 1C, 1D, and 1E will be up to 500' along Ramsey to 3929 W. Ramsey Street.

The traffic control plans will be prepared following the requirements of the California Manual on Uniform Traffic Control Devices (MUTCD) and the City of Banning. Three (3) submittals are assumed – 60%, 90%, and final. Five (5) sheets

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of traffic control plans are assumed for Phase 1.

A progress meeting will be coordinated with the City of Banning to discuss the 60% design plans. The meeting will discuss the comments and markups and establish a timeline for the project moving forward.

Deliverables - (all via the city's SmartGov platform): PDF of the preliminary design plans and the preliminary opinion of probable costs.

3.3 Detailed Design Plans (90% Design)

Rick will prepare the 90% detailed design waterline plans and traffic control plans based on the 60% review comments received from the City of Banning and other entities. Plans shall follow the City of Banning standards and policies.

RICK will prepare project specifications following the Standard Specifications for Public Works Construction, SSPWC, "Greenbook", latest edition.

RICK will prepare an opinion of probable cost and bid schedule that has construction items of work, unit of measurement, unit cost, and cost based on the detailed design waterline plans.

Deliverables - (all via the city's SmartGov platform): PDF of the preliminary design plans, the preliminary opinion of probable costs, and the Standards and Specifications

Task 4. Final Design Plans

4.1 Final Water Plans

Upon authorization from the City, RICK will finalize the waterline plans and traffic control plans based on the final comments from the City and other entities. Plans will follow the City of Banning standards and policies. Plans will be signed by a licensed Civil Engineer and provided to the City of Banning on Mylar.

RICK will provide the City of Banning a Final set of Project specifications based on final comments from the City of Banning following the SPPWC. RICK will also provide a final opinion of probable cost and bid schedule based on the signed waterline plans.

Deliverables - (all via the city's SmartGov platform): PDF of the preliminary design plans, the preliminary opinion of probable costs, and the Standards and Specifications

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Task 5. Easement Documents

5.1 Easement Documents

RICK will prepare a legal description and plat for each easement for three (3) permanent easements to be granted to the City of Banning and ten (10) temporary construction easements that are required for reconnection of existing private water systems to the new water main. RICK will obtain and review title reports for the thirteen (13) affected properties.

RICK assumes three (3) permanent easements to be granted to the City of Banning and ten (10) Temporary Construction Easements for reconnection of existing private water systems to the new water main.

Assumptions:

- Assumes up to 13 tax parcels owned by 13 unique entities are impacted by temporary construction easements (TCE's) and/or permanent easements.
- Scope does not include any discussions with property owners.
- No appraisal work or negotiations included.
- Consultant is providing legal description and plat for the 13 easements only.

Deliverables - (all via the city's SmartGov platform): Easement documents (legal description and plat) and up to 13 preliminary title reports.

Task 6. Stormwater Pollution Prevention Plan

6.1 Stormwater Pollution Prevention Plan

The Risk Type 1 LUP SWPPP will be prepared in accordance with the requirements of the Appendix E of the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities Order WQ 2022-0057-DWQ NPDES No. CAS000002 (adopted September 8, 2022, effective September 1, 2023).

RICK will prepare a Risk Type 1 LUP SWPPP based on the project's assumed Risk Type.

This task will also include the preparation of a Notice of Intent (NOI) on the Storm Water Multi Application Report Tracking System (SMARTS) database. The Discharger must designate RICK as a Data Entry Person to prepare the NOI. The Discharger/LRP must electronically certify and submit the NOI on SMARTS.

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RICK will act as the initial Qualified SWPPP Developer (QSD) for the preparation of the SWPPP, however the Discharger must hire a QSD and a Qualified SWPPP Practitioner (QSP) for implementation of the SWPPP throughout the life of the project.

Based on the provided bid package this project is assumed to be a Risk Type 1 LUP based on the following assumptions:

1. More than 70% of the soil disturbance will occur on paved surfaces; and
2. Areas that are disturbed will be returned to pre-project conditions at the end of each day.

Deliverables - (all via the city's SmartGov platform): SWPPP (erosion control plan submitted via drawing submittals)

Task 7. Construction Surveying and Staking

7.1 Phase One Water Stakes

RICK will maintain horizontal and vertical control for the duration of the surveying work on this project. RICK will also provide required calculations to field crew for each survey request received.

RICK will provide one set of stakes at all primary points of control; beginning and ends of pipe and at not less than 50' on center along tangent sections and 25' on curves to facilitate the construction of approximately 2,600 LF of water mainline. RICK will also provide not more than two (2) stakes each; to facilitate the location of services, fire hydrants, and points of connection.

*Water stakes to be set in three (3) trips.

Deliverables – Construction Staking Cut Sheets

7.2 Phase Two Water Stakes

RICK will provide one set of stakes at all primary points of control; beginning and ends of pipe and at not less than 50' on center along tangent sections and 25' on curves to facilitate the construction of approximately 2,700 LF of water mainline. RICK will also provide not more than two (2) stakes each; to facilitate the location of services, fire hydrants, and points of connection.

*Water stakes to be set in three (3) trips.

Deliverables – Construction Staking Cut Sheets

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7.3 Phase Three Water Stakes

RICK will provide one set of stakes at all primary points of control; beginning and ends of pipe and at not less than 50' on center along tangent sections and 25' on curves to facilitate the construction of approximately 1,900 LF of water mainline. RICK will also provide not more than two (2) stakes each; to facilitate the location of services, fire hydrants, and points of connection.

*Water stakes to be set in three (2) trips.

Deliverables – Construction Staking Cut Sheets

Task 8. Bidding/Construction Support – Phase 1 Only

8.1 Bidding

RICK will be available during the advertising and bidding of the project to assist the City of Banning in answering questions/RFI's and the preparation of plan addenda, if needed. RICK will attend one (1) pre-bid meeting for the bidding process.

Deliverables – Meeting attendance, responses to Bidder's RFI's

8.2 Construction Administration

RICK will be available during the construction of the project to answer RFI's and prepare plan addenda, if needed. RICK will attend one (1) pre-construction meeting and eight (8) site visits during construction of the project as requested by the city. RICK will review shop drawings and submittals from the contractor for conformance with the contract plans and specifications, and make recommendations for acceptance, denial or resubmittal.

Deliverables – Meeting attendance, response to Contractor's RFI's, design addenda, submittal reviews

8.3 As-Built Plans

RICK will prepare As-Built Plans and process with the City of Banning, as necessary. Scope assumes RICK will receive as-built letters from the contractors and the contractor's as-built plan markup's. Scope assumes no major changes have occurred and does not include any as-built survey time. As-built plans will be submitted to the City within one month of receiving as-built letters and markup's from the contractor.
Deliverables – As-built Plans

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Additional Services (If Needed Services)

Corrosivity Assessment

Rick's subconsultant, RF Yeager will prepare a corrosivity assessment for the proposed waterline, that will include a field resistivity testing, a review of the Geotech/soil chemical analysis data, a review for the potential of stray current interference, and a Corrosivity Assessment Letter Report. This information will be used for the determination of the type of corrosion protection and if any cathodic protection for the pipeline would be required and the corrosion control approach that the City may want to implement.

Deliverable – Corrosivity Assessment Letter Report

Corrosion Control Design

As part of the 90% design plans, RICK's subconsultant, RF Yeager, will provide Corrosion Control Design as part of the plans if Client requires joint bonds, test stations, insulators, and other standard corrosion control facilities. It is recommended the Client to use joint bonds, test stations, and insulators (steel or DIP) such that the pipeline is made electrically continuous and test stations are installed at the side of the road. This allows for monitoring and for adding cathodic protection in the future (should soil conditions/pipeline environment change) and will be much less costly because the pipe is electrically continuous and test stations are already installed. Corrosion control detail sheets, specifications, and cost estimate is included.

Cathodic Protection Design Pipeline

If it is found that Cathodic Protection is required, RICK's subconsultant, RF Yeager, will review the waterline plans, provide comments, and corrosion control design analysis/calculations. Details and specifications will be included. A cathodic protection system cost estimate will be included. RF Yeager will then address the 90% plan comments and provide final 100% design documents. Once approved for final signature, RF Yeager will sign and stamp the final drawings. Cathodic protection detail sheets, specifications, and cost estimates are included.
Deliverables – Corrosion control design analysis/calculations, specifications, and cost estimate.

Hydraulic Analysis

RICK's subconsultant, Dexter Wilson Engineering, will perform hydraulic modeling for the waterline sizing for the project site, if City does not provide the waterline

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sizing. It is assumed City will provide the necessary information to run the modeling.

Caltrans Encroachment Permit

RICK will prepare one (1) Caltrans encroachment permit application for the traffic control devices (i.e. advance signage) that are within the Caltrans right-of-way (ROW) along Sunset Avenue in the vicinity of I-10. For the Caltrans encroachment permit application, the traffic control plans are assumed to be submitted to Caltrans in City of Banning format and will include a Caltrans signature block on the plans.

Plan Processing and Coordination (Caltrans)

RICK will submit and process the traffic control plans with Caltrans District 8. It is assumed that up to two (2) sets of plan check review comments will be received, coordinated, and addressed.

Monument Preservation

Pursuant to Section 8771 of the Business and Professions Code, preconstruction corner records will be prepared and filed identifying recovered survey monuments within the proposed construction limits. Post construction corner records will also be filed reflecting replacement monuments.

Deliverables – Pre and Post construction corner records

Monument Replacement

RICK will replace destroyed survey monuments at the completion of the construction with the project limits.

Record of Survey

Pursuant to 8762 of the Business and Professions Code the filing of a Record of Survey shall be filed if the survey discloses “the establishment of one or more points or lines not shown on any subdivision map, official map, or record of survey, the positions of which are not ascertainable from the inspection of the subdivision map official map or record of survey.

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III. In addition to the requirements of Parts I and II of this Scope of Services, during the performance of the Services, Consultant will keep City appraised through periodic status reports regarding the performance of the Services under this Agreement as set forth below and in Section 5.2, by the following means:

a. In-person meetings and/or teleconferences.

b. Email updates/questions to applicant team and City while reviews are underway.

c. Conference calls.

IV. All work product is subject to review and acceptance by City, and must be revised by Consultant without additional charge to City until found satisfactory and accepted by City.

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EXHIBIT "B"
SPECIAL REQUIREMENTS

TERMS FOR COMPLIANCE WITH CALIFORNIA LABOR LAW REQUIREMENTS

1. This Agreement calls for services that, in whole or in part, constitute "public works" as defined in Division 2, Part 7, Chapter 1 (commencing with Section 1720) of the California Labor Code ("Chapter 1"). Further, Consultant acknowledges that this Agreement is subject to (a) Chapter 1 and (b) the rules and regulations established by the Department of Industrial Relations ("DIR") implementing such statutes. Therefore, as to those Services that are "public works," Consultant shall comply with and be bound by all the terms, rules and regulations described in 1(a) and 1(b) as though set forth in full herein.

2. California law requires the inclusion of specific Labor Code provisions in certain contracts. The inclusion of such specific provisions below, whether or not required by California law, does not alter the meaning or scope of Section 1 above.

3. Consultant shall be registered with the Department of Industrial Relations in accordance with California Labor Code Section 1725.5, and has provided proof of registration to City prior to the Effective Date of this Agreement. Consultant shall not perform work with any subcontractor that is not registered with DIR pursuant to Section 1725.5. Consultant and subcontractors shall maintain their registration with the DIR in effect throughout the duration of this Agreement. If the Consultant or any subcontractor ceases to be registered with DIR at any time during the duration of the project, Consultant shall immediately notify City.

4. Pursuant to Labor Code Section 1771.4, Consultant's Services are subject to compliance monitoring and enforcement by DIR. Consultant shall post job site notices, as prescribed by DIR regulations.

5. Pursuant to Labor Code Section 1773.2, copies of the prevailing rate of per diem wages for each craft, classification, or type of worker needed to perform the Agreement are on file at City Hall and will be made available to any interested party on request. Consultant acknowledges receipt of a copy of the DIR determination of such prevailing rate of per diem wages, and Consultant shall post such rates at each job site covered by this Agreement.

6. Consultant shall comply with and be bound by the provisions of Labor Code Sections 1774 and 1775 concerning the payment of prevailing rates of wages to workers and the penalties for failure to pay prevailing wages. The Consultant shall, as a penalty to City, forfeit $200.00 for each calendar day, or portion thereof, for each worker paid less than the prevailing rates as determined by the DIR for the work or craft in which the worker is employed for any public work done pursuant to this Agreement by Consultant or by any subcontractor.

7. Consultant shall comply with and be bound by the provisions of Labor Code Section 1776, which requires Consultant and each subcontractor to: keep accurate payroll records and verify such records in writing under penalty of perjury, as specified in Section 1776; certify and make such payroll records available for inspection as provided by Section 1776; and inform City of the location of the records.

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8. Consultant shall comply with and be bound by the provisions of Labor Code Sections 1777.5, 1777.6 and 1777.7 and California Administrative Code Title 8, Section 200 et seq. concerning the employment of apprentices on public works projects. Consultant shall be responsible for compliance with these aforementioned Sections for all apprenticeable occupations. Prior to commencing work under this Agreement, Consultant shall provide City with a copy of the information submitted to any applicable apprenticeship program. Within 60 days after concluding work pursuant to this Agreement, Consultant and each of its subcontractors shall submit to City a verified statement of the journeyman and apprentice hours performed under this Agreement.

9. The Consultant shall not perform Work with any Subcontractor that has been debarred or suspended pursuant to California Labor Code Section 1777.1 or any other federal or state law providing for the debarment of contractors from public works. The Consultant and Subcontractors shall not be debarred or suspended throughout the duration of this Agreement pursuant to Labor Code Section 1777.1 or any other federal or state law providing for the debarment of contractors from public works. If the Consultant or any subcontractor becomes debarred or suspended during the duration of the project, the Consultant shall immediately notify City.

10. Consultant acknowledges that eight hours labor constitutes a legal day's work. Consultant shall comply with and be bound by Labor Code Section 1810. Consultant shall comply with and be bound by the provisions of Labor Code Section 1813 concerning penalties for workers who work excess hours. The Consultant shall, as a penalty to City, forfeit $25.00 for each worker employed in the performance of this Agreement by the Consultant or by any subcontractor for each calendar day during which such worker is required or permitted to work more than eight hours in any one calendar day and 40 hours in any one calendar week in violation of the provisions of Division 2, Part 7, Chapter 1, Article 3 of the Labor Code. Pursuant to Labor Code section 1815, work performed by employees of Consultant in excess of eight hours per day, and 40 hours during any one week shall be permitted upon public work upon compensation for all hours worked in excess of eight hours per day at not less than one and one-half times the basic rate of pay.

11. California Labor Code Sections 1860 and 3700 provide that every employer will be required to secure the payment of compensation to its employees. In accordance with the provisions of California Labor Code Section 1861, Consultant hereby certifies as follows:

> "I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract."
>
> **Date**_____ **Signature**_____

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12. For every subcontractor who will perform work on the project, Consultant shall be responsible for such subcontractor's compliance with Chapter 1 and Labor Code Sections 1860 and 3700, and Consultant shall include in the written contract between it and each subcontractor a copy of those statutory provisions and a requirement that each subcontractor shall comply with those statutory provisions. Consultant shall be required to take all actions necessary to enforce such contractual provisions and ensure subcontractor's compliance, including, without limitation, conducting a periodic review of the certified payroll records of the subcontractor and upon becoming aware of the failure of the subcontractor to pay his or her workers the specified prevailing rate of wages. Consultant shall diligently take corrective action to halt or rectify any failure.

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EXHIBIT "C"
SCHEDULE OF COMPENSATION

I. Consultant shall perform the following Scope of Services at the rates stated in Exhibit C-1.

II. Within the budgeted amounts for each Task, and with the approval of the Contract Officer, funds may be shifted from one Task sub-budget to another so long as the Contract Sum is not exceeded per Section 2.1, unless Additional Services are approved per Section 1.8.

III. City will compensate Consultant for the Services performed upon submission of a valid invoice. Each invoice is to include:

A. Line items for all personnel describing the Services performed, the number of hours worked, and the hourly rate.

B. Line items for all materials and equipment properly charged to the Services.

C. Line items for all other approved reimbursable expenses claimed, with supporting documentation.

D. Line items for all approved sub-contractor labor, supplies, equipment, materials, and travel properly charged to the Services.

IV. Consultant's billing rates for all personnel are attached as Exhibit C-1.

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EXHIBIT "C-1"
CONSULTANT'S BILLING RATE AND TASK SCHEDULE

RICK ENGINEERING COMPANY

Principal Consultant (Special Projects)	$300.00
Principal	260.00
Associate Principal	240.00
Associate/Manager	225.00
Expert Witness	450.00
Court Appearance per half day or part	1,800.00
Senior Project Manager	$225.00
Principal Project Engineer/Manager	210.00
Associate Project Engineer/Manager	190.00
Assistant Project Engineer/Manager	175.00
Principal Engineering Designer	155.00
Associate Engineering Designer	140.00
Assistant Engineering Designer	130.00
Principal Engineering Drafter	125.00
Associate Engineering Drafter	115.00
Assistant Engineering Drafter	105.00
Senior Transportation/Traffic Engineer	$215.00
Principal Transportation/Traffic Engineer	210.00
Associate Transportation/Traffic Engineer	190.00
Assistant Transportation/Traffic Engineer	175.00
Principal Transportation/Traffic Designer	155.00
Associate Transportation/Traffic Designer	140.00
Assistant Transportation/Traffic Designer	130.00
Principal Community Planner	$215.00
Principal Project Planner/Manager	200.00
Associate Project Planner/Manager	185.00
Senior Planner	175.00
Associate Planner	140.00
Assistant Planner	120.00
Planning Technician	95.00
Principal Project Landscape Architect/Manager	$190.00
Associate Project Landscape Architect/Manager	170.00
Assistant Project Landscape Architect/Manager	150.00
Principal Landscape/Urban Designer	125.00
Associate Landscape/Urban Designer	120.00
Assistant Landscape/Urban Designer	115.00
Principal Environmental Project Manager	$200.00
Associate Environmental Project Manager	170.00
Assistant Environmental Project Manager	150.00
Principal Environmental Specialist	140.00
Associate Environmental Specialist	130.00
Assistant Environmental Specialist	120.00
Environmental Technician	100.00
Senior Water Quality Manager	$240.00
Principal Water Resources Designer	155.00
Associate Water Resources Designer	140.00
Assistant Water Resources Designer	130.00
GIS Manager	$190.00
Principal GIS Project Manager	180.00
Associate GIS Project Manager	165.00
Assistant GIS Project Manager	150.00
Principal GIS Analyst	145.00
Associate GIS Analyst	130.00
Assistant GIS Analyst	120.00
Principal Graphics Designer	130.00
Associate Graphics Designer	125.00
Assistant Graphics Designer	115.00
CAD Manager	180.00
Field Supervisor	$195.00
One-person Survey Party (Prevailing Wage)	270.00
One-person Survey Party w/ Robotics (Prevailing Wage)	270.00
Two-person Survey Party (Prevailing Wage)	350.00
Three-person Survey Party (Prevailing Wage)	390.00
3D Laser Scanning Crew (One-Person)	$235.00
3D Laser Scanning Crew (Two Person)	280.00
Principal 3D Laser Scanning Project Manager	$190.00
Associate 3D Laser Scanning Project Manager	175.00
Assistant 3D Laser Scanning Project Manager	160.00
Principal 3D Laser Scanning Specialist	140.00
Associate 3D Laser Scanning Specialist	130.00
Assistant 3D Laser Scanning Specialist	120.00
Principal 3D Laser Scanning Technician	115.00
Associate 3D Laser Scanning Technician	100.00
Assistant 3D Laser Scanning Technician	90.00
Photogrammetry Supervisor	$185.00
Principal Photogrammetrist	155.00
Associate Photogrammetrist	120.00
Assistant Photogrammetrist	110.00
Principal Survey Analyst	$185.00
Associate Survey Analyst	150.00
Assistant Survey Analyst	125.00
Associate Project Administrator	$80.00
Assistant Project Administrator	70.00
Administrative Assistant/Manager	75.00

Rates subject to change for prevailing wage contracts.
When authorized, overtime shall be charged at the listed rates times 1.5.
Unless otherwise agreed upon, we shall charge for printing, reproduction, deliveries, transportation, and other expenses.
A fifteen (15) percent fee for administration, coordination and handling will be added to all subcontracted services.

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Structural Engineer
$185.00 Per Hour

SKS Engineering, Inc.

Position	Hourly Rates
Principal	$205-275
Senior Associate	$150-220
Associate	$110-170
Senior Analyst	$105-135
Analyst	$70-105
Assistant Analyst	$60-115
Administrative Support	$65-105

URBAN CROSSROADS

General

(1) Reimbursable direct costs, such as reproduction, supplies, and messenger service will be billed at cost.
(2) Hourly rates apply to work time, travel time, and time spent at public hearings and meetings. For overtime work, the above rates may be increased 50 percent.
(3) Monthly billing statements are due within thirty (30) days of receipt.

TURNING MOVEMENT COUNTS (TMC)
$226.00 – 2-hour Peak Period Counts – Pedestrian & Bicycles Included
$226.00 – 4-hour Peak Period Counts – Pedestrian & Bicycles Included
$339.00 – 6-hour Peak Period Counts – Pedestrian & Bicycles Included

BI-DIRECTIONAL VOLUME (ADT) – TUBE COUNTS
$100.00 – 24 hours (1-day)
$200.00 – 48 hours (2-day)
$300.00 – 72 hours (3-day)
$400.00 – 96 hours (4-day)
$500.00 – 120 hours (5-day)
$600.00 – 144 hours (6-day)
$700.00 – 168 hours (7-day)

BI-DIRECTIONAL SPEED OR CLASSIFICATION – TUBE COUNTS
$198.00 – 24 hours (1-day)
$396.00 – 48 hours (2-day)
$594.00 – 72 hours (3-day)
$792.00 – 96 hours (4-day)
$990.00 – 120 hours (5-day)
$1,188.00 – 144 hours (6-day)
$1,386.00 – 168 hours (7-day)

OTHER STUDIES – QUOTES BASED ON SCOPE
Pedestrian Gap Studies
Parking Duration Studies
Video Turning Movement Counts
Radar Studies – Non Intrusive
Travel Time Studies – GPS
Many more customized studies available

Veracity Traffic Group

Exhibit "C-1"-2

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EXHIBIT "D"
SCHEDULE OF PERFORMANCE

I. Consultant shall perform all Services timely, and deliver the specified tangible work products to City in accordance with the schedule attached as Exhibit D-1.

II. The Contract Officer may approve extensions for performance of the Services in accordance with Sections 1.8 and 3.3.

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EXHIBIT "D-1"
PROPOSED PROJECT SCHEDULE

EXHIBIT B

RAMSEY STREET WATER MAIN PROJECT

TASK DESCRIPTION:	Principal	Associate Principal	Associate	Principal Project Engineer	Associate Project Engineer	Principal Designer	Assistant/Associate Designer/Analyst	Field Supervisor	Two-Person Survey Crew	Principal Survey Analyst	RICK FEE	Subconsultants	Expenses	Task Total($):
Hourly Rate	$275.00	$260.00	$240.00	$220.00	$200.00	$165.00	$135.00	$220.00	$360.00	$195.00				
TASK 1 - PROJECT MANAGEMENT														
1.1 Kick-off Meeting and Project Management		2		24							$ 5,800.00			$ 5,800.00
1.2 Progress Meetings		2		33							$ 7,780.00			$ 7,780.00
1.3 Invoicing				8							$ 1,760.00			$ 1,760.00
SUBTOTAL TASK 1:	**0**	**4**	**0**	**65**	**0**	**0**	**0**	**0**	**0**	**0**	**$ 15,340.00**	**$ -**	**$ -**	**$ 15,340.00**
Task 2 - Project Development														
2.1 Utility Research, Base Mapping & Site Reconnaissance				20		32	40				$ 15,080.00			$ 15,080.00
2.1.1 Property Research			8				8		24	40	$ 19,440.00			$ 19,440.00
2.1.2 Supplemental Field Topography									40	2	$ 14,790.00			$ 14,790.00
2.1.3 Aerial Topography									24	6	$ 9,810.00		$ 15,000.00	$ 24,810.00
2.2 Potholing - C Below											$ -	$ 92,195.00		$ 92,195.00
2.3 Geotechnical Study - Geocon											$ -	$ 12,875.00		$ 12,875.00
SUBTOTAL TASK 2:	**0**	**0**	**8**	**20**	**0**	**32**	**48**	**0**	**88**	**48**	**$ 59,120.00**	**$ 105,070.00**	**$ 15,000.00**	**$ 179,190.00**
Task 3 - Preliminary Engineering Design														
3.1 Preliminary Design Plans (30% design) - Civil	2	4		12		50	80				$ 23,280.00	$ 2,990.00		$ 26,270.00
Conceptual Staging Plan - Traffic					4		16				$ 2,960.00			$ 2,960.00
3.2 Preliminary Design Plans (60% design) - Civil, Dexter Wilson	2	4		20		80	100				$ 32,690.00	$ 2,150.00		$ 34,840.00
Preliminary Design Plans (60% design) - Traffic		1			3		36				$ 5,720.00			$ 5,720.00
3.3 Detailed Design Plans (90% design) - Civil, Dexter Wilson	2	4		16		60	88				$ 26,890.00	$ 1,075.00		$ 27,965.00
Detailed Design Plans (90% design) - Traffic		1			2		23				$ 3,765.00			$ 3,765.00
SUBTOTAL TASK 3:	**6**	**14**	**0**	**48**	**9**	**190**	**343**	**0**	**0**	**0**	**$ 95,305.00**	**$ 6,215.00**	**$ -**	**$ 101,520.00**
Task 4 - Final Design Plans, Specifications and Estimate (100% Design)														
4.1 Final Water Plans - Civil, Dexter Wilson	1	4		12		24	40				$ 13,315.00	$ 645.00		$ 13,960.00
Final Water Plans - Traffic		1			3		12				$ 2,480.00			$ 2,480.00
SUBTOTAL TASK 4:	**1**	**5**	**0**	**12**	**3**	**24**	**52**	**0**	**0**	**0**	**$ 15,795.00**	**$ 645.00**	**$ -**	**$ 16,440.00**

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EXHIBIT B

RAMSEY STREET WATER MAIN PROJECT

TASK DESCRIPTION:	Principal	Associate Principal	Associate	Principal Project Engineer	Associate Project Engineer	Principal Designer	Assistant Designer/Assistant Analyst	Field Supervisor	Two-Person Survey Crew	Principal Survey Analyst	RICK FEE	Subconsultants	Expenses	Task Total($):
Hourly Rate	$275.00	$260.00	$240.00	$220.00	$200.00	$165.00	$135.00	$220.00	$360.00	$195.00				
Task 5 - Easement Documents														
5.1 Easement Documents			26							130	$ 31,590.00		$ 9,750.00	$ 41,340.00
SUBTOTAL TASK 6:	0	0	26	0	0	0	0	0	0	130	$ 31,590.00	$ -	$ 9,750.00	$ 41,340.00
Task 6 - Stormwater Pollution Prevention Plan														
6.1 Stormwater Pollution Prevention Plan				6		32					$ 6,600.00			$ 6,600.00
SUBTOTAL TASK 6:	0	0	0	6	0	32	0	0	0	0	$ 6,600.00	$ -	$ -	$ 6,600.00
Task 7 - Construction Surveying and Staking														
7.1 Phase One Water Stakes							10	2	24		$ 10,430.00			$ 10,430.00
7.2 Phase Two Water Stakes - 3 staking days											$ -			$ -
7.3 Phase Three Water Stakes - 2 staking days											$ -			$ -
SUBTOTAL TASK 5:	0	0	0	0	0	0	10	2	24	0	$ 10,430.00	$ -	$ -	$ 10,430.00
Task 8 - Bidding/Construction Support - Phase 1 only														
8.1 Bidding				1		4					$ 880.00			$ 880.00
8.2 Construction Administration		2		32		12					$ 9,540.00	$ 1,160.00		$ 10,700.00
8.3 As-Built Plans		1		1		1	6				$ 1,455.00			$ 1,455.00
SUBTOTAL TASK 7:	0	3	0	34	0	17	6	0	0	0	$ 11,875.00	$ 1,160.00	$ -	$ 13,035.00
Reimbursables													$ 3,000.00	$ 3,000.00
	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ 3,000.00	$ 3,000.00
SUBTOTAL TASKS 1-7:	7	26	34	185	12	295	459	2	112	178	$ 246,055.00	$ 113,090.00	$ 27,750.00	$ 386,895.00

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EXHIBIT B

RAMSEY STREET WATER MAIN PROJECT

TASK DESCRIPTION:	Principal	Associate Principal	Associate	Principal Project Engineer	Associate Project Engineer	Principal Designer	Assistant Designer/A ssistant Analyst	Field Supervisor	Two-Person Survey Crew	Principal Survey Analyst	RWCK FEE	Subconsultants	Expenses	Task Total($):
Hourly Rate	$275.00	$260.00	$240.00	$220.00	$200.00	$165.00	$135.00	$220.00	$360.00	$195.00				
Additional Services (if needed)														
Additional Potholing (daily rate) - C Below											$ -	$ 12,725.00		$ 12,725.00
Corrositivity Assessment - YF Yeager											$ -	$ 4,980.00		$ 4,980.00
Corrosion Control Design - YF Yeager											$ -	$ 12,180.00		$ 12,180.00
Cathodic Protection Design Pipeline - YF Yeager											$ -	$ 18,400.00		$ 18,400.00
Hydraulic Analysis - Dexter Wilson											$ -	$ 3,480.00		$ 3,480.00
Caltrans Encroachment Permit Application											$ 1,480.00			$ 1,480.00
Caltrans Processing and Coordination											$ 2,020.00			$ 2,020.00
Phase 1 Monument Preservation											$ 3,120.00			$ 3,120.00
Phase 1 Monument Replacement											$ 5,980.00			$ 5,980.00
Record of Survey											$ 15,000.00			

CITY OF BANNING
STAFF REPORT

TO:	**CITY COUNCIL**
FROM:	**Robert Fisher, Acting City Manager**
PREPARED BY:	**Shah Nawaz, Deputy Water/Wastewater Director** **Art Vela, Director of Public Works**
MEETING DATE:	**February 25, 2025**
SUBJECT:	**Consideration of Resolution 2025-29, Approving a Construction Agreement with Pacific Hydrotech Corporation for Project No. 2022-07W "M-12A Well Site Equipping and Improvements" in the Amount of $2,440,900 and Establishing a Total Project Budget of $2,684,990 and Rejecting All Other Bids**

RECOMMENDATION:

Adopt Resolution 2025-29.

BACKGROUND:

The existing Well M-12 is located on Westward Avenue, between Highland Homes Road and Sunset Avenue and is one of many municipal wells that the City had relied on to meet its year-round water demands. The typical water production capacity of Well M-12 was approximately 900 gallons per minute or 1.3 million gallons per day.

In February 2020, City staff discovered that Well M-12 was not producing water. Through various repair attempts, a skilled contractor found that well's external 'screened' casing pipes surrounded by gravel pack and the internal 'suction' piping consisting of pump column pipes containing line-shaft and vertical turbine pumps were stuck together and could not be extracted. The well had begun caving in, and consequently, proper abandonment of the well was necessary.

The State Water Resources Control Board's Division of Drinking Water authorized existing Well M-12's abandonment and redrilling of a new "Well M-12A", to meet the City's increasing demands for potable water. On November 8, 2023 City Council adopted Resolution 2022-13UA, awarding a professional services agreement with Dudek (consultant) for the design of Well M-12A.

The City staff working along with the design consultant Dudek, implemented a phased-construction approach which is typical for new municipal wells consisting of developing the well (testing and drilling, Phase 1), followed by equipping (Phase 2). Subsequently, Dudek prepared and finalized technical specifications for developing new Well M-12A which included drilling, construction, development and testing.

The City released an Invitation for Bids to develop the Well M-12A on August 15, 2023. As a result of this Invitation for Bids, Nor-Cal Pump & Well Drilling , Inc. of Yuba City was awarded the construction contract via Resolution 2023-10UA to develop the well, which was completed in August 2024.

After developing the well, Dudek finalized the plans and specifications to equip the well. The equipping

scope of work consists of but is not limited to the installation of well column pipe, vertical turbine multi-stage pumps, pump discharge header and motor, pump to waste flow control valve,
masonry building, motor control panels and main electrical switchgear.

Subsequently, the City finalized the bidding documents and released an Invitation for Bids (IFB-24-092) on December 19, 2024. A mandatory pre-proposal meeting was held on January 9, 2025 to perform a job-walk and to go over the scope of work. As a result of the Invitation for Bids, the City received six proposals:

Contractor	**Bid Amount**
Pyramid Building & Engineering, Inc.	$2,287,500.00
H7 Contracting & Engineering	$2,390,000.00
Pacific Hydrotech Corporation	$2,440,900.00
Innovative Construction Solutions	$2,485,000.00
SCW Contracting Corporation	$2,492,574.00
MMC Inc.	$2,644,000.00

Although Pyramid Building & Engineering, Inc. and H7 Contracting & Engineering were apparently the lowest and second lowest bidders respectively, both withdrew their bids. Therefore, Pacific Hydrotech Corporation of Perris, California, is the responsive, responsible lowest bidder.

The City's Purchasing staff has conducted reference checks on Pacific Hydrotech Corporation and found that the company was responsive and responsible on similar contracts with other agencies.

As a result, staff recommends that the Construction Agreement be awarded to the lowest responsive and responsible bidder, Pacific Hydrotech Corporation of Perris, California, in the amount of $2,440,900. A copy of the bid summary for the lowest bid can be found attached hereto.

If awarded, staff anticipates the work to commence in early March, 2025 and to be completed within one hundred and thirty (130) working days or approximately six (6) months from the issuance of a Notice to Proceed.

JUSTIFICATION:

In order to meet the City's potable water production demands, during phase 1, the existing collapsed Well M-12 was abandoned and a new Well M-12A was developed (constructed) at the same location.

Furthermore, in phase 2, to extract/produce potable water, City must 'equip' this new Well M-12A with mechanical, electrical, building and various other onsite improvements.

As a result of the City's Invitation for Bids (IFB 24- 092), Pacific Hydrotech Corporation is the apparent lowest bidder and is qualified to complete the scope of work.

FISCAL IMPACT:

The recommended Construction Agreement with Pacific Hydrotech Corporation is for an amount of $2,440,900. Staff requests a 10% contingency in the amount of $244,090 for any unforeseen conditions or circumstances. The total project budget, including the Construction Agreement and contingency, is for an amount of $2,684,990.

The current adopted budget for Fiscal Year 2024/2025 includes the funding needed for the Construction Agreement and will be funded from Account No. 660-6300-471.95-08.

This project inclusive of both development and equipping phases of new Well M-12A is partially funded by an Urban and Multibenefit Drought Relief Grant in the amount of $2,475,000.

ALTERNATIVES:

Do not approve Resolution 2025-29 and provide alternative direction to staff. Not approving Resolution 2025-29 will impact the City's ability to meet it's water demand during the summer months and may also require the City to pay back grant funds that have been spent on the project.

BUDGETED?:

Yes

CONTRACT/AGREEMENT:

Yes

ATTACHMENTS:

1. Resolution 2025-29, Award Well M12A.docx
2. Exhibit A - C00124 Pacific Hydrotech Corporation - M-12A WEll Site Equipping.pdf
3. Resolution No. 2022-13UA (For Reference Purposes Only).pdf
4. Resolution No. 2023-10UA (For Refrence Purposes Only).pdf
5. IFB-24-092 M-12A Well Site Equipping and Improvements.pdf
6. Bid Summary.pdf

RESOLUTION 2025-29

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BANNING, CALIFORNIA, APPROVING A CONSTRUCTION AGREEMENT WITH PACIFIC HYROTECH CORPORATION FOR PROJECT NO. 2022-07W "M-12A WELL SITE EQUIPPING AND IMPROVEMENTS" IN THE AMOUNT OF $2,440,900 AND ESTABLISHING A TOTAL PROJECT BUDGET OF $2,684,990 AND REJECTING ALL OTHER BIDS

WHEREAS, in 2020 during routine maintenance of existing Well M-12 the well equipment became permanently stuck in the well casing resulting in the well becoming unusable. To accommodate growing water demands it was determined that Well M-12 would have to be replaced on the same site with a new Well "M-12A"; and

WHEREAS, in October 2021, pursuant to the State Legislature's passage of the Budget Act of 2021 and Trailer Bill AB 148, the California Department of Water Resources DWR) announced the Urban and Multibenefit Drought Relief Grant Program for Fiscal Year 2022. The Department of Public Works submitted a grant requesting an amount of 2,475,000 and was successfully awarded the full amount for developing and equipping new Well M-12A; and

WHEREAS, City released an Invitation for Bids to develop the well on November 23, 2022. As a result of this Invitation for Bids, Best Drilling and Pump Inc. of Colton was awarded the construction contract via Resolution 2023-02UA to develop the well, and a notice-of-completion for developing the well was filed on December 5, 2023; and

WHEREAS, on November 8, 2023 City Council adopted Resolution 2022-13UA, awarding a professional services agreement with Dudek for design of Well M-12A; and

WHEREAS, the City finalized bidding documents to 'develop' new Well M-12A and released an Invitation for Bids (IFB 23-035) on August 15, 2023. Thereafter, through Resolution 2023-10UA, a Construction Agreement was awarded to the lowest responsive and responsible bidder, Nor-Cal Pump and Well Drilling, Inc. of Yuba City, California, which completed developing Well M-12A by August 2024; and

WHEREAS, City directed Dudek to finalize the plans and specifications to 'equip' the well, the equipping scope of work consists of but is not limited to the installation of well column pipe, vertical turbine multi-stage pumps, pump discharge header and motor, masonry building, motor control panels, main electrical switchgear, etc.; and

WHEREAS, City staff finalized bidding documents to equip well M-12A, Project No. 2022-07W, "M-12A Well Site Equipping and Improvements" (the "Project") and advertised an Invitation for Bids (IFB-24-092) and subsequently received six (6) bids ranging in price from $2,287,500 to $2,644,000; and

WHEREAS, Pyramid Building & Engineering, Inc. and H7 Contracting and Engineering were the apparent lowest bidders in the amounts of $2,287,500 and $2,390,000, respectively. Both, however, withdrew their bids; and

WHEREAS, Pacific Hydrotech Corporation was deemed the lowest responsible and responsive bidder; and

WHEREAS, the Construction Agreement with Pacific Hydrotech Corporation is for an amount of $2,440,900

WHEREAS, the total project budget, including the Construction Agreement and a 10% contingency, is for an amount of $2,684,990; and

WHEREAS, the current fiscal year 2024/2025 includes $3,500,000 budgeted for the Project in Account No. 660-6300-471.95-08.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Banning as follows:

SECTION 1. The City Council approves a Construction Agreement for Project No. 2022-07W, "M-12A Well Site Equipping and Improvements" to Pacific Hydrotech Corporation of Perris, California, in the amount of $2,440,900 and approves a 10% contingency in the amount of $244,090 for a total project budget of $2,684,990 and rejects all other bids.

SECTION 2. The City Council authorizes the City Manager to make non-substantive changes to the Construction Agreement and to execute the Construction Agreement with Pacific Hydrotech Corporation on behalf of the City Council.

SECTION 3. The City Council authorizes the City Manager, or designee, to make necessary budget adjustments, appropriations, and transfers related to this resolution.

SECTION 4. The City Clerk shall certify to the adoption of this resolution and shall cause a certified resolution to be filed in the book of original resolutions.

PASSED, APPROVED AND ADOPTED this 25th day of February, 2025.

Sheri Flynn, Mayor
City of Banning

ATTEST:

Caroline Patton, Administrative City Clerk
City of Banning

APPROVED AS TO FORM:

John Pinkney, City Attorney
Slovak, Baron, Empey, Murphy & Pinkney, LLP

CERTIFICATION:

I, Caroline Patton, Administrative City Clerk of the City of Banning, California, do hereby certify that the foregoing Resolution 2025-29, was duly adopted by the City Council of the City of Banning, California, at a regular meeting thereof held on the 25th day of February, 2025 by the following vote, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

Caroline Patton, Administrative City Clerk
City of Banning, California

EXHIBIT A
Construction Agreement with Pacific Hydrotech Corporation

CONTRACT (C01124)

CITY OF BANNING CONTRACT FOR
M-12A WELL SITE EQUIPPING AND IMPROVEMENTS & IFB 24-092

THIS CONTRACT ("Contract") is made and entered this _____ ("Effective Date"), by and between the CITY OF BANNING, a California municipal corporation ("City") and Pacific Hydrotech Corporation ("Contractor"). Contractor's California State Contractor's license number is 518355; Class A, B). Contractor's DIR registration number is 1000002987.

In consideration of the mutual covenants hereinafter set forth, the parties hereto agree as follows:

1. Contract Documents. The Contract Documents consist of this Contract, the Notice Inviting Bids, Instructions to Bidders, Bid (including documentation accompanying the Bid and any post-Bid documentation submitted before the Notice of Award), the Bonds, permits from regulatory agencies with jurisdiction, General Provisions, Special Provisions, Plans, Standard Plans, Standard Specifications, Reference Specifications, Addenda, Change Orders, and Supplemental Agreements. The Contract Documents are attached hereto and incorporated herein by reference.

2. Scope of Services. Contractor shall perform the Work in a good and workmanlike manner for the project identified as M-12A Well Site Equipping and Improvements ("Project"), as described in this Contract and in the Contract Documents.

3. Compensation. In consideration of the services rendered hereunder, City shall pay Contractor a not to exceed amount of Two Million Four Hundred Forty Thousand Nine Hundred Dollars ($2,440,900.00) in accordance with the prices as submitted in the Bid.

4. Incorporation by Reference. All of the following documents are attached hereto and incorporated herein by this reference: Workers' Compensation Certificate of Insurance, Additional Insured Endorsement (Comprehensive General Liability), Additional Insured Endorsement (Automobile Liability), and Additional Insured Endorsement (Excess Liability).

5. Antitrust Claims. In entering into this Contract, Contractor offers and agrees to assign to City all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. § 15) or under the Cartwright Act (Business and Professions Code Section 16700 *et seq*.) arising from purchases of goods, services, or materials pursuant to the Contract. This assignment shall be made and become effective at the time City tenders final payment to Contractor without further acknowledgment by the parties.

6. Prevailing Wages. City and Contractor acknowledge that the Project is a public work to which prevailing wages apply.

7. Workers' Compensation. Labor Code Sections 1860 and 3700 provide that every contractor will be required to secure the payment of compensation to its employees. In accordance with the provisions of Labor Code Section 1861, by signing this Contract, the Contractor certifies as follows:

> "I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the Work of this Contract."

8. Titles. The titles used in this Contract are for convenience only and shall in no way define, limit or describe the scope or intent of this Contract or any part of it.

9. Authority. Any person executing this Contract on behalf of Contractor warrants and represents that he or she has the authority to execute this Contract on behalf of Contractor and has the authority to bind Contractor to the performance of its obligations hereunder.

10. Debarment or Suspension.

Contractor represents and warrants that, as of the Effective Date of this Agreement, Contractor is not debarred or suspended pursuant to any applicable Federal or State law providing for the debarment of contractors. Contractor shall not perform the Services with any subcontractor that has been debarred or suspended pursuant to any applicable Federal or State law providing for the debarment. Contractor and its subcontractors shall not be debarred or suspended throughout the Term of this Agreement pursuant to any applicable Federal or State law providing for the debarment of contractors. If Contractor or any subcontractor becomes debarred or suspended during the Term of this Agreement, Contractor shall immediately notify City.

11. Entire Agreement. This Contract, including the Contract Documents and any other documents incorporated herein by specific reference, represents the entire and integrated agreement between City and Contractor. This Contract supersedes all prior oral or written negotiations, representations or agreements. This Contract may not be modified or amended, nor any provision or breach waived, except in a writing signed by both parties that expressly refers to this Contract.

12. Counterparts. This Contract may be executed in counterpart originals, duplicate originals, or both, each of which is deemed to be an original for all purposes.

IN WITNESS WHEREOF, the parties hereto have executed the Contract the day and year first above written.

CITY OF BANNING

City Council Approval: _____

By: _____
City Manager Date

ATTEST:

By: _____
Administrative City Clerk Date

APPROVED AS TO FORM:

By: _____
City Attorney Date

_____
("CONTRACTOR")

By: _____
Name: Date
Title:

RESOLUTION 2022-13 UA

A RESOLUTION OF THE UTILITY AUTHORITY OF THE CITY OF BANNING, CALIFORNIA AWARDING A PROFESSIONAL SERVICES AGREEMENT TO DUDEK FOR DESIGN OF WELL M-12A DRILLING AND EQUIPPING IN THE AMOUNT OF $870,213 AND ESTABLISHING A 5% CONTINGENCY FOR A TOTAL PROJECT BUDGET OF $913,724

WHEREAS, Well M-12 is potable water production well located on Westward Avenue, between Highland Home Road and Sunset Avenue and is one of many wells that the City has relied on to meet the City's water demands; and

WHEREAS, in 2020 Well M-12 had a catastrophic failure during a maintenance project that resulted in the City having to abandon and cap the well; and

WHEREAS, staff prepared a request for proposals (RFP) for design services for Well M-12A for drilling and equipping of the new well and advertised the RFP on OpenGov on August 23, 2022 with a due date for the submission of proposals on September 13, 2022; and

WHEREAS, an evaluation committee reviewed and ranked two proposals submitted as a response to the RFP and found Dudek to have submitted the highest ranked proposal; and

WHEREAS, Dudek's fee proposal is in the amount of $870,213; and

WHEREAS, the scope of services include: project management; data and literature review; preliminary well design; environmental and permitting support; technical plans, specifications and estimates for drilling; bidding assistance; drilling construction management; drilling inspection, hydrogeological services and water quality testing; well head facility plans, specifications and estimates; well head facility construction and post construction support services; and

WHEREAS, in October 2021, pursuant to the State Legislature's passage of the Budget Act of 2021 and Trailer Bill AB 148, the California Department of Water Resources (DWR) announced the Urban and Multibenefit Drought Relief Grant Program for Fiscal Year 2022. The Department of Public Works submitted a grant requesting an amount of $2,475,000 and was successfully awarded the full amount. $200,000 of the awarded amount will be allocated to the planning, design, engineering and environmental phase of the project and the balance allocated to the construction phase; and

WHEREAS, the design of Well M-12A is included in the City's approved Capital Improvement Plan and incorporated in the approved fiscal year 2022/2023 budget.

NOW, THEREFORE, BE IT RESOLVED by the Banning Utility Authority of the City of Banning as follows:

SECTION 1. Awarding a Professional Services Agreement for Design of Well M-12A Drilling and Equipping to Dudek of Encinitas, California in the amount of $870,213.

SECTION 2. Authorizing the City Manager or his designee to execute the Professional Services Agreement with Dudek.

SECTION 3. Establish a 5% contingency and authorizing the City Manager to execute amendments to the agreement within the contingency amount ($43,511).

PASSED, APPROVED AND ADOPTED this 8th day of November 2022.

Colleen Wallace, Chairperson
Banning Utility Authority

ATTEST:

Caroline Patton, Secretary
Banning Utility Authority

APPROVED AS TO FORM AND LEGAL CONTENT:

Serita R. Young, Authority Counsel
Richards, Watson & Gershon

CERTIFICATION:

I, Caroline Patton, Secretary of the Banning Utility Authority, do hereby certify that the foregoing Resolution 2022-13 UA, was duly adopted by the Utility Authority of the City of Banning, California, at a regular meeting thereof held on the 8th day of November 2022 by the following vote, to wit:

AYES: Happe, Minjares, Sanchez, and Wallace.

NOES:

ABSENT:

ABSTAIN:

Caroline Patton, Secretary
Banning Utility Authority

RESOLUTION 2023-10UA

A RESOLUTION OF THE UTILITY AUTHORITY OF THE CITY OF BANNING, CALIFORNIA, APPROVING A CONSTRUCTION AGREEMENT WITH NOR-CAL PUMP & WELL DRILLING, INC. FOR "WELL M12A GROUNDWATER PRODUCTION WELL DRILLING, CONSTRUCTION, DEVELOPMENT AND TESTING" IN THE AMOUNT OF $2,049,096, ESTABLISHING A TOTAL PROJECT BUDGET OF $2,254,005 AND REJECTING ALL OTHER BIDS

WHEREAS, in 2020 during routine maintenance of existing Well M12 the well equipment became permanently stuck in the well casing resulting in the well becoming unusable. To accommodate growing water demands it was determined that Well M12 would have to be replaced on the same site (Well M12A); and

WHEREAS, in October 2021, pursuant to the State Legislature's passage of the Budget Act of 2021 and Trailer Bill AB 148, the California Department of Water Resources (DWR) announced the Urban and Multibenefit Drought Relief Grant Program for Fiscal Year 2022. The Department of Public Works submitted a grant requesting an amount of $2,475,000 and was successfully awarded the full amount. $200,000 of the awarded amount is allocated to the planning, design, engineering and environmental phase of the project and the balance ($2,275,000) is allocated to the construction phase; and

WHEREAS, on November 8, 2023 City Council adopted Resolution 2022-13UA, awarding a professional services agreement with Dudek for design of Well M-12A; and

WHEREAS, the City finalized the bidding documents and released an Invitation for Bids (IFB 23-035) on August 15, 2023. A mandatory pre-proposal meeting was held on August 28, 2023 to go over the scope of work, deadlines and to answer any questions from prospective bidders. As a result of the Invitation for Bids, the City received three proposals ranging in cost from $2,049,096 to $3,723,710; and

WHEREAS, staff recommends that the Construction Agreement be awarded to the lowest responsive and responsible bidder, Nor-Cal Pump and Well Drilling, Inc. of Yuba City, California, in the amount of $2,049,096; and

WHEREAS, the total project budget, including the Construction Agreement and a 10% contingency, is for an amount of $2,254,005; and

WHEREAS, the current adopted budget for Fiscal Year 2023/2024 includes a budgeted amount of $2,300,000 in Account No. 660-6300-471.95-08 for this project.

NOW, THEREFORE, BE IT RESOLVED by the Banning Utility Authority of the City of Banning as follows:

SECTION 1. The Banning Utility Authority approves a Construction Agreement for "Well M12A Groundwater Production Well Drilling, Construction, Development and Testing" to

Nor-Cal Pump & Well Drilling, Inc. of Yuba City, California in the amount of $2,049,096 and approves a 10% contingency in the amount of $204,909 for a total project budget of $2,254,005 and rejects all other bids.

SECTION 2. The Utility Authority Director is authorized to execute the Construction Agreement with Nor-Cal Pump & Well Drilling, Inc. for "Well M12A Groundwater Production Well Drilling, Construction, Development and Testing".

SECTION 3. The Utility Authority Director or his designee is authorized to make necessary budget adjustments, appropriations and transfers related to the Construction Agreement for "Well M12A Groundwater Production Well Drilling, Construction, Development and Testing" and to approve change orders within the 10% contingency.

SECTION 4. The Authority Secretary shall certify to the adoption of this resolution and shall cause a certified resolution to be filed in the book of original resolutions.

PASSED, APPROVED AND ADOPTED this 10th day of October 2023.

Alberto Sanchez, Chairperson
Banning Utility Authority

ATTEST:

Caroline Patton, Secretary
Banning Utility Authority

APPROVED AS TO FORM AND LEGAL CONTENT:

Serita R. Young, Authority Counsel
Richards, Watson & Gershon

CERTIFICATION:

I, Caroline Patton, Secretary of the Banning Utility Authority, do hereby certify that the foregoing Resolution 2023-10UA, was duly adopted by the Utility Authority of the City of Banning, California, at a regular meeting thereof held on the 10th day of October 2023 by the following vote, to wit:

AYES: Flynn, Gonzales, Minjares, Sanchez, and Wallace.

NOES:

ABSENT:

ABSTAIN:

Caroline Patton, Secretary
Banning Utility Authority

Exhibit A
Nor-Cal Agreement

CONTRACT (C00904)
CITY OF BANNING CONTRACT FOR
WELL M-12 A GROUNDWATER PRODUCTION WELL DRILLING, CONSTRUCTION, DEVELOPMENT, AND TESTING (IFB 23-035)

THIS CONTRACT ("Contract") is made and entered this _____, ("Effective Date"), by and between the CITY OF BANNING, a California municipal corporation ("City") and Nor-Cal Pump & Well Drilling, Inc., a California corporation ("Contractor"). Contractor's California State Contractor's license number is 908591; Class B, C-57, C-61. Contractor's DIR registration number is 1000012947.

In consideration of the mutual covenants hereinafter set forth, the parties hereto agree as follows:

1. Contract Documents. The Contract Documents consist of this Contract, the Notice Inviting Bids, Instructions to Bidders, Bid (including documentation accompanying the Bid and any post-Bid documentation submitted before the Notice of Award), the Bonds, permits from regulatory agencies with jurisdiction, General Provisions, Special Provisions, Plans, Standard Plans, Standard Specifications, Reference Specifications, Addenda, Change Orders, and Supplemental Agreements. The Contract Documents are incorporated herein by reference.

2. Scope of Services. Contractor shall perform the Work in a good and workmanlike manner for the project identified as Street Improvements at Various Locations ("Project"), as described in this Contract and in the Contract Documents.

3. Compensation. In consideration of the services rendered hereunder, City shall pay Contractor a not to exceed amount of Two Million Forty-Nine Thousand Ninety-Six Dollars ($2,049,096.00) in accordance with the prices as submitted in the Bid.

4. Incorporation by Reference. All of the following documents are attached hereto and incorporated herein by this reference: Workers' Compensation Certificate of Insurance, Additional Insured Endorsement (Comprehensive General Liability), Additional Insured Endorsement (Automobile Liability), and Additional Insured Endorsement (Excess Liability).

5. Antitrust Claims. In entering into this Contract, Contractor offers and agrees to assign to City all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. § 15) or under the Cartwright Act (Business and Professions Code Section 16700 *et seq.*) arising from purchases of goods, services, or materials pursuant to the Contract. This assignment shall be made and become effective at the time City tenders final payment to Contractor without further acknowledgment by the parties.

6. Prevailing Wages. City and Contractor acknowledge that the Project is a public work to which prevailing wages apply.

7. Workers' Compensation. Labor Code Sections 1860 and 3700 provide that every contractor will be required to secure the payment of compensation to its employees. In accordance with the provisions of Labor Code Section 1861, by signing this Contract, the Contractor certifies as follows:

> "I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers'

compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the Work of this Contract."

8. Titles. The titles used in this Contract are for convenience only and shall in no way define, limit or describe the scope or intent of this Contract or any part of it.

9. Authority. Any person executing this Contract on behalf of Contractor warrants and represents that he or she has the authority to execute this Contract on behalf of Contractor and has the authority to bind Contractor to the performance of its obligations hereunder.

10. Entire Agreement. This Contract, including the Contract Documents and any other documents incorporated herein by specific reference, represents the entire and integrated agreement between City and Contractor. This Contract supersedes all prior oral or written negotiations, representations or agreements. This Contract may not be modified or amended, nor any provision or breach waived, except in a writing signed by both parties that expressly refers to this Contract.

11. Counterparts. This Contract may be executed in counterpart originals, duplicate originals, or both, each of which is deemed to be an original for all purposes.

IN WITNESS WHEREOF, the parties hereto have executed the Contract the day and year first above written.

CITY OF BANNING

By: _____
City Manager Date

ATTEST:

By: _____
Deputy City Clerk Date

APPROVED AS TO FORM:

By: _____
City Attorney Date

City Council Approval: _____

_____
("CONTRACTOR")

By: _____
Name: Date
Title:

By: _____
Name: Date
Title:

INVITATION FOR BIDS

IFB-24-092 M-12A WELL SITE EQUIPPING AND IMPROVEMENTS

IFB-24-092

CITY OF BANNING, CA

http://www.banning.ca.us

RELEASE DATE: December 9, 2024
DEADLINE FOR QUESTIONS: January 16, 2025
RESPONSE DEADLINE: January 30, 2025, 11:59 pm

RESPONSES MAY BE SUBMITTED ELECTRONICALLY TO:
https://secure.procurenow.com/portal/banning-ca

City of Banning
INVITATION FOR BIDS
IFB-24-092 M-12A WELL SITE EQUIPPING AND IMPROVEMENTS

I. Instructions And Conditions .....
II. Introduction .....
III. Prerequisites .....
IV. Scope of Work .....
V. Submission Instructions & Questions .....
VI. Pricing Proposal .....
VII. Vendor Questionnaire .....
VIII. Terms & Conditions .....

Attachments:

A - Purchase Order Terms & Conditions
B - 4600014457 Agreement - Grant
C - 200 CFR GRANTS
D - Check List, Sample Contract, and Required Forms
E - General and Special Provisions
F - Technical Specs
G - Pump Data Sheets
H - Sign-In Sheets
I - Existing SCADA Panel Diagrams
J - 14970 WELL M12A_FINAL SUBMITTAL 12-16-24

I. Instructions And Conditions

WE ARE PLEASED TO ISSUE THE ENCLOSED BID SPECIFICATIONS FOR YOUR CONSIDERATION

A. Bids will be rejected unless submitted electronically via the bidding website along with all required bid line items. All documents in the "Vendor Questionnaire" are required to be filled out, signed and submitted using the instructions listed herein.

B. The City of Banning, Purchasing Department, will not honor any explanation or change in the bid documents unless a written addendum has been issued.

C. All bids must identify bidder's firm name and be electronically submitted by a responsible officer or employee.

D. The City reserves the right to reject any and all bids and to waive any informalities related thereto.

E. It is the intention of the City to evaluate and make a recommendation for award as indicated by the electronic bid; however, the City does reserve the right to increase or decrease quantities or to remove items before award to remain within the limitations of the availability of approved funds. The apparent low Bidder will be notified prior to recommendation for award if such adjustments are deemed necessary.

F. Our public bid openings occur online, on the OpenGov vendor portal at https://procurement.opengov.com/portal/banning-ca and results are available instantly at the bid event time.

G. Prices quoted by the Bidder shall be exclusive of Federal Excise taxes pursuant to exemption of political subdivisions of a State by Federal Law.

H. Prices quoted by the Bidder shall mean total cost to the City, F.O.B. delivered to Banning.

I. Bid prices shall be firm for 90 days from date of bid opening to permit staff evaluation and City Council award. Upon award, prices quoted will be in effect for the term of the contract.

J. Communications: All technical, scope, and/or project related questions shall be submitted through the Procurement Portal Q&A Tab before the deadline and according to these specifications herein. Any and all other bidding communications shall only be with Barbara Mason, Purchasing Manager, using the phone number listed within this document. Companies bidding on this project shall not communicate with any other City Staff members or they risk being disqualified.

II. Introduction

II.A Summary

The City of Banning ("City") is seeking a qualified entity or individual ("Company") to provide the goods and/or services described herein. The City anticipates selecting one firm to perform the services.

Bids are requested from Companies that have a demonstrated ability to perform the tasks identified in this Invitation for Bids ("IFB").

II.B Background

The City of Banning is strategically located astride Interstate 10 between the Inland Empire and the Coachella Valley in the San Gorgonio Pass. The City, incorporated in 1913, has a rich and colorful history.

Initially Banning served as a stagecoach and railroad stop between the Arizona territories and Los Angeles. This history has contributed to the present-day spirit of pioneer resourcefulness and "can do" attitude that is so prevalent in the community.

Banning is a friendly and wholesome place to work and raise a family. Desirable executive housing is available, as well as moderate and lower income housing. Clean air, ample water supplies and the memorable and inspiring scenic vistas of both Mt. San Gorgonio and Mt. San Jacinto, the 2 tallest peaks in Southern California, are additional amenities which make the City of Banning a logical choice as a development opportunity in the Southern California area.

II.C Contact Information

Barbara Mason
Purchasing Manager
99 E. Ramsey Street
Banning, CA 92220
Email: bmason@banningca.gov
Phone: (951) 922-3121
Department:
Purchasing Division

II.D Timeline

This Invitation for Bids will be governed by the following tentative schedule. All dates are subject to change at the discretion of the City:

Release Project Date	December 9, 2024

Pre-Proposal Meeting (Mandatory)	January 9, 2025, 10:00am Please arrive 5 minutes early to: City of Banning 99 E. Ramsey St Banning, CA 92220 This pre-bid meeting includes a jobsite walk. Bidders must attend both the meeting and jobsite walk.
Question Submission Deadline	January 16, 2025, 11:59pm
Bid Submission Deadline	January 30, 2025, 11:59pm
Anticipated Contractor Selection Date	February 25, 2025

III. Prerequisites

The City of Banning Public Work Standards can be found on the City of Banning's website at the following link:

http://www.banning.ca.us/21/Engineering.

Bids will only be considered from Companies that meet the following prerequisites:

- Company shall be registered as vendor on the City's electronic bidding system, and listed as a Prospective Bidder for this specific project.
- Company and/or its key personnel, shall hold an appropriate license for the Company's discipline and the Services on the date the Bid is submitted.
- Company shall have registered with the Department of Industrial Relations and any other required organizations http://www.dir.ca.gov/.
- Bidder shall possess a valid Class "A" Contractor's license issued by the California State Contractors License Board.
- 10% Bid Bond must be submitted. A copy can be uploaded to OpenGov, but a hard copy must be mailed in.
- Must attend the pre-bid meeting. If we do a site visit, you must attend as well.
- 5% Retention
- Will comply with the Grant Requirements along with grant management & meeting all the deadlines.
- Provide proof of Good Faith Efforts showing advertising to DBE & HUB sites.
- The successful bidder will be required to obtain a City of Banning business license prior to commencement of work.
- The successful bidder will be required to provide a faithful performance and payment bonds.

IV. Scope of Work

The general requirements from the Technical Specifications file under the Attachments section is listed below to provide an overview of the project.

DIVISION 1: GENERAL REQUIREMENT

IV.A SECTION 01010 - SUMMARY OF WORK

PART 1 - GENERAL

1.01 GENERAL

A. The work to be performed under this Contract shall consist of:

1. Furnishing all tools, equipment, materials, supplies, and manufactured articles.

2. Furnishing all labor, transportation and services, including fuel, power, water, and essential communications.

3. Performing all work, or other operations required for the fulfillment of the Contract in strict accordance with the Contract Documents.

4. The work shall be complete.

a. All work, materials, and services not expressly indicated or called for in the Contract Documents which may be necessary for the complete and proper construction of the work shall be provided by the Contractor as though originally indicated, at no increase in cost to the Agency.

1.02 PROJECT LOCATION

M12A Well Site
3750 W Westward Ave
Banning, CA 92220

1.03 SUMMARY OF WORK

A. The work generally includes, but is not limited to construction of the following:

1. Demolition of existing equipment and facilities per the project drawings.

2. Grading and paving existing M12A well site per the project drawings.

3. Construction of new well building per the project drawings.

4. Equipping new M12A well with mechanical equipment, instrumentation, piping, and appurtenances per the project drawings.

5. Providing electrical power and control to new equipment and other improvements per the project drawings.

1.04 CONTRACTOR'S USE OF THE PROJECT SITE

A. The Contractor's use of the project site shall be limited to its construction operations for this project.

B. Construction equipment and materials shall not be stored on public or private streets, roads, and rights-of-way where they will prevent free and safe passage of the traveling public unless permitted by the Agency of Jurisdiction.

C. It is anticipated that the work site provides sufficient space to store equipment and materials.

1. If found otherwise, the Contractor shall not unreasonably encumber the premises with his materials.

2. It is the Contractor's responsibility to find and obtain permission from other property owners for the storage of equipment and materials on their property.

D. If required, the Contractor shall provide, at his own expense, the necessary right-of-way and access to the work, which may be required outside the limits of Agency's property.

1.05 AGENCY'S USE OF THE PROJECT SITE

A. The Contractor shall allow the Agency unimpeded access to the project site at all times during the period of construction.

1. The Agency shall have access to the site to conduct normal operations.

2. The Contractor shall not interfere with the operation of the Agency's equipment at the site during construction.

3. The Contractor shall cooperate and coordinate with Agency to facilitate Agency's operations and to minimize interference with the Contractor's operations at the same time.

1.06 ACCESS TO THE PROJECT SITE

A. It is the Contractor's responsibility:

1. To maintain and repair any damage caused by the Contractor to existing roads or adjoining properties that are caused by the Contractor's ingress or egress.

a. All repairs to damaged roads or properties shall be equal to or better than the existing and must meet the Agency of Jurisdiction's satisfaction.

1.07 WORK BY OTHERS

A. The Contractor shall cooperate fully with all utility forces of the Agency or forces of other public or private agencies engaged in the relocation, altering, or otherwise rearranging of utilities which interfere with the progress of work and shall schedule the work so as to minimize interference with said relocation, altering, or other rearranging of facilities.

1.08 EASEMENTS AND RIGHT OF WAY

A. The Contractor shall confine his construction operations to within the right of way limits as shown on the Drawings or make special arrangements with property owners for the additional area required. Any damage to property, either inside or outside the limits of the rights of way, shall be the responsibility of the Contractor as specified herein. The Contractor shall remove, protect, and replace all fences or other items encountered on private property and restore the affected areas to the condition in which they existed prior to the Contractor's use. Before final payment will be
authorized by the Agency, the Contractor will be required to furnish the Agency with written releases from property owners where side agreements or special easements have been made by the
Contractor or where the Contractor's operations, for any reason, have not been kept within the right of way, or from property owners that complained to the Agency or the Agency's Representative about damage to their property resulting from the Contractor's operations.

1.09 SHUTDOWN RESTRICTIONS

A. The Contractor shall make a written request to schedule a shutdown of an Agency pipeline or facility required to perform the work at least five (5) days in advance.

1. The Agency may refuse to perform the shutdown on the day requested by the Contractor due to operational circumstances or other reasonable concerns by the Agency.

2. No request will be denied for arbitrary reasons.

3. The Agency will, at all times, make the decision of the appropriateness and readiness for the shutdown.

4. The Agency may cancel the shutdown, up to the last minute, at no additional cost to the Agency if:

a. The Contractor is not ready at the designated time with all required labor, materials, and equipment to perform the work.

b. In the opinion of the Agency the weather will severely impact the length of the shutdown, quality of the finished work product, or ability of the Contractor to perform the work.

c. The Agency's operations personnel have determined that the shutdown is not timely due to operation circumstances or unforeseen circumstances.

5. The Agency does not guarantee the shutdown facility will be completely dry or leak tight after it is removed from service.

a. The Contractor shall provide all necessary equipment and material to control, remove, and dispose of any excess water.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

IV.B SECTION 01025 - MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work under this Contract will be paid on a unit price or lump sum basis as outlined on the Schedule of Pay Items for the quantity of work installed.

B. The unit prices and lump sum prices include full compensation for furnishing the labor, materials, tools, and equipment and doing all the work involved to complete the work included in the Contract documents.

C. The bids for the work are intended to establish a total cost for the work in its entirety. Should the Contractor feel that the cost for the work has not been established by specific items in the Schedule of Pay Items, include the cost for that work in some related bid item so that the Proposal for the project reflects the total cost for completing the work in its entirety.

1.02 BID PROPOSAL

Measurement and payment will be made for each Bid Schedule Item independently and in accordance with the Special Provisions as follows:

A. Lump Sum Prices: The Contractor shall provide Lump Sum Prices in the Bid Schedule for all work in the Contract Documents, except items of work listed in the Contract as Unit Priced Items. For Lump Sum items, only the total amount need be filled in.

B. Unit Priced Items: Unit Price Items are provided by the Owner for additive or deductive WORK not presently identified in the Contract Documents. In the appropriate places on the Bid Schedule each Bidder shall quote Unit Prices for the items of work in the units stated when no unit price is provided on the Bid Schedule. Each unit price, whether additive or deductive, shall cover all costs and charges, including, without limitation, the costs of material, fabrication, delivery, installation or application, supervision, bond and insurance charges, overhead, profit, and taxes. Unit Prices shall be the exact amount per unit to be applied to the units of work actually provided or not provided for the purpose of modifying the Contract Price or establishing the payment due the Contractor, as applicable. Unit Prices provided by the Owner shall be held good and in effect until the work is completed and accepted by Owner. Contractor-proposed Unit Prices which are so unbalanced as to be detrimental to the Owner's interest may be rejected or cause rejection of the Bidder's entire bid at the discretion of the Owner.

C. Allowance Items: Allowance Item amounts are provided by the Owner to cover the cost of additive WORK not presently identified in the Contract Documents. Payment for Allowance Items will be made only when authorized as described in Part 1.03, below.

D. Retention: Payment for all bid items is subject to the retention provisions of the Special Provisions.

E. Schedule: All scoped Allowance Bid Items and Unit Priced Bid Items are included in the scope of the Contract without specific locations for the work provided. The Owner reserves the right to
direct that these scoped items of work be performed when they are encountered, and the Contractor is obligated to accommodate this work within the original contract duration. The Contractor will not be entitled to additional time regardless of where work is encountered.

F. The Owner reserves the right to vary the total contract price by +/- 25% by varying the Unit Price quantities and authorized Allowance amounts within their respective individual limits.

G. Stipulated or Bid Unit Prices: When the Owner's use of a Unit Price Bid Item exceeds 200% of the Bid Item quantity, the Contractor or Owner may demand that the Unit Price Item be renegotiated for quantities in excess of 200%, whether the price is stipulated or bid. This provision is to prevail over any conflicting general condition provision.

H. Specified Items and Stipulated Priced: The stipulated price for these items cannot be invoiced until the item is complete and accepted by the Construction Manager and the Owner.

1.03 MEASUREMENT AND PAYMENT

A. General: This article defines the manner and method to develop the Lump Sum, Unit Price, and Allowance bid amounts of all items identified in the Bid Schedule. Bid amounts will include all plant, equipment, tools, materials, labor, service, and all other items required to complete the work included in the Contract unless specifically excluded by this section. Work required for which no separate bid item is identified will be considered as a subsidiary obligation of the Contractor, and the cost therefore shall be included in the most applicable bid item. Compensation for completion of the Work will be determined by use of the cost loaded CPM schedule (reference Section 01320). Bid amounts for each item will be the basis for development of budget values for activities included in the cost loaded CPM schedule as described in Section 01320. Unit Price and Allowance Bid Item amounts will also be adjusted by a Change Order to the contract amount when work is completed, and actual authorized quantities and Allowance amounts are established. The allowable variation in quantities is identified in each Unit Price Bid Item.

B. Contract Required Work:

C. Bid Item No. 1 – Mobilization and Demobilization.

1. This is a lump sum bid item for mobilization and demobilization work required for the project. Mobilization work shall include, but not be limited to, that necessary for the movement of personnel, equipment, supplies, and incidentals to the project site; for the establishment of CONTRACTOR'S field facilities necessary for work on

the project; for establishment of staging/lay down areas; for obtaining permits, bonds, and insurance; preparation of surveys and videos of existing access roads and facilities; for providing all risk insurance for the project; for confirming, marking, and determining the depth of all existing utilities that are crossed or otherwise impacted by the work; and for all other work and operations which must be performed or costs incurred prior to beginning work on the various contract items on the project site.

2. Demobilization work shall include, but not be limited to, the removal from the project at the end of construction of all equipment, supplies, field facilities, personnel, and incidentals, and shall include restoration of all staging/lay down areas. The amount bid for mobilization and demobilization shall not exceed 5% of the total project bid.

D. Bid Item No. 2 – Demolition.

1. This is lump sum bid item that shall include furnishing all labor, material, tools, and equipment, and performing all work required to demolish and legally dispose of the existing discharge piping, emergency generator, electrical equipment, controls equipment, associated appurtenances, and selective site demolition of fencing, and miscellaneous onsite facilities, and all other existing improvements that must be demolished to construct the new facilities and site improvements shown in the Contract Documents.

E. Bid Item No. 3 – Site Grading and Asphalt Concrete

1. This is a lump sum bid item for grading required for construction of the new facilities and site improvements shown in the Contract Documents and shall include furnishing all labor,
material, tools, and equipment, and performing all work required, including excavation, stockpiling, hauling and disposal of excess material, imported fill and aggregate base, backfilling, compacting, and testing.

2. This is a lump sum bid item for asphalt concrete paving and shall include furnishing all labor, material, tools, and equipment, and performing all work required, including prime
coat, seal coat and edge support. Payment for sitework concrete shall be based on percent complete.

F. Bid Item No. 4 – Well Building Construction

1. This is a lump sum bid item for the new well building and shall include furnishing all labor, material, tools, and equipment, and performing all work required, including foundations,
flooring, access/doors, HVAC, louvres, masonry walls, removable wall and roof panels, and roofing.

G. Bid Item No. 5 – Electrical and Instrumentation Equipment for New Well Pump

1. This is a lump sum bid item for electrical and instrumentation equipment for the primary wet well and shall include furnishing all labor, material, tools, and equipment, and performing all work including but not limited to installing flow control valve, pump control equipment, chemical feed system, tank, flow meter, main switchboard, motor control center, conduits, and wiring.

H. Bid Item No. 6 – Well Pumps, Piping and Appurtenances.

1. This is a lump sum bid item for the well pumps, piping, and appurtenances and shall include furnishing all labor, material, tools, and equipment, and performing all work required to provide a fully functioning system, including but not limited to furnishing and installing the new pump, well pedestal, discharge piping, fittings, restrained couplings, tapping saddles, pilotry piping, drain piping, drain vault, concrete pipe support, pipe supports, check valves, resilient wedge gate valves, pressure testing, disinfection, pipe trench excavation, backfill and compaction.

I. Bid Item No. 7 - Well Testing and Startup:

1. This is a lump sum bid item for the testing and startup shall include furnishing all labor, material, tools, and equipment, and performing all work required, including but not limited to testing and commissioning of the new well pump.

J. Bid Item No. 8 - All Other Work:

1. This is a lump sum bid item including all labor, materials, tools, and equipment necessary to complete any and all other work not included by the Contractor in Bid Items 1 through
7 and which is required for a complete and operable well system, piping and appurtenances, demolition and abandonment of facilities, cleanup and restoration of site improvements,
and other miscellaneous work needed to complete the project in accordance with all requirement of the project plans, specifications, and required permits to the full satisfaction
of the Owner.

K. Variation in Unit Price Quantities:

1. If a change is ordered in an item of work covered by a Contract Unit Price, and the change does not exceed the specified variation limits of the original bid quantity, then an
adjustment in payment will be made based on the increase or decrease in quantity at the Contract Unit Price. Should the quantity variation exceed an increase or decrease of 25
percent, an adjustment in the Contract Unit Price may be made at the request of the Owner or Contractor. The use of this basis for adjustment of payment shall be limited to that
portion of the change which is in excess of an increase of 25 percent of the original bid quantity.

PART 2 - PRODUCTS

2.01 GENERAL PROGRESS PAYMENT REQUIREMENTS

A. Payment for work performed shall be in accordance with the Cost Loaded CPM. The Construction Manager will verify measurements and quantities. Each activity necessary to manage and complete the work is identified on the contract schedules. Each activity will be assigned its respective value, a portion of the contract price, as shown on the Summary of Values.

B. Payment for all lump sum costs and services incurred on this Contract shall be based on the earned value of work accomplished during the reporting period. Earned value is determined by the completion percentage of each activity applied to the total value of the activity. No construction activity shall be deemed 100% complete until the Contractor has completed the physical check out and inspection of the completed work and has submitted the signed inspection form to the Construction Manager.

C. Unit price items will be paid based on quantities (or equivalent quantities) installed.

D. Earned value is derived from the current status of the Contractor Construction Schedule as determined by the monthly schedule status submittals (Reference Section 01320). Each schedule status submittal is reviewed and approved by the Construction Manager prior to the Contractor obtaining approval for the Summary of Earned Values or quantities installed and the Application for Payment.

E. The Contractor shall not take advantage of any apparent error or omission on the Drawings or Specifications, and the Construction Manager shall be permitted to make corrections and interpretations as may be deemed necessary for fulfillment of the intent of the Contract Documents at no additional cost to the Owner.

F. Two copies of the application for payment shall be submitted. Application shall be made monthly.

G. The Application for Payment contains all necessary references and attachments that substantiate the invoice for progress payment, (e.g., certified payrolls, labor reports, progress schedule data, and Summary of Earned Values). It must be preceded or accompanied by schedule and status data in accordance with Section 01320.

H. The Application for Payment is submitted according to the format and instructions provided by the Owner and is based on work completed through the last day of the previous month or through the date established by the Construction Manager.

PART 3 - EXECUTION

3.01 MONTHLY REVIEWS/APPLICATION FOR PAYMENT

A. Monthly review meetings between the Contractor and the Construction Manager will be held within 7 days prior to the payment application date designated by the Construction Manager. Prior to the monthly review meeting, the Contractor will submit the Master Record Documents as directed by the Construction Manager, an updated

schedule and a signed application for payment showing a Summary of Earned Values for the reporting and payment period so that the Construction Manager can compare earned values to available status data. The Contractor shall make any adjustments to the Master Record Documents, updated schedule, and payment applications deemed necessary. Upon completion of the adjustments the Construction Manager will sign the payment upon request and forward it to the Owner. The Construction Manager will determine payment amounts if agreement with Contractor is not reached.

3.02 PAYMENT FOR PRODUCTS STORED ON SITE

A. The Contractor may request payment for products (material and/or equipment) which will be incorporated in the work and which will be delivered and stored on-site. Payments for products stored at the site shall be based upon the cost of all acceptable materials and equipment not incorporated in the work but delivered and suitably stored at the site; provided each such individual item has a value of more than $5,000 and will become a permanent part of the work. The Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that the Contractor has received the materials and the equipment free and clear of all liens, charges, secured interests, and encumbrances and evidence that the materials and equipment are covered by appropriate property insurance as specified in the insurance provisions and other arrangements to protect the Owner's interest.

3.03 PARTIAL PAYMENT FOR MATERIALS STORED OFF SITE

A. The Contractor may request partial payment for products (material and/or equipment) which will be incorporated into the Work and which are delivered and stored off site at a location agreed upon between the contractor and the owner in writing. Any payments approved pursuant to this subsection shall not exceed sixty-five percent (65%) of the Product's invoiced value and shall be subject to retainage as set forth in the Contract Documents. The Owner reserves the right to refuse approval for payment for any Equipment or Materials suitably stored off-site at its sole discretion, regardless of whether all conditions have been met.

B. Partial payment may be made for Products eligible for off-site delivery and storage only upon presentation by the Contractor of a Bill of Sale, an Invoice or an Affidavit certifying that the material is received by the Contractor free and clear of all liens, encumbrances and secured interests of any kind, and including, for off-site delivery, evidence acceptable to the Owner that "all-risks" property insurance in an amount sufficient to protect the interests of the Owner is in effect at the approved site, and that the Owner is a loss payee and an additional insured.

C. Partial payment for Products eligible for off-site delivery and stored off-site shall be contingent upon the Contractor's compliance with the storage and protective maintenance requirements set forth in Section 01620 and all other requirements necessary to preserve equipment warranties for the benefit of the Owner.

D. All costs associated with delivery to, and storage at, an off-site facility shall be assumed by the Contractor notwithstanding the Contractor's request for, and the obtaining from the Owner, approval to so deliver and store the materials.

E. Contractor shall provide written evidence to the Owner of having made arrangements for unrestricted access by the Owner and its authorized representatives, to the materials wherever stored, including provision for the Owner to take control and possession of such materials at any time and without restriction.

F. Contractor must provide the Owner, upon request and prior to any partial payment, documentation which transfers absolute legal title to such materials to the Owner conditional only upon receipt of final payment. Neither such transfer of title nor any partial payment shall constitute acceptance by the Owner of the materials, nor void the right to reject the materials subsequently found to be unsatisfactory, or in any way relieve the Contractor of any obligation arising under the Contract Documents.

END OF SECTION

IV.C SECTION 01045 - EXISTING FACILITIES

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Requirements for protection and restoration of existing utilities.

B. Connections to existing facilities, including wet tapping.

C. Abandonment of existing facilities.

1.02 RELATED REQUIREMENTS

A. Section 01300, Submittal Procedures.

B. Section 02050, Demolition.

C. Section 03300, Cast-in-Place Sitework Concrete.

1.03 REFERENCES

A. The publications listed below form part of this specification to the extent referenced and are referred to in the text by the basic designation only. Reference shall be made to the latest edition of said standards unless otherwise called for.

ASTM C150 - Portland Cement

ASTM C495 - Standard Test Method for Compressive Strength of Lightweight Insulating Concrete

ASTM C796 - Standard Test Method for Foaming Agents for Use in Producing Cellular Concrete Using Preformed Foam

ASTM C869 - Standard Specification for Foaming Agents Used in Making Preformed Foam for Cellular Concrete American Public Works Association, Standard Plans for Public Works Construction (APWA)

1.04 SUBMITTALS

A. All submittals shall be submitted in accordance with Section 01300, “Submittal Procedures.”

1. Submit drawings and calculations for support and protection at all pipeline crossings, 18-inches and larger, at least 30 days prior to excavation of the crossing.

2. Submit documentation of existing facilities including a copy of all photos and/or videos.

PART 2 - PRODUCTS

2.01 CONCRETE

A. Concrete used for the replacement of damaged or removed facilities shall be in accordance with Section 03300, “Cast-in-Place Sitework Concrete” and shall match the mix design of the existing facility and the requirements of the Jurisdictional Agency.

B. Concrete for plugging abandoned conduits shall be Class 560-C-3250 per Section 03300, “Cast-in-Place Sitework Concrete”.

PART 3 - EXECUTION

3.01 GENERAL

A. Protect utilities in place, unless abandoned, and maintain the utility in service, unless otherwise specified on the Drawings or in the Specifications.

1. Unless indicated otherwise, oil and gasoline pipelines, power, and telephone or the communication cable ducts, gas and water mains, irrigation lines, sewer lines, storm drain lines, poles, and overhead power and communication wires and cables encountered along the line of the Work shall remain continuously in service during all the operations under the Contract.

2. Protect all improvements in place, unless otherwise specified.

3. Protect grading and plantings in place unless otherwise specified.

4. When protecting in place, the Contractor shall take into account all loads, including surcharges and potential surcharges.

B. Replace in kind improvements that are cut, removed, damaged, or otherwise disturbed by the construction.

1. Including pavement, curbs and gutters, ramps, barricades, traffic islands, signalization, fences, signs, mail boxes, etc.

C. Reconstruct utilities with new material of the same size, type, and original quality as that removed, except as indicated on the Drawings or as specifically authorized by the Agency.

D. Where utilities are parallel to or cross the pipeline trench but do not conflict with the permanent work to be constructed, follow the procedures given below and as indicated on the Drawings.

1. Notify the utility owner 48 hours in advance of the crossing construction and coordinate the construction schedule with the utility owner's requirements.

E. Determine the true location and depth of utilities and service connections which may be affected by or affect the work.

1. Determine the type, material, and condition of these utilities in order to provide sufficient lead-time to resolve unforeseen conflicts, order materials and take appropriate measures to ensure that there is no delay in work.

F. The Contractor's attention is drawn to the Drawings which indicate the potholes performed by the Agency.

1. The Contractor is responsible to ensure that the elevations of all existing utilities that are tied into, crossed, or which exist within the work area, are properly located.

2. The Contractor shall perform additional potholing at his own expense should additional information be required by the Contractor which is not already shown on the Drawings.

G. Contractor shall provide temporary support for all pipelines crossing a proposed trench.

1. For all existing pipelines 18-inches in diameter or larger crossing over the proposed pipe with less than 4 feet of clearance, the Contractor shall submit his proposed method of
support for review by the Agency.

2. Facilities may be supported in accordance with APWA Standard Plan 224-2, Sheets 1-4, "Supports for Conduits Across Trenches". The Standard Plan is given in Appendix “A”.

3.02 DOCUMENTATION

A. At least 48 hours prior to beginning physical construction, the Contractor shall document the condition of all potentially impacted roads, the project site, adjacent properties and any other potentially affected areas.

1. At least 48 hours prior to documenting the condition of potentially affected areas, the Contractor shall notify the Agency.

2. The Agency may accompany the Contractor during the documentation process and may obtain additional documentation.

3. The Contractor is not relieved of his responsibility to document conditions if the Agency also obtains documentation.

4. Documentation shall include pictures and/or videos.

5. The documentation shall be kept by the Contractor and made available to the Agency throughout construction and for three years after the Notice of Completion has been filed.

3.03 RIGHTS-OF-WAY

A. The Contractor shall not do any Work that would affect any oil, gas, sewer, or water pipeline; any telephone, or electric transmission line; any fence; or any other structure, nor shall the Contractor enter upon the rights-of-way involved, until notified that the Agency has secured authority therefor from the proper party.

1. After authority has been obtained, the Contractor shall give said party due notice of its intention to begin work, if required by said party.

3.04 PROTECTION OF SURVEY MONUMENTS OR ROADWAY MARKERS

A. The Contractor shall not destroy, remove, or otherwise disturb any existing survey monuments or other existing street or roadway markers without proper authorization.

1. No pavement breaking or excavation shall be started until all survey or other permanent marker points that will be disturbed by the construction operations have been properly referenced.

2. Survey markers or points disturbed by the Contractor shall be accurately restored after pavement repairs or improvements have been completed at no additional cost to the Agency.

3.05 EXISTING UTILITIES AND IMPROVEMENTS

A. The Contractor shall protect underground utilities and other improvements which may be impaired during construction.

1. Regardless of whether or not the utilities are indicated on the Drawings.

B. The Contractor shall take all possible precautions for the protection of unforeseen utility lines to provide for uninterrupted service and to provide such special protection as may be necessary.

1. Prior to any excavation in the vicinity of any existing underground facilities.

a. Underground facilities include all water, sewer, storm drain, gas, petroleum products, or other pipelines; all buried electric power, communications, or television cables; all traffic signal and street lighting facilities; and all roadway and state highway rights-of-way.

b. The Contractor shall notify the respective authorities representing the owners or agencies responsible for such facilities not less than 3 days nor

more than 7 days prior to excavation so that a representative of said owners or agencies can be present during such work if they so desire.

c. The Contractor shall also notify the regional notification center at 1-800-227-2600 or 811 at least 2 days, but no more than 14 days, prior to such excavation.

2. The Contractor shall be responsible for exploratory excavations as it deems necessary to determine the exact locations and depths of utilities which may interfere with its work.

a. Except where the Drawings indicate utilities have been field located during design, such utility locations shall be exposed as part of the Work.

3. All such exploratory excavations shall be performed as soon as practicable after Notice to Proceed and, in any event, a sufficient time in advance of construction to avoid possible delays to the Contractor's progress.

4. When such exploratory excavations show the utility location as shown on the Drawings to be in error, the Contractor shall so notify the Agency.

5. The number of exploratory excavations required shall be that number which is sufficient to determine the alignment and grade of the utility.

6. In case it shall be necessary to move the property of any public utility or franchise holder, such utility company or franchise holder will, upon request of the Contractor, be notified by the Agency to move such property within a specified reasonable time.

a. When utility lines that are to be removed are encountered within the area of operations, the Contractor shall notify the Agency a sufficient time in advance for the necessary measures to be taken to prevent interruption of service.

7. Where the proper completion of the Work requires the temporary or permanent removal and/or relocation of an existing utility or other improvement which is indicated, the Contractor shall remove and, without unnecessary delay, temporarily replace or relocate such utility or improvement in a manner satisfactory to the Agency and the owner of the facility.

a. In all cases of such temporary removal or relocation, restoration to the former location shall be accomplished by the Contractor in a manner that will restore or replace the utility or improvement as nearly as possible to its former locations and to as good or better condition than found prior to removal.

C. The right is reserved to the Agency and to the owners of public utilities and franchises to enter at any time upon any public street, alley, right-of-way, or easement for the purpose of making changes in their property made necessary by the Work of this Contract.

1. Existing Utility lines that are indicated or the locations of which are made known to the Contractor prior to excavation and that are to be retained, and all Utility lines that are constructed during excavation operations shall be protected from damage during excavation and backfilling.

a. If damaged, existing utility lines shall be immediately repaired or replaced by the Contractor, unless otherwise repaired by the owner of the damaged Utility.

b. If the owner of the damaged facility performs its own repairs, the Contractor shall reimburse said owner for the costs of repair.

2. In the event that the Contractor damages existing utility lines that are not indicated or the locations of which are not made known to the Contractor prior to excavation, a verbal
report of such damage shall be made immediately to the Agency and a written report thereof shall be made promptly thereafter.

a. The Agency will immediately notify the owner of the damaged utility.

b. If the Agency is not immediately available, the Contractor shall notify the utility owner of the damage.

c. If directed by the Agency, repairs shall be made by the Contractor under the provisions for changes and extra work contained in Articles of the General Conditions.

3. Work will be paid for as extra work in accordance with the provisions of Articles of the General Conditions.

a. Costs of locating and repairing damage not due to failure of the Contractor to exercise reasonable care.

b. Removing or relocating such utility facilities not indicated in the Contract Documents with reasonable accuracy.

c. For equipment on the project which was actually working on that portion of the Work, which was interrupted or idled by removal or relocation of such utility facilities, and which was necessarily idled during such activity.

4. All repairs to a damaged utility or improvement are subject to inspection and approval by an authorized representative of the utility or improvement owner before being concealed by backfill or other work, unless other arrangements satisfactory to the Agency are made with the owner of said utility or improvement.

a. The Contractor shall be responsible for and shall repair all damage due to its operations, and the provisions of this Section shall not be abated even in the event such damage occurs after backfilling or is not discovered until after completion of the backfilling.

3.06 TREES OR SHRUBS

A. Except where trees or shrubs are indicated to be removed, the Contractor shall exercise all necessary precautions so as not to damage or destroy any trees or shrubs, including those lying within street rights-of-way and project limits.

1. The Contractor shall not trim or remove any trees unless such trees have been approved for trimming or removal by the Jurisdictional Agency.

2. The Contractor shall immediately notify the Jurisdictional Agency if any tree or shrub is damaged by the Contractor's operations.

3. Existing trees and shrubs which are damaged during construction shall be trimmed or replaced by the Contractor or a certified tree company under permit from the Jurisdictional Agency at no additional cost to the Agency.

4. Trimming of trees and shrubs shall comply with the following:

a. Symmetry of the tree shall be preserved; no stubs or splits or torn branches left; clean cuts shall be made close to the trunk or large branch.

b. Spikes shall not be used for climbing live trees.

c. Cuts greater than 1-1/2 inches in diameter shall be coated with a tree paint product that is waterproof, adhesive, elastic, and free from kerosene, coal tar, creosote, or other material injurious to the life of the tree.

5. Replacement of trees and shrubs shall comply with the following:

a. The tree or shrub shall be of a like size and variety as the one damaged, or, if of a smaller size, the Contractor shall pay to the owner of said tree a compensatory payment acceptable to the tree or shrub owner.

b. The size of the tree shall be not less than 1-inch diameter nor less than 6 feet in height.

c. The Contractor shall water and maintain the replacement trees and shrubs for 6 months after planting unless otherwise indicated.

3.07 ABANDONMENT OF PIPELINES

A. When indicated on the Drawings or when directed by the Agency, existing pipelines to be abandoned shall be disconnected from all source pipelines.

1. All above-ground appurtenances connected to pipelines to be abandoned shall be removed and disposed of or salvaged in accordance with Section 02050, “Demolition.”

2. All piping and appurtenances buried at a depth of 24 inches or less and connected to pipelines to be abandoned shall be removed and disposed of or salvaged.

3. Remaining buried pipe ends, gate wells and other appurtenances cut at a depth of 24 inches shall be removed entirely or filled with concrete.

4. Pipe, 6 inches through 15 inches to be abandoned, shall be excavated at intervals of 200 feet, cut and plugged with an 8-inch long concrete plug.

a. Where shown on the Drawings or as directed by the Agency, the pipe shall be completely filled with 2-sack sand cement slurry or lightweight cellular concrete.

5. Pipe 16 inches and larger to be abandoned, shall be completely filled with lightweight cellular concrete per Section 03320, "Engineered Fill for Pipeline Abandonment (16" and Larger)."

6. All valves on pipelines to be abandoned shall be turned to the closed position.

a. The valve box cover shall be removed and the valve box filled with sand.

7. Water services to be abandoned that are connected to pipelines that will remain in service, shall be abandoned in-place and deactivated at the corporation stop.

8. Sewer laterals to be abandoned shall be cut and plugged with concrete at the main.

B. Excavated areas shall be replaced with compacted backfill and surfaces shall be repaired in accordance with the Drawings, Specifications, the requirements of the Agency of Jurisdiction or as directed by the Agency.

3.08 PAVEMENT RESTORATION

A. All paved areas, including asphaltic concrete berms cut or damaged during construction, shall be replaced with similar materials of equal thickness to match the existing adjacent undisturbed areas.

1. Except where specific resurfacing requirements have been called for in the Contract Documents or in the requirements of the Agency issuing the permit.

2. The pavement restoration requirement to match existing sections shall apply to all components of existing sections, including sub-base, base, pavement, curb and gutter, and roadway markings.

3. Temporary and permanent pavement shall conform to the requirements of the affected pavement owner.

4. Pavements which are subject to partial removal shall be neatly saw cut in straight lines.

B. Temporary Resurfacing:

1. Wherever required by the Agencies of Jurisdiction, the Contractor shall place temporary surfacing promptly after backfilling.

2. The Contractor shall maintain such surfacing for the period of time fixed by said Agencies before proceeding with the final restoration of improvements.

C. Permanent Resurfacing:

1. The Contractor shall saw cut back and trim the edge of adjacent surface to provide a clean, sound, vertical joint before permanent replacement of an excavated or damaged portion of
pavement.

2. Permanent pavement shall be restored to finish grades compatible with adjacent undisturbed pavement.

D. Restoration of Sidewalks or Private Driveways:

1. Wherever sidewalks or private roads have been removed for purposes of construction, the Contractor shall place suitable temporary sidewalks or roadways promptly after backfilling.

2. The Contractor shall maintain them in satisfactory condition for the period of time fixed by the Agency of Jurisdiction over the affected portions.

3. If no such period of time is so fixed, the Contractor shall maintain said temporary sidewalks or roadways until the final restoration has been completed.

3.09 CUTTING AND RESTORING ASPHALT AND CONCRETE SURFACES

A. All asphalt and/or Portland cement concrete surfaces shall be scored with sawing equipment of a type meeting the approval of the Agency; providing however, that any concrete base under an asphaltic mix surface will not be required to be scored by sawing.

1. Existing paving surfaces shall be saw cut back beyond the edges of the trenches to form neat square cuts before repaving is commenced.

2. Pavements, sidewalks, curbs, or gutters removed or destroyed in connection with performance of the work shall be saw cut to the nearest score marks, if any.

3. The Contractor shall replace pavements, sidewalks, curbs, or gutters in the same kind, or better, in accordance with the latest specifications, rules, and regulations and subject to the
inspection of the Agency of Jurisdiction.

4. Aggregate base shall be placed beneath the restored pavement to the thickness required by the Agency of Jurisdiction.

END OF SECTION

IV.D SECTION 01060 - SAFETY AND HEALTH

PART 1 - GENERAL

1.01 SAFETY AND HEALTH REGULATIONS

The Contractor shall comply with Safety and Health Regulations for Construction, promulgated by the Secretary of Labor under Section 107 of the Contract Work Hours and

Safety Standards Act, as set forth in Title 29, C.F.R. Copies of these regulations may be obtained from Labor Building, 14th and Constitution Avenue, NW, Washington, DC 20013.

The Contractor shall also comply with the provisions of the Federal Occupational Safety and Health Act, as amended.

The Contractor shall provide his own gas monitoring equipment to assure his and his workers' safety when entering confined spaces. The Contractor shall follow the requirements of Section 7-10.4.5 Confined Spaces of the standard specifications "Greenbook" latest edition. A copy of the contractors Confined Space Entry Program shall be provided to the Engineer for information.

In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for conditions of the site, including safety of all persons and property during performance of work, and the Contractor shall fully comply with all local, state and federal laws, rules, regulations, and orders relating to the safety of the public and workers.

The right of Owner or the Owner's Representative to conduct construction review or inspection of the Contractor's performance is not intended to include review or inspection of the adequacy of safety measures in, on, or near the site.

Before any work at the site is started, the Contractor shall have prepared a written plan for project specific safety precautions and programs, complete with respect to procedures and actions that the Contractor and all parties and individuals that will be on the work site are to follow in order for the Contractor and all others to comply with all applicable Laws and Regulations.

The Contractor shall revise their plan for safety precautions and programs at appropriate times to reflect changes in construction conditions, the Contractor means, methods, techniques, sequences and procedures of construction. The Contractor shall disseminate the original plan and revisions to all parties and individuals that will be on the Work site.

The Contractor's plan for safety precautions and programs will not require more stringent safety requirements, training or other qualifications for all others, than the Contractor's sets forth for comparable activity and responsibility of the Contractor, Subcontractors, and Suppliers and their respective employees.

1.02 PUBLIC CONVENIENCE AND SAFETY

The Contractor shall so conduct their operations as to offer the least possible obstruction and inconvenience to the public or facility operations, and they shall have under construction no greater length or amount of work than can be prosecuted properly with due regard to the convenience and safety of the public.

The Contractor shall provide and maintain such fences, barriers, directional signs, lights, and flaggers as are necessary to give adequate warning to the public at all times of any dangerous conditions to be encountered as a result of the work and to give directions to the public.

1.03 EXCAVATION PLANS FOR WORKER PROTECTION

The Contractor shall submit to Owner, in advance of excavation, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be-made for worker protection from the hazard of caving ground during excavation. The plan shall be prepared by a registered civil or structural engineer. As a part of the plan, a note shall be included stating that the registered civil or structural engineer certifies that the plan complies with the CALOSHA Construction Safety Orders, or stating that the registered civil or structural engineer certifies that the plan is not less effective than the shoring, bracing, sloping, or other provisions of the safety orders. The contractor shall also submit copies of all permits that are obtained for the excavation work.

All shoring submittals shall include surcharge loads from adjacent embankments, construction loads and spoil bank. The submittal shall indicate the minimum horizontal distance from the top of trench to the edge of all surcharge loads for all cases of shoring and side slopes.

Nothing contained in this paragraph shall be construed as relieving the Contractor of the full responsibility for providing shoring, bracing, sloping, or other provisions which are adequate for worker protection.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION (NOT APPLICABLE)

END OF SECTION

IV.E SECTION 01300 - SUBMITTALS

PART 1 - GENERAL

1.01 GENERAL

A. All submittals by the Contractor shall be submitted to the Agency.

B. Unless otherwise noted, within fifteen (15) days after the date of commencement as stated in the Notice to Proceed, the Contractor shall submit the following items to the Agency for review:

1. A list of submittals with scheduled submission dates. This list shall include specification section number, description of the submittal, scheduled submission date, and anticipated approval date. The Contractor's schedule shall be based on a minimum of one resubmittal for each shop drawing and sample.

C. A list of all permits and licenses the Contractor is required to obtain, indicating the agency required to grant the permit, the expected date of submittal for the permit, and required date for receipt of the permit.

D. The Contractor is responsible for identifying and delivering all submittals and/or permits required by the Contract Documents.

1.02 LONG LEAD ITEMS

A. Submittals for long lead items shall be provided within 14 calendar days of the commencement date stated in the NTP.

1. The following items are anticipated to be long lead items (greater than 16 weeks):

a. Well Pump

b. Variable-frequency drive

c. Automatic transfer switch

1.03 SHOP DRAWINGS

A. Wherever called for in the Contract Documents, the Contractor shall furnish to the Agency for review, four (4) copies of each shop drawing submittal. The term "Shop Drawings" as used herein shall be understood to include detail design calculations, shop drawings, fabrication and installation drawings, erection drawings, lists, graphs, catalog sheets, data sheets, and similar items. The Contractor shall submit, as applicable, the following for all mechanical and plumbing equipment:

1. Complete manufacturer's specifications, including materials description and coatings.

2. Requirements for storage and protection prior to installation.

3. Installation procedures.

4. List of all requested exceptions to the Contract Documents and/or variations from the specified equipment.

B. All shop drawing submittals shall be accompanied by the Agency's standard submittal transmittal form. Any submittal not accompanied by such a form, or where all applicable items on the form are not completed, will be returned for resubmittal.

1. Sequentially number the transmittal forms. Resubmittals shall have original number with an alphabetic suffix.

2. Identify Contract, Contractor, Subcontractor and/or Supplier, pertinent drawing sheet and detail number(s), and specification

3. number, as appropriate. On standard drawings or data sheets, clearly indicate model and option being proposed and strike out all non-relevant data.

C. Normally, a separate transmittal form shall be used for each specific item or class of material or equipment for which a submittal is required. Transmittal of a submittal of various items using a single transmittal form will be permitted only when the items taken together constitute a manufacturer's "package" or are so functionally related that expediency indicates review of the group or package as a whole. A multiple-page submittal shall be collated into sets, and each set shall be stapled or bound, as appropriate, prior to transmittal to the Agency.

D. Except as may otherwise be indicated herein, the Agency will return four (4) prints of each submittal to the Contractor with comments noted within twenty (20) calendar days following their receipt by the Agency. It is considered reasonable that the Contractor shall make a complete and acceptable submittal to the Agency by the second submission of a submittal item. Additional submittal reviews will be conducted at the Contractor's expense as outlined in the General Conditions of these Specifications. Alternatively, the Agency reserves the right to withhold monies due the Contractor to cover additional costs of the Agency's review beyond the second submittal. The Agency's maximum review period for each submittal, will be twenty (20) days per submittal and the Contractor's resubmittal shall be made within twenty (20) days. Therefore, for a submittal that requires a second submittal before it is complete, the maximum period for that submittal could be seventy (70) days.

E. If four (4) copies of a submittal are returned to the Contractor marked "NO EXCEPTIONS TAKEN," formal revision and resubmission of said submittal will not be required.

F. If four (4) copies of a submittal are returned to the Contractor marked "MAKE CORRECTIONS NOTED," formal revision and resubmission of said submittal will not be required, unless specifically requested.

G. If a submittal is returned to the Contractor marked "REJECTED-RESUBMIT," the Contractor shall revise said submittal and shall resubmit the originally required number of copies of said revised submittal to the Agency.

H. Fabrication of an item shall be commenced only after the Agency has reviewed the pertinent submittals and the Agency has returned copies to the Contractor marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED." Corrections indicated on submittals shall be considered as changes necessary to meet the requirements of the Contract Documents and shall not be taken as the basis for changes to the contract requirements.

I. All Contractor shop drawing submittals shall be carefully reviewed by an authorized representative of the Contractor, prior to submission to the Agency. Each submittal shall be dated, signed, and certified by the Contractor, as being correct and in strict conformance with the Contract Documents. In the case of shop drawings, each sheet shall be so dated, signed, and certified. No consideration for review by the Agency of any Contractor submittals will be made for any items which have not been so certified by the Contractor. All non-certified submittals will be returned to the Contractor without action taken by the Agency, and any delays caused thereby shall be the total responsibility of the Contractor.

J. The Agency's review of Contractor shop drawing submittals shall not relieve the Contractor of the entire responsibility for the correctness of details and dimensions. The Contractor shall assume all responsibility and risk for any misfits due to any errors in Contractor submittals. The Contractor shall be responsible for the dimensions and the design of adequate connections and details. Neither review nor approval of shop drawings or submittals by the Agency shall relieve the Contractor from responsibility for errors,

omissions, or deviations from the Contract Documents, unless such deviations were specifically called to the attention of the Agency in the letter of transmittal.

K. The Agency may schedule a submittal conference to provide for a rapid review of a submittal, should the project schedule warrant such a review. The Agency, Design Engineer, Contractor, and a qualified manufacturer's representative shall attend the submittal conference.

L. Requests for Information (RFIs) shall be submitted to the Engineer using the RFI form which accompanies this section. RFIs shall be numbered consecutively from the beginning of the project through the completion of the project.

M. The contractor shall submit shop drawings for the following:

1. Pipe and fittings.
2. Valves & valve boxes.
3. Pipeline Appurtenances
4. Concrete.
5. Steel.
6. Electrical Work
7. Other materials required by these Specifications

1.04 CONTRACTOR'S SCHEDULE

A. The Contractor's construction schedules and reports shall be prepared and submitted to the Agency in accordance with the Special Conditions.

1.05 WATER POLLUTION CONTROL PROGRAM

A. A Water Pollution Control Program (WPCP) will be completed by the Contractor and submitted for approval by the Agency. The WPCP shall be completed by a qualified individual and shall conform to the State of California requirements for projects of a similar nature.

1.06 SAMPLES

A. Whenever, in the Specifications, samples are required, the Contractor shall submit not less than four (4) samples of each such item or material to the Agency for review.

B. Samples, as required herein, shall be submitted for acceptance a minimum of thirty (30) days prior to ordering such material for delivery to the job site, and shall be submitted in an orderly sequence so that dependent materials or equipment can be assembled and reviewed without causing delays in the Work.

C. All samples submitted to the Agency shall be individually and indelibly labeled or tagged, indicating thereon all specified physical characteristics and the Manufacturer's name for identification. Upon receiving acceptance of the Agency, two (2) sets of the samples will be returned to the Contractor by the Agency. One set of samples will be retained by the

Agency, and one set of samples shall remain at the job site with the Agency until completion of the Work.

D. Unless indicated otherwise, all colors and textures of specified items presented in sample submittals shall be from the manufacturer's standard colors and standard materials, products, or equipment lines. If the samples represent non-standard colors, materials, products, or equipment lines and their selection will require an increase in contract time or price, the Contractor shall clearly indicate same on the transmittal page of the submittal.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION (NOT APPLICABLE)

END OF SECTION

IV.F SECTION 01320 - SCHEDULING AND REPORTING

PART 1 - GENERAL

1.01 GENERAL DESCRIPTION

This section specifies the scheduling of the work, which shall be performed by the Contractor. The development of the schedule, the cost loading of the schedule, monthly payment requisitions and project status reporting requirements of the Contract shall employ computerized Critical Path Method (CPM) scheduling. The CPM Schedule shall be cost loaded based on the schedule of values as approved by the Owner. The CPM schedule and all reports should be prepared with "MS Office" software or equal. Where submittals are required hereunder, the Contractor shall submit four copies of each submittal item.

The Contractor shall provide one unopened software package of the approved CPM scheduling program within ten (10) days after the Notice to Proceed. The software package shall be registered to the Owner and shall be complete with all options to facilitate all the requirements presented in this section, including printing capabilities.

1.02 INITIAL SCHEDULE SUBMITTALS

The Contractor shall submit two short term schedule documents at the Preconstruction Conference which shall serve as the Contractor's Plan of Operation for the initial 60 day period of the Contract Time and to identify the manner in which the Contractor intends to complete all work within the Contract Time. The Contractor shall submit (1) a 60-day Plan of Operation bar chart, and (2) a project overview bar chart type plan for all work as indicated below.

A. 60-Day Plan of Operation: During the initial 60 days of the Contract Time, the Contractor shall conduct Contract operations in accordance with the 60 day bar chart Plan of Operation. The bar chart so prepared and submitted shall show the accomplishment of the Contractor's early activities (mobilization, permits, submittals necessary for early material and equipment procurement, submittals necessary for long lead equipment

procurement, CPM submittals, initial site work and other submittals and activities required in the first 60 days).

B. Project Overview Bar Chart: The overview bar chart shall indicate the major components of the project work and the sequence relations between major components and subdivisions of major components. The overview bar chart shall indicate the relationships and time frames in which the various components of the work will be made substantially complete and placed into service to meet the project milestones. Sufficient detail shall be included for the identification of subdivisions of major components into such activities as (1) excavation, (2) foundation subgrade preparation, (3) foundation concrete, (4) completion of all structural concrete, (5) major mechanical work, (6) major electrical work, (7) instrumentation and control work, and (8) other important work for each major facility within the overall project scope. Planned durations and start dates shall be indicated for each work item subdivision. Each major component and subdivision component shall be accurately plotted on time scale sheets not to exceed 36-inch by 60-inch in size. Not more than four sheets shall be employed to represent this overview information.

C. The Owner and the Contractor shall meet to review and discuss the 60-day plan of operations and project overview bar chart within 5 days after they have been submitted to the Owner. The Owner's review and comment on the schedules shall be limited to Contract conformance with the sequencing and milestone requirements as stated in other sections of the specifications. The
Contractor shall make corrections to the schedules necessary to comply with the Contract requirements and shall adjust the schedules to incorporate any missing information requested by the Owner.

1.03 CPM SCHEDULE SUBMITTALS

A. Original CPM Schedule Submittal: Within 45 days after the commencement date stated in the Notice to Proceed, the Contractor shall submit for review by the Owner a hard copy of the CPM Network Schedule and the Computerized Schedule Report tabulations. The Contractor shall also submit a CD (compact disk) that contains all of the schedule submittal information and data. A new disk with updated information shall be submitted with each change or submission of the CPM schedule. The disk shall contain data compatible with MS Office to generate network diagrams and schedule reports identical to the hard copies submitted. This submittal shall have already been reviewed and approved by the Contractor's Project Manager, Project Superintendent, and the Project Estimator prior to submission. The CPM Schedule shall be a time-scaled network diagram of the "I-j" activity-on-arrow or precedence type. The Network Diagram shall describe the activities to be accomplished and their logical relationships and show the Critical Path. The schedule shall contain sufficient detail and information to cost load the CPM schedule in accordance with the approved schedule of values as specified. Each installation and site work activity shall have been cost loaded as specified.

The Computerized Schedule Report tabulations shall include the following:

1. Report of activities sorted by Activity Number.

2. Report of activities sorted by Early Start date.

3. Report of activities sorted by Total Float.

4. Report of activities sorted by Responsibility Code. Responsibility Codes shall be established for the Contractor, Owner, subcontractors, suppliers, etc. These codes shall be identified in the Network Diagram.

5. A successor-predecessor report which shall identify the successor and predecessor activities for each activity and ties between schedule activities.

6. Cost loaded report supporting partial payment request.

B. Original CPM Schedule Review Meeting: The Contractor shall, within fifty-five (55) days from the commencement date stated in the Notice to Proceed, meet with the Owner to review the original CPM schedule submittal. The Contractor shall have his Project Manager, Project Superintendent, and the Project Scheduler in attendance. The Owner's review will be limited to the submittal's conformance to the Contract requirements. However, the review may also include:

1. Clarifications of the design intent, process, and startup requirements.

2. Directions to include activities and information missing from the submittal.

3. Requests to the Contractor to clarify the schedule.

C. Revisions to the Original CPM Schedule: Within sixty-five (65) days after the commencement date stated in the Notice to Proceed, the Contractor shall have revised the original CPM schedule submittal to address all review comments from the original CPM schedule review meeting and resubmit the network diagrams and reports for the Owner's review. The Owner, within fourteen (14) days from the date that the Contractor submitted the revised schedule will either (1) accept the schedule and cost loaded activities as submitted, or (2) advise the Contractor in writing to review any part or parts of the schedule which either do not meet the Contract requirements or are unsatisfactory for the Owner to monitor the project's progress and status or evaluate monthly payment requests by the Contractor. The Owner may accept the schedule with conditions that the first monthly CPM schedule update be revised to correct deficiencies identified. When the schedule is accepted, it shall be considered as the "Original CPM Construction Schedule" until an updated schedule has been submitted. The Owner reserves the right to require that the Contractor adjust, add to, or clarify any portion of the schedule which may later be discovered to be insufficient for the monitoring of the Work or approval of partial payment requests. No additional compensation will be provided for such adjustments, additions or clarifications.

D. Acceptance: The acceptance of the Contractor's schedule by the Owner will be based solely upon the schedule's compliance with the Contract requirements. By way of the Contractor assigning activity durations and proposing the sequence of the Work, the Contractor agrees to utilize sufficient and necessary management and other resources to perform the work in accordance with the schedule. Upon submittal of a schedule update,

the updated schedule shall be considered the "current" project schedule. Submission of the Contractor's progress schedule to the Owner shall not relieve the Contractor of the Contractor's total responsibility for scheduling, sequencing, and pursuing the Work to comply with the requirements of the Contract Documents, including adverse effects such as delays resulting from ill-timed work.

E. Monthly Updates and Periodic CPM Schedule Submittals: Following the acceptance of the Contractor's Original Construction Schedule, the Contractor shall monitor the progress of the
Work and adjust the schedule each month to reflect actual progress and any changes in planned future activities. Each schedule update submitted must be complete including all information
requested in the original schedule submittal and that shown in Subsection 6.0. Each update shall continue to show all work activities including those already completed. These completed
activities shall accurately reflect the "as built" information by indicating when the work was actually started and completed.

Neither the submission nor the updating of the Contractor's original schedule submittal nor the submission, updating, change or revision of any other report, curve, schedule or narrative
submitted to the Owner by the Contractor under this Contract, nor the Owner's review or acceptance of any such report, curve, schedule or narrative shall have the effect of amending or
modifying, in any way, the Contract completion date or milestone dates or of modifying or limiting, in any way, the Contractor's obligations under this Contract. Only a signed, fully executed change order can modify these contractual obligations.

The monthly schedule update submittal will be reviewed with the Contractor during a monthly construction progress meeting held on the twentieth (20th) work day of each month. The goal of
these meetings is to enable the Contractor and the Owner to initiate appropriate remedial actions to minimize any known or foreseen delay in completion of the Work and to determine the amount of Work completed since the last month's schedule update. The status of the Work will be determined by the percent complete of each activity shown in the Network Diagram. These
meetings are considered a critical component of the overall monthly schedule update submittal and the Contractor shall have appropriate personnel attend. As a minimum, these meetings shall
be attended by the Contractor's Project Manager and General Superintendent. Within seven (7) working days after the monthly progress meeting, the Contractor shall submit the revised CPM
Network Diagram, the revised CPM computerized tabulations as noted in this Section, the revised successor/predecessor report, the Project Status Reports as defined by Subsection 7.0 and the Contractor's Application for Payment. Within five (5) working days of receipt of

the above noted revised submittals, the Owner will either accept or reject the monthly schedule update submittal. If accepted, the percent complete shown in the monthly update will be the basis for the Application for Payment to be submitted by the Contractor. If rejected, the update shall be
corrected and resubmitted by the Contractor before the Application for Payment for the update period can be processed.

F. Schedule Revisions: The Contractor shall highlight or otherwise identify all changes to the Network Diagram Schedule Logic or activity durations made from the previous schedule. The Contractor shall modify any portions of the CPM schedule which become infeasible because of activities behind schedule or for any other valid reason.

1.04 CHANGE ORDERS

Upon approval of a change order, or upon receipt by the Contractor of authorization to proceed with additional work, the change shall be reflected in the next submittal of the CPM schedule by the Contractor. The Contractor shall utilize a sub-network in the schedule depicting the changed work and its effect on other activities. This sub-network shall be tied to the main network with the appropriate logic so that a true analysis of the Critical Path can be made.

1.05 CPM STANDARDS

A. Definitions: CPM, as required by this Section, shall be interpreted to be generally as outlined in the Association of General Contractors (AGC) publication, "The Use of CPM in Construction." except that either "I-j" arrow diagrams or precedence diagramming format may be utilized. In the case of conflicts between this specification and the AGC Document, this specification shall govern.

B. Construction Schedules: Construction schedules shall include a graphic network diagram and computerized construction schedule reports as described in Paragraph 8.0.

C. Networks: The CPM network shall be in a form of a pure logic diagram or, if directed or approved by the Owner, a time scaled "I-j" activity-on-arrow or precedence type diagram and may be divided into a number of separate sheets with suitable match lines relating the interface points among the sheets. Individual sheets shall not exceed 36-inch by 60-inch (maximum 2 sheets).

D. Except for a pure logic diagram, all construction activities and procurement shall be indicated in a time-scaled format and a calendar time line shall be shown along the entire sheet length. Each activity arrow or node shall be plotted so that the beginning and completion dates of each activity are accurately represented along the calendar time line. All activities shall be shown using the symbols that clearly distinguish between critical path activities, non-critical activities and free float for each non-critical activity. All activity items shall be identified by their respective Activity Number, Responsibility Code, Work Duration, and their Dollar Value. All non-critical path activities shall show their total float time in scale form by utilizing a dotted line or some other graphical means.

E. Duration Estimates: The duration estimate indicated for each activity shall be computed in working days and shall represent the single best estimate considering the scope of the activity work and resources planned for the activity. Except for certain non-labor activities, such as curing of concrete or delivery of materials, activity duration shall not exceed 10 working days nor be less than one working day unless otherwise accepted by the Owner.

F. Float Time: Float time shall be as follows:

1. Definition: Unless otherwise provided herein, float as referenced in these documents, is total float. Total float is the period of time measured by the number of working days each non-critical path activity may be delayed before it and its succeeding activities become part of the critical path. If a non-critical path activity is delayed beyond its float period, that activity then becomes part of the critical path and controls the end date of the project. Thus, the delay of the non-critical path activity beyond its float period will cause delay to the project itself.

2. Float Ownership: Neither the Owner nor the Contractor owns the float time. The project owns the float time. As such, liability for delay of the project completion date rests with the party actually causing delay to the project completion date. For example, if Party A uses some, but not all of the float time and Party B later uses the remainder of the float time as well as additional time beyond the float time, Party B shall be liable for the costs associated with the time that represents a delay to the project's completion date. Party A would not be responsible for any costs since it did not consume all of the float time and additional float time remained, therefore, the project's completion date was unaffected.

1.06 SCHEDULE REPORTS (FORMAT)

A. Schedule Reports: Schedule Reports shall be prepared based on the Construction Schedule, and shall include the following minimum data for each activity:

1. Activity Numbers and Responsibility Codes.

2. Contract Number

3. Estimated Activity Duration.

4. Activity Description.

5. Activity's Percent Completion.

6. Early Start Date (Calendar Dated).

7. Early Finish Date (Calendar Dated).

8. Late Start Date (Calendar Dated).

9. Late Finish Date (Calendar Dated).

10. Status (Whether Critical).

11. Total Float for Each Activity.

12. Free Float for Each Activity.

13. Cost Value for Each Activity.

B. Project Information: Each Schedule Report shall be prefaced with the following summary data:

1. Project Name.

2. Contractor.

3. Contract No.

4. Type of Tabulation.

5. Project Duration.

6. Contract Completion Date (revised to reflect time extensions).

7. The Commencement Date Stated in the Notice to Proceed.

8. The Data Date and Plot Date of the Network Diagram.

9. If an update, the new schedule completion date.

1.07 PROJECT STATUS REPORTING

A. In addition to the submittal requirements for the CPM scheduling identified in this Section, the Contractor shall provide monthly project status reports (Overview Bar Chart and a written narrative report) to be submitted in conjunction with the revised CPM Schedules as specified in Subsection 3.0. Status reporting shall be in the form specified below.

B. The Contractor shall prepare and submit monthly, an Overview Bar Chart schedule of the major project components. The overview bar chart schedule shall be a summary of the current CPM schedule (original and as updated and adjusted throughout the entire construction period). It shall be limited to not more than two sheets which shall not exceed 36-inch by 60-inch. The major project components shall be represented as time bars which shall be subdivided into various types of work including demolition, excavation and earthwork, yard piping, concrete construction, mechanical, electrical and instrumentation installations. Major components shall include each new structure by area designation, sitework, modifications to existing structures, tie-ins to existing facilities and startups.

Each major component and subdivision shall be accurately time scale plotted consistent with the project overview bar chart specified above. It shall represent the same status indicated by early start and finish activity information contained in the latest update of the CPM schedule. In addition, a percent completion shall be indicated for each major component and subdivision. The initial submittal of the overview bar chart schedule shall be made at the time that the revised original CPM schedule is submitted to the Owner (15 days from the commencement date stated in the Notice to Proceed). The Contractor shall amend the overview schedule to include any additional detail required by the Owner. The

Contractor shall include any additional information requested by the Owner at any time during the construction of the Work.

C. The Contractor shall prepare monthly written narrative reports of the status of the project for submission to the Owner. Written status reports shall include:

1. The status of major project components (Percent Complete, amount of time ahead or behind schedule) and an explanation of how the project will be brought back on schedule
if delays have occurred.

2. The progress made on critical activities indicated on the CPM schedule.

3. Explanations for any lack of work on critical path activities planned to be performed during the last month.

4. Explanations for any schedule changes, including changes to the logic or to activity durations.

5. A list of the critical activities scheduled to be performed in the next two month period.

6. The status of major material and equipment procurement.

7. The value of materials and equipment properly stored at the site, but not yet incorporated into the work-in-place.

8. Any delays encountered during the reporting period.

9. An assessment of inclement weather delays and impacts to the progress of the Work.

The Contractor may include any other information pertinent to the status of the project. The Contractor shall include additional status information requested by the Owner.

1.08 INCLEMENT WEATHER PROVISIONS OF THE SCHEDULE

A. The Contractor's construction schedule shall include at least ten (10) lost days on the CPM schedule's critical path due to inclement weather.

1.09 LIQUIDATED DAMAGES

A. If any submittal required by this Section is determined by the Owner to be incomplete or is submitted later than required, the Owner will suffer financial loss and, accordingly, liquidated damages will be assessed against the Contractor in accordance with these specifications.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION (NOT APPLICABLE)

END OF SECTION

IV.G SECTION 01500 - CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1.01 WORK INCUDED

A. Mobilization, storage yard, temporary utilities, security, access roads and parking areas, temporary controls and traffic regulation.

1.02 RELATED WORK

A. Section 01300: Submittals

1.03 SUBMITTALS

A. Storage yard description shall describe contractor's proposed methods for dust and noise control in storage areas to satisfaction of Owner.

1.04 MOBILIZATION

A. Obtain temporary easements, which Contractor may require for construction activities outside of existing easements and/or rights of way secured by Owner, at Contractor's expense.

1.05 TEMPORARY UTILITIES

A. Construction power shall be purchased or generated on-site for constructing Work where existing outlets are not available.

B. Provide safe drinking water and sanitation facilities on jobsite at all times.

C. Construction telephone shall be available at site at all times Work is in progress. Cellular phones are acceptable.

1.06 CONSTRUCTION AIDS

A. Scaffolding, rigging, hoisting and services needed to safely deliver and install products shall be provided. Remove same from premises when installation is complete.

1.07 TEMPORARY CONTROLS

A. Dust control operations shall prevent construction dust from harming or annoying persons living in or occupying buildings near Work. Use water or dust preventative to control dust. Cover or wet loads of excavated material or rubbish leaving site or of material being imported to prevent blowing dust.

B. Noise control shall be done to comply with local noise ordinances. Schedule Work to comply with noise ordinances. Install sound barriers if needed to comply with noise ordinances and Contract Documents.

C. Fire danger shall be minimized at and near construction site. Protect surrounding private property from fire damage resulting from construction operations.

D. Storm water management operations shall be conducted and maintained as needed to prevent runoff or seepage from entering excavations and to control erosion in

conformance with
Federal, State and local regulations.

1.08 TRAFFIC REGULATION

A. Contractor shall implement whatever traffic control measures may be required to facilitate the Work of this contract, at no additional cost to Owner.

1.09 UNIT PRICES

A. Payment for verification of field dimensions and utility locations will be included in the price bid for items of Work which may require relocation or refitting if field dimensions differ from
those shown on plans.

B. Payment for power to be furnished by Contractor for construction use will be included in the price bid for items to which it is appurtenant. Payment under these items will include full
compensation for furnishing labor, products, tools, and equipment and doing work necessary to obtain and distribute power to construction purposes.

C. Payment for costs arising from fire or prevention of fire will be included in the price bid for items of work for which fire protection during construction is needed.

D. Payment for noise control facilities will be included in the price bid for items of work where noise control facilities are required during construction.

1.10 CONSTRUCTION SURVEYING

A. The first set of construction surveying/staking will be provided by the Owner. If additional survey and staking is required due to lost stakes the Contractor shall be required to pay for these costs. These costs will be deducted from monies due the Contractor by the Owner.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION (NOT APPLICABLE)

END OF SECTION

IV.H SECTION 01505 - MOBILIZATION

PART 1 - GENERAL

1.01 GENERAL

A. Mobilization shall include the acquisition of all permits; moving onto the site all equipment; furnishing and erecting temporary buildings, and other construction facilities; and implementing security requirements; all as required for the proper performance and completion of the work. Mobilization shall include but not be limited to the following principal items:

1. Moving on to the site of all Contractor's equipment required for construction operations.

2. Installing temporary construction power, wiring, and lighting facilities.

3. Establishing fire protection system.

4. Developing construction water supply as required.

5. Providing all on-site communication facilities, including telephones and radios for Contractor personnel.

6. Providing on-site sanitary facilities and potable water facilities for Contractor personnel.

7. Arranging for, and establishment of, Contractor's storage yard as required. (Contractor is solely responsible for obtaining property owner agreements to use private property for storage or laydown areas per the contract documents.)

8. Constructing and implementing security features and requirements in compliance with the Contract Documents.

9. Obtaining all required permits.

10. Having all OSHA required notices and establishment of safety programs.

11. Submitting initial submittals.

1.02 CONSTRUCTION FACILITIES PLAN

A. Prior to commencement of any field work, the Contractor shall submit a Construction Facilities Plan to Construction Manager for approval. Said plan shall show the layout, equipment, materials and procedures that Contractor proposes for construction of temporary electrical, telephone, lighting, heating, water, sanitation, field sheds, and other similar site facilities.

B. The Contractor's construction facilities shall be of a temporary nature. The Contractor shall be wholly responsible for the security of his site laydown area, and for all its materials, equipment and tools at all times.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION (NOT APPLICABLE)

END OF SECTION

IV.I SECTION 01630 - OPERATION AND MAINTENANCE MANUALS

PART 1 - GENERAL

1.01 SCOPE

A. All Operation and maintenance manuals shall be provided and shall consist of the names and addresses of the manufacturer, the nearest representative of the

manufacturer, and the nearest supplier of the manufacturer's equipment and parts. In addition, when applicable, the following items of information shall be provided for each item of equipment or equipment assembly:

1. Lubrication Information: This shall consist of the manufacturer's recommendations regarding the equipment lubricants to be used and the lubrication schedule to be followed.

2. Control Diagrams: Diagrams shall show internal and connection wiring, terminal numbers and wire numbers.

3. Start-Up Procedures: These instructions consist of the equipment manufacturer's recommendations for installation, adjustment, calibration, and troubleshooting.

4. Operating Procedures: These instructions shall consist of the equipment manufacturer's recommended step-by-step procedures for starting, operating, and stopping the equipment under specified modes of operation.

5. The manuals shall include a discussion of automatic control of the pumps as well as all other equipment. In addition, detailed, step-by-step procedures shall be included for manual operation of all equipment.

6. Preventative Maintenance Procedures: These instructions shall consist of the equipment manufacturer's recommended steps and schedules for maintaining the equipment. Included shall be equipment data sheet and pump curves, if applicable.

7. Overhaul Instructions: These instructions shall consist of the equipment manufacturer's directions for the disassembly, repair and reassembly of the equipment and any safety precautions that must be observed while performing the work.

8. Parts List: This list shall consist of all parts, their applicable numbers and materials of construction.

9. Spare Parts List: This list shall consist of the equipment manufacturer's recommendations of number of parts which should be stored by the Owner, any special tools that are not readily available from a major tool supplier and storage precautions which are required.

10. Exploded View: Exploded or cut views of equipment shall be provided if available as a standard item of the manufacturer's information. When exploded or cut views are not available, plan and section views shall be provided with detailed callouts.

11. Cross-sectional View: Cut view showing details of construction.

12. Warranty: Warranty and Maintenance Contract documentation shall be included in the Operation and Maintenance Manual.

13. Specific Information: When items of information not included in the above list are required, they will be provided as described in the specification for the equipment.

14. Provide paint manufacturer's name and blend number for each type of paint used on each piece of equipment.

1.02 DRAFT OPERATIONS AND MAINTENANCE MANUALS

Two copies of the draft operation and maintenance manuals shall be submitted to the Engineer for review and comment. If manufacturer's standard brochures and manuals are used to describe operation and maintenance procedures, such brochures and manuals shall be modified to reflect only the model or series of equipment used on this project. Extraneous material shall be crossed out neatly or otherwise annotated or eliminated.

1.03 FINAL TRANSMITTAL PROCEDURE

Once the draft operation and maintenance manuals are revised based on review comments, two copies of the specified final operation and maintenance manuals shall be provided to the District. The information shall be originals and shall be 3-hole punched and inserted into an overall binder. For ease of identification, each section of the operation and maintenance manual shall be clearly labeled with tabs. A table of contents shall be included in the front of the operation and maintenance manual.

PART 2 - PRODUCTS

2.01 PAYMENT

Acceptable operation and maintenance manuals must be delivered to the Engineer before the Contractor performs the operational testing of the reservoir and appurtenances. Progress payments for items related to testing, close-out, or warranty will not be made until the specified acceptable operation and maintenance manuals have been delivered to the Engineer.

2.02 FIELD CHANGES

Following the acceptable installation and operation of an equipment item, the item's instructions and procedures shall be modified and supplemented by the Contractor to reflect any field changes or information requiring field data.

END OF SECTION

IV.J SECTION 01640 - PRODUCT SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Procedures and requirements for substituting products.

1.02 RELATED REQUIREMENTS

A. Section 01300, Submittals

1.03 GENERAL REQUIREMENT

A. In compliance with the provisions of Section 3400 of the Public Contract Code of the State of California, the Contractor will have thirty (30) calendar days after award of the contract to submit data substantiating a request for substituting any “or equivalent” items. Substitution requests shall be submitted and accepted by the District prior to the Contractor ordering materials.

B. Standard Products - Where products are specified by reference standard, any product meeting the standards referenced may be used. Information on such products shall be submitted in accordance with the requirements of Section 01300.

C. Proprietary Products – Where products or processes are specified or listed in the approved material list by trade, patent or proprietary name, said specification or approved material list, unless marked "no exceptions", shall be deemed to be followed by the words "or accepted equal accepted in writing by the District." In such case substitution of similar products as “accepted equals” will be considered under this section.

D. Selection of Proprietary Product - Where more than one proprietary name is specified or listed in the approved material list, the Contractor may provide any one of the products specified. Only one manufacturer shall be used for each specific application throughout the Work notwithstanding that similar materials or equipment of two or more manufacturers or producers may be specified for the same application.

E. Substitution Request Procedure - Submit a written request on the enclosed form for proposed substitutions to the District prior to deadline for receipt of substitution requests. Submit proposed substitutions relating to a particular subcontract or trade in a single package. If the District accepts any proposed substitutions, such acceptance will be set forth in an Addendum. No substitution will be considered after the deadline for receipt of substitution requests has expired.

F. Contractor's Responsibility for Construction Modifications - Drawings have been detailed in compliance with dimensions and International Council of Building Officials (ICBO) Evaluation Report data for products specified. If proposed substitute product is accepted by the District, the Contractor shall assume both responsibility for construction modifications and additional costs required by reason of this acceptance. If substitution results in a decrease in cost, potential savings to the District may be submitted to the District for consideration.

G. Systems of Like Manufacture - Where products are specified in groups to be furnished by one manufacturer, no substitution will be considered that is not similarly furnished by one manufacturer. Where the Contractor proposes to use a system of equipment other than that shown in the Contract Documents, the substitution shall be proposed as a complete system.

H. No time extension will be allowed for substitution of materials.

1. Submittals

    a. Furnish the following submittals for substitution requests.

SUBMITTAL	DESCRIPTION
Substitution Request Form	Submit Substitution Request on form furnished (under attachments s
Contractor's Certification of Performance and Assumption of Liability	Submit Certificate of Performance certifying that the proposed substi or better in all respects to the product specified and that the propose will, in all respects perform the function for which it is intended.
Certificate of Compliance	Required as needed to substantiate Product Substitutions
Dimensional Data	Required for Product Substitutions
Material Samples	Required as needed to substantiate Product Substitutions
Manufacturer's Statement of Responsibility	Required at District's discretion for Product Substitutions. See form a 01300.
Foundry or Test Record Transcripts	Required as needed to substantiate Product Substitutions
Material List and Ratings	Required as needed to substantiate Product Substitutions
Names and Addresses of Nearest Local Manufacturer's Representatives	Required for Product Substitutions (Use allotted space on attached Su Request Form)
List of Three Local Product Installations	Names and contact information for three installations within a 100 m project completed within the prior three years. Required for Product allotted space on attached Substitution Request Form)
Manufacturer's Service Contract Statement of Qualifications	Required for installations of products which include optional mainten contracts
Warranty	Furnish warranty equal to or better than warranty required for specif

b. Determination of Equality - The burden of proof for demonstrating equality of the substituted item shall be the responsibility of the Contractor. Acceptance of such substitutions is entirely at the discretion of the District.

c. List of Accepted Substitutions - The District will issue to the Contractor a list setting forth those substitutions that have been accepted. No products proposed for substitution, shall be ordered before being accepted in writing by the District.

d. Products accepted as "accepted equals" shall, in the District's opinion, meet the following requirements:

1) Products shall be of equal quality, substance, function, and color to those listed.

2) Products shall be standard products of a reputable manufacturer having regularly been engaged for 5 years in manufacture of products furnished.

3) Products shall have a reputation for assuring long-lasting trouble-free service.

4) Factory-authorized, factory-trained, and competent service personnel, and stocked service parts shall be available within a 150 mile radius of the Work.

5) Manufacturer shall be capable of certifying compliance with listed reference standards.

e. The District reserves the right to reject product substitutions solely on the basis of maintenance of economies of scale available to the District through standardizing on
manufacturers and minimizing spare parts inventories.

f. Denial of Substitution - If, in the opinion of the District the proposed substitution is not equal to or better in every respect to that of the specified product, or was not
submitted for acceptance in the manner outlined above, the Contractor shall furnish the specified products.

g. Responsibility for Coordinating Substitutions with Construction Trades – the Contractor shall inform all other trades, vendors, and subcontractors of the effects of substitutions on their work or products. Failure to notify shall not relieve the Contractor of their duty to make payments arising from alterations in specified products or methods needed to complete the Work in an approved and acceptable manner.

2. Contractor's Responsibility for Cost of Substitution Reviews

a. The Contractor shall pay all costs incurred by the District to review Requests for Substitutions.

3. Responsibility for Spare Part Inventories

a. Provide spare parts inventory to accommodate two years' typical maintenance. See technical specifications for further information for specific equipment items.

4. Substitution of "Inferior" Products

a. Products not meeting the above requirements shall, for purpose of this contract, be deemed "inferior" even if product's only shortcoming is that the Contractor failed to submit a Substitution Request on said product prior to the stipulated deadline.

b. Substitution of "inferior" products shall not occur except where cost savings are offered to and accepted by the District in the form of a Change Order.

5. Bid Shopping and Reverse Auctions

a. Substitutions for products and services of Manufacturers, system integrators or subcontractors listed at time of bid and/or in the Contractor's

initial Submittal will only be permitted under one or more of the following circumstances:

1) Where the Contractor-listed manufacturer, system integrator, or subcontractor has gone out of business.

2) Where the Contractor-listed manufacturer, system integrator or subcontractor has, in the District's opinion, failed to perform or no longer possesses both capability and willingness to perform to standard required by Contract Documents.

3) Where the Contractor-listed manufacturer, supplier, or subcontractor increases price quoted to the Contractor above, that quoted at time of bid, and the Contractor submits evidence of this acceptable to District.

4) Where the Contractor offers a credit to the District sufficient in the District's opinion to justify accepting the substitution in the form of a Change Order.

FORMS: Located in the "Attachments" section.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

IV.K SECTION 01650 - PRODUCT DELIVERY, STORAGE, AND HANDLING REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Transportation and handling, storage and protection of products

1.02 REFERENCED STANDARDS

A. California Stormwater Quality Association (CASQA) Stormwater Best Management Practice Handbook for Construction latest edition

B. ANSI/NSF 61 Drinking Water System Components – Health Effects

1.03 DELIVERY, STORAGE AND HANDLING

A. Ship and deliver products to jobsite as follows:

1. Do not ship, accept delivery of, or store items on site for which applicable submittals have not been accepted.

2. Before shipping, operate valves, motors, pumps, actuators, and mechanical equipment at the factory to ensure products are complete and in working condition.

3. Only products of accepted manufacturers shall be delivered to or stored at the site.

4. Deliver products to the jobsite in manufacturer's original, unbroken, unopened, labeled packaging containers or bundles. Tag or label packages, containers, or bundles as needed
to identify contents and name of equipment of which contents form a part.

5. Deliver large multi-component assemblies in sections that facilitate field handling and installation.

6. Oil-lubricated gearing, bearings, and other lubricated components shall be shipped with oil soluble protective coating as described in the warranty requirements or as recommended
by the manufacturer. For parts contacting potable water, coating shall be NSF-approved. Coating shall provide protection for one year after final acceptance.

B. Store products at jobsite as follows:

1. Store materials per manufacturer's recommendations, and in a protected area at a temperature between 35 degrees F and 110 degrees F.

2. Store products so as to preserve their quality and fitness for the Work. Locate stored products and equipment to be incorporated in the Work to facilitate prompt inspection. The Contractor shall be responsible for damage or loss to products until Final Acceptance.

3. Protect products against moisture, weather, temperature extremes, dust, debris, tampering, theft, vandalism, ultraviolet radiation, or damage from improper handling, storage, or exposure. Protect exposed metals from rust and corrosion even for items which may be sandblasted or otherwise cleaned before painting.

4. Store items not designed for outdoor exposure off the ground and under cover.

5. Store cementitious materials in weather-tight spaces. Keep free from moisture.

6. Store aggregate in well-drained area to minimize change in moisture content. Prevent contamination by other materials.

7. Store fasteners and connectors in original unopened containers until used.

8. Ventilate materials subject to corrosion or moisture damage to prevent condensation.

9. Any corrosion evident prior to final acceptance shall be removed, or the product shall be removed or replaced.

10. Cover plastic and similar brittle items to protect from sun exposure and temperature extremes.

11. Cover stored materials with tarpaulin or other covering to prevent soiling or exposure to weather. Fasten coverings to prevent removal by wind.

12. Store flammable products to conform with City, County, State, and Federal safety codes for storage of flammable materials.

13. Cover, plug, or cap pipe ends, valve ends and equipment openings with rubber, plastic or canvas to prevent intrusion or contamination.

14. Stringing of pipe along right of way shall be done in a manner that will not interfere with free passage of vehicles.

15. Do not store pipe on roadway or parkway of residential streets for more than 10 days.

16. Store items in accordance with requirements of project Storm Water Pollution Prevention Plan (SWPPP), if applicable. If a SWPPP has not been prepared for the project, store items
in accordance with the appropriate best management practices (BMP's) listed in the California Stormwater Quality Association (CASQA) Stormwater Best Management Practice Handbook for Construction latest edition. Comply with all City, County, State, and Federal pollution prevention laws and permits.

17. Notify the District in writing if delivered or stored product is damaged. Exterior surfaces of delivered items shall be in perfect unblemished condition. Do not repair damaged products without prior written approval.

C. Handle products as follows:

1. Handle products with care, using proper equipment according to manufacturer's recommendations. Lift large heavy items only at points designated by manufacturer. Do not drop, drag, bump, bend or handle products in a manner that causes abrasions, bruises, cracks, mars, scars, scratches or other damage. Use padded slings and hooks for lifting as needed to prevent damage. Improper handling shall be cause to reject mishandled products.

2. Coated pipe, valves and other products shall be lifted, lowered or suspended using rubber or canvas belt slings or pneumatic-tired cradles. Sling width shall equal or exceed pipe or product diameter. Do not handle coated products using ropes, hooks, chains, calipers or cables. Store such materials on padded skids.

3. Inspect each product item for damage, defects, completeness and correct operation before installing.

4. Before installation, swab joints and interiors of piping materials to remove foreign matter.

5. Clean and protect machined surfaces and shafting from corrosion using proper type and amount of coating as described in warranty requirements to assure protection to one year
after final acceptance.

6. Maintain records for the District's review of deliveries to show Contractor's order number, purchase order number and equipment number. Include labeling or shipping tag in records.

1.04 WARRANTY REQUIREMENTS

A. Manufacturer’s instruction and warranty requirements for delivery, storage and handling of products shall be strictly followed.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

IV.L SECTION 01700 - PROJECT CLOSEOUT

PART 1 - GENERAL

1.01 DESCRIPTION

A. Contract closeout is the process that commences as the Work nears Substantial Completion. It continues through Substantial Completion, and Final Acceptance of the Work.

B. This specification section defines the overall change over process from construction (by the Contractor) to operations (by the Agency). The section defines the terms in this process, and
outlines the responsibilities of the Contractor, the Construction Manager, and the Agency.

1.02 CONTRACT CLOSEOUT SEQUENCE OF EVENTS

A. The sequence of events and their description listed below represent the suggested order of activities as the Contract proceeds from construction, through checkout, testing, Substantial Completion, and the Notice of Completion. Not all work will proceed in this exact order. Adjustments may be made, after approval by the Construction Manager, for the mutual benefit of the Contractor and the Agency, if the situation so warrants. Any adjustments made in the sequence of events, to accommodate the Contractor, shall be at no additional cost to the Agency.

B. Closeout Sequence of Events and Description:

1. Contract Closeout Deliverables: The Contractor shall provide the following:

a. Final Record Drawings.

b. Written guarantees, where required.

c. Certificates of inspection and acceptance by local governing agencies having jurisdiction.

2. Pre-Final Inspection and Discrepancy List: The Construction Manager will conduct a prefinal inspection of the Work prior to substantial completion. The Construction

Manager will prepare a discrepancy list (punch list). The discrepancy list includes items of work which do not conform to the Contract Documents, plus any additional items found to be missing, incomplete, damaged, incorrect, or constructed in an un-workmanlike manner. The Contractor shall correct all items on the discrepancy list.

3. Substantial Completion: Following correction of items on the discrepancy list, and successful completion of the operation demonstration, the Contractor shall notify the Construction Manager that the Work is substantially complete. Refer to the contract documents for other requirements for Substantial Completion.

4. Final Inspection: Following written notice from the Contractor that the entire Work is complete, the Construction Manager, the Agency, the Contractor, and the Design Consultant will conduct a final inspection to verify that the Work is complete. The Construction Manager will prepare a final punch list of all outstanding items.

5. Final Payment: After the Contractor has completed all final punch list items, and completed all other requirements, the Contractor shall submit a final application for payment to the Construction Manager. The final payment application will include all necessary documentation, in addition to waivers or releases of all liens filed in connection with the Work. The Contractor shall specifically release the Agency from any claims not specifically renewed on the final application for payment. After acceptance by the Construction Manager and the Agency, the Agency will make final payment to the Contractor after deducting all amounts to be retained under the provisions of the Contract Documents.

6. Notice of Completion: The Agency will file a Notice of Completion with the County Recorder to begin the 30-day stop notice filing period.

7. Release of Retention: Not more than 35 days after filing the Notice of Completion, the Agency will release to the Contractor all retainage, less any deductions to cover pending third party claims against the Agency.

1.03 SUBSTANTIAL COMPLETION

A. Substantial Completion includes compliance with the following requirements:

1. The Contractor has substantially completed the construction and erection of the Work in conformance with the Contract Documents.

2. The Contractor has installed, adjusted, and successfully tested products, equipment, and systems. The facilities are constructed as indicated by the erection, installation, and operations and maintenance instruction of the suppliers.

3. The Contractor has provided and completed the following items as approved by the Construction Manager.

a. Contract Closeout Deliverables.

b. Special Manufacturer's or Supplier's Warranties.

1.04 PRE-FINAL AND FINAL INSPECTIONS

A. Pre-final and final inspections are surveys of the Contractor's work by the Construction Manager, the Agency, and the Design Consultant in order to create the list of incomplete or unsatisfactory items of work.

B. Prior to the pre-final and final inspections, the Contractor must complete the following:

1. Clean equipment and fixtures by removing temporary labels, stains, dirt, and other foreign substances.

2. Clean debris from pipes, gutters, basins, and drainage systems.

3. Clean site; sweep paved areas, rake clean unpaved surfaces.

4. Remove waste and surplus materials, rubbish, fencing, equipment, temporary utilities, and construction facilities from the site.

C. The discrepancy list(s) and punch list will include all items of work found to be unsatisfactory, missing, incomplete, damaged, incorrect, or improperly installed or constructed. Prior to Final Acceptance the Contractor shall correct the punch list items by re-work, modification, or replacement, at the option of the Construction Manager and at no additional cost to the Agency. The Construction Manager will re-inspect punch list items upon notice by the Contractor that they are complete.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.01 CLEANUP

A. The Contractor shall promptly remove from the vicinity of the completed work, all rubbish, unused materials, concrete forms, construction equipment, and temporary structures and facilities used during construction. Final acceptance of the Work by the Agency will be withheld until the Contractor has satisfactorily complied with the forgoing requirements for final cleanup of the project site.

3.02 MAINTENANCE AND GUARANTEE

A. The Contractor shall comply with the maintenance and guarantee requirements contained in the contract documents.

B. Replacement of earth fill or backfill, where it has settled below the required finish elevations, shall be considered as a part of such required repair work, and any repair or resurfacing which becomes necessary by reason of such settlement shall likewise be considered as a part of such required repair work unless the Contractor shall have obtained a statement in writing from the affected private Agency or public agency releasing the Agency from further responsibility in connection with such repair of resurfacing.

C. The Contractor shall make all repairs and replacements promptly upon receipt of written order from the Agency. If the Contractor fails to make such repairs or

replacements promptly, the Agency reserves the right to do the work and the Contractor and his surety shall be liable to the Agency for the cost thereof.

3.03 BOND

A. The Contractor shall provide a bond to guarantee performance of the provisions contained in Paragraph "Maintenance and Guarantee" above, and in the Contract Documents.

END OF SECTION

IV.M SECTION 01730 - RECORD DRAWINGS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Maintenance and delivery of marked-up record drawings showing the final locations of the work.

1.02 RELATED REQUIREMENTS

A. Section 01300, Submittals.

1.03 RECORD DRAWINGS

A. The Contractor shall maintain a set of contract drawings with neat and legible red-line markups showing the final locations of structures, piping, equipment, electrical conduits, outlet boxes, cables, and other components of the work.

B. Marking of the drawings shall be kept current and shall be done at the time the material and equipment are installed.

C. The Contractor shall not conceal any work until the required record drawing information has been recorded. The Construction Manager may direct the Contractor to expose concealed work if work was not recorded on the Record Drawings.

D. Record drawings shall be available to the Construction Manager at all times.

E. After the final walk through has been completed and before the project “final” is granted, the Contractor shall deliver record drawings to the Construction Manager.

F. The Contractor may submit additional 24" X 36" sheets detailing record work as approved by the Construction Manager.

G. Final payment shall not be made until the marked-up record drawings are delivered to and approved by the Construction Manager.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION (NOT APPLICABLE)

END OF SECTION

IV.N TRENCHING

If the Project involves the construction of a pipeline, sewer, sewage disposal system, boring and jacking pits, or similar trenches or open excavations, which are five (5) feet deep or more, then each Bidder must submit, as a Bid item, adequate sheeting, shoring, and bracing, or an equivalent method, for the protection of life or limb, which shall conform to applicable safety orders. This final submission must be accepted by the City in advance of excavation and must include a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from caving ground during the excavation Work. If such plan varies from the shoring system standards, the plan shall be prepared by a registered civil or structural engineer.

IV.O BIDDER'S EXAMINATION OF SITE AND CONTRACT DOCUMENTS

Each Bidder must carefully examine the Project site and the entirety of the Contract Documents. Upon submission of a Bid, it will be conclusively presumed that the Bidder has thoroughly investigated the Work and is satisfied as to the conditions to be encountered and the character, quality, and quantities of Work to be performed and materials to be furnished. Upon Bid submission, it also shall be conclusively presumed that the Bidder is familiar with and agrees to the requirements of the Contract Documents, including all Addenda. No information derived from an inspection of records or investigation will in any way relieve the Contractor from its obligations under the Contract Documents nor entitle the Contractor to any additional compensation. The Contractor shall not make any claim against the City based upon ignorance or misunderstanding of any condition of the Project site or of the requirements set forth in the Contract Documents. No claim for additional compensation will be allowed which is based on a lack of knowledge of the above items. Bidders assume all risks in connection with performance of the Work in accordance with the Contract Documents, regardless of actual conditions encountered, and waive and release the City with respect to any and all claims and liabilities in connection therewith, to the extent permitted by law.

IV.P TRADE NAMES OR EQUALS

Requests to substitute an equivalent item for a brand or trade name item must be made by written request submitted no later than the date specified in Section 4-6 of the General Provisions. Requests received after this time shall not be considered. Requests shall clearly describe the product for which approval is requested, including all data necessary to demonstrate acceptability

V. Submission Instructions & Questions

V.A Inquiries

If prior to the date fixed for submission of bids, a prospective Company discovers any ambiguity, conflict, discrepancy, omission or other errors in this bid package or any of its appendices or exhibits, the Company shall immediately notify the City of such error in writing and request modification or clarification of the document. Modifications shall be made by written Addenda to the bid.

If a Company fails to notify the City, prior to the date fixed for submissions of bids, of an error in the bid package known to the Company, or an error that reasonably should have been known to the Company, the Company shall submit its bid at its own risk, and if the Company is awarded a Contract, it shall not be entitled to additional compensation or time by reason of the error or its later correction.

All requests for clarifications, changes, exceptions, deviations to the terms and conditions set forth in this bid package must be submitted via the City's electronic bidding website project "Q&A Tab" on the Banning Vendor Portal: https://procurement.opengov.com/portal/banning-ca. The Final day for receipt of questions from bidders shall be on or before the date indicated in the schedule of events. To ensure fairness and avoid misunderstandings, all communications must be in electronic format and submitted via the City's electronic bidding website. Any verbal communications will not be considered or responded to. All questions received by the due date will be logged and reviewed and if required, a response will be provided via an addendum to the bid package that will be posted on the City's website. Any communications, whether written or verbal, with any City Councilmember or City staff with regards to project details and scope prior to award of a contract by City Council is strictly prohibited and the bidder shall be disqualified from consideration.

For technical assistance using the City's electronic bidding website, please contact Barbara Mason, Purchasing Manager at 951-922-3121.

V.B Pricing Submission

Bid line items must be filled out electronically, and submitted electronically on the City's electronic bidding website. Vendors must fill out and submit pricing before the deadline. All bid submittals shall be for the specific items requested only, no substitutes.

Bids shall be submitted for NEW (not used, nor refurbished) items only. Bids that do not meet these requirements and the requirements in the "Scope of Work" section, will NOT be accepted, and will result in the company(s) being deemed non-responsive.

V.C Bid Submission Requirements

The Final day for submission of bids shall be on or before the due date indicated in the schedule of events section.

Companies shall register on the City's Vendor Portal, https://procurement.opengov.com/portal/banning-ca https://procurement.opengov.com/portal/banning-ca. Once registered, Companies must download the IFB by clicking "Download Documents" while logged in under their own name and identification number to appear on the Planholders List as a "Prospective Bidder." Companies that fail to download the IFB will not appear on the Current Prospective Bidders List and their bid responses will be considered non-responsive. If a Company is unable to register or download the IFB from the bidding website, a representative may contact OpenGov.

All bids and supplementary documents must be uploaded using the City's bidding website prior to event date and time as instructed in this solicitation. Once the file(s) has been uploaded and the Submission Status shows as "Submitted" the submission is complete. At that point respondents will receive an email confirmation from the bidding website.

The City reserves the right to reject any and all bids and to waive information and minor irregularities in any bid received.

Acceptance of Terms and Conditions - Submission of a bid pursuant to this IFB shall constitute acknowledgment and acceptance of all terms and conditions hereinafter set forth in this IFB.

The time and date are fixed, and extensions will not be granted unless specifically stated by the City in an addendum to this IFB. Bids not received before the bid event time will not be accepted.

V.D Addenda

Addenda alerts issued by the City are sent out electronically through the electronic bidding system via email to all Prospective Bidders on the list for this IFB. All addenda, if any, shall be acknowledged by the bidder electronically via the electronic bidding website as part of the bid response before the deadline. Failure to acknowledge an addendum, unless the requirement to acknowledge has been waived, will immediately cause the bidder's bid response to be deemed non-responsive.

V.E COMPETENCY OF BIDDERS

In evaluating Bidder responsibility, consideration will be given not only to the financial standing, but also to the general competency of the Bidder for the performance of the Project. Each Bidder shall set forth in the designated area of the Bid form a statement of its experience. No Contract will be executed with a Bidder that is not licensed and registered with the DIR in accordance with State law, and with any applicable specific licensing requirements specified in these Contract Documents. These licensing and registration requirements for Contractors shall also apply to all Subcontractors.

V.F WITHDRAWAL OF BID

A Bid may be withdrawn by a Prospective Bidder in the Electronic Bidding System before the Bid submission deadline. Bids must remain valid and shall not be subject to withdrawal for ninety (90) Days after the Bid opening date.

V.G BIDDER'S SECURITY

Each Bid shall be accompanied by cash, a certified or cashier's check payable to the City, or a satisfactory Bid Bond in favor of the City executed by the Bidder as principal and an admitted surety insurer as Surety, in an amount not less than ten percent (10%) of the amount set forth in the Bid. Personal or company checks are not acceptable. The cash, check or Bid Bond shall be given as a guarantee that, if selected, the Bidder will execute the Contract in conformity with the Contract Documents, and furnish the specified Bonds. No Bid Bond will be accepted unless it conforms substantially to the form provided in these Contract Documents.

If using a cash deposit, cashier's check, certified check, it shall be delivered in original hard copy form, timestamped and received by the Purchasing Division ***BEFORE*** *the bid event time. In addition to scanning and uploading a copy with your bid.*

If using a Bidder's Bond, it shall be ***fully executed*** *(*dated, all signatures must be notarized, and evidence of the authority of any person signing as attorney-in-fact must be attached*) and submitted electronically via the City's Electronic Bidding System with the remainder of the required bid documents* ***BEFORE*** *the bid event time. Bidder's may be deemed non-responsive for submitting a non-fully executed Bidder's Bond. In addition, mail or drop off an original hard copy of your bid bond to the Purchasing Department.*

Upon Contract award, the Contractor shall provide faithful performance and payment Bonds, each in a sum equal to the Contract Price. All Bonds must be issued by a California admitted Surety insurer using the forms set forth in the Contract Documents, or in any other form approved by the City Attorney.

V.H REGISTRATION WITH THE DEPARTMENT OF INDUSTRIAL RELATIONS

In accordance with Labor Code Sections 1725.5 and 1771.1, no contractor or subcontractor shall be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, unless currently registered and qualified to perform public work pursuant to Section 1725.5 [with limited exceptions for bid purposes only under Labor Code Section 1771.1(a)].

V.I PREVAILING WAGES

In accordance with Labor Code Section 1770 *et seq*., the Project is a "public work." The selected Bidder (Contractor) and any Subcontractors shall pay wages in accordance with the determination of the Director of the Department of Industrial Relations ("DIR") regarding the

prevailing rate of per diem wages. Copies of those rates are on file with the Director of Public Works and are available to any interested party upon request. The Contractor shall post a copy of the DIR's determination of the prevailing rate of per diem wages at each job site. This Project is subject to compliance monitoring and enforcement by the DIR.

V.J BONDS

Each Bid must be accompanied by a cash deposit, cashier's check, certified check or Bidder's Bond issued by a Surety insurer, made payable to the City and in an amount not less than ten percent (10%) of the total Bid submitted. Personal or company checks are not acceptable. Upon Contract award, the Contractor shall provide faithful performance and payment Bonds, each in a sum equal to the Contract Price. All Bonds must be issued by a California admitted Surety insurer using the forms set forth in the Contract Documents, or in any other form approved by the City Attorney. Failure to enter into the Contract with the City, including the submission of all required Bonds and insurance coverages, within fifteen (15) Days after the date of the mailing of written notice of contract award to the Bidder, shall subject the Bid security to forfeiture to the extent provided by law.

VI. Pricing Proposal

BID SHEET - M-12A WELL SITE EQUIPPING AND IMPROVEMENTS

In compliance with the Notice Inviting Bids, the undersigned hereby agrees to execute the Contract to furnish all labor, materials, equipment and supplies for the Project in accordance with the Contract Documents to the satisfaction and under the direction of the City, utilizing the following Bid Schedule. Note: Items may be adjusted or deleted. Therefore, regardless of total actual volume (percentage) compared to estimated quantities, the unit prices submitted electronically by the Bidder shall be applied to the final quantity when payment is calculated for these items. No adjustment in the unit prices will be allowed. The City reserves the right to not use any of the estimated quantities; and if this right is exercised, the Contractor will not be entitled to any additional compensation. Cost of all export of material shall be included in the above unit costs; no additional compensation will be granted for such expenses.

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total
1	Mobilization and Demobilization - See Section 01025 Measurement and Payment, 1.03, C for details.	1	Lump Sum		
2	Demolition - - See Section 01025 Measurement and Payment, 1.03, D for details.	1	Lump Sum		
3	Site Grading and Asphalt Concrete - See Section 01025 Measurement and Payment, 1.03, E for details.	1	Lump Sum		
4	Well Building Construction - See Section 01025 Measurement and Payment, 1.03, F for details.	1	Lump Sum		
5	Electrical and Instrumental Equipment for New Well Pump - See Section 01025 Measurement and Payment, 1.03, G for details.	1	Lump Sum		
6	Well Pumps, Piping and Appurtenances - See Section 01025 Measurement and Payment, 1.03, H for details.	1	Lump Sum		
7	Well Testing and Start-Up - See Section 01025 Measurement and Payment, 1.03, I for details.	1	Lump Sum		

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total
8	All Other Work - See Section 01025 Measurement and Payment, 1.03, J for details.	1	Lump Sum		
9	Furnish and Deliver Motor Control Center 'MCC' as shown on drawing E-08 and Specifications.	1	Lump Sum		
10	Furnish and Deliver the Main Service Switchboard 'MSB' as shown on drawing E-08 and Specifications.	1	Lump Sum		
TOTAL					

VII. Vendor Questionnaire

VII.A Authorized Person(s)*

Please provide the following information for each person(s) authorized to submit a response on behalf of your organization:

Name
Title
Phone Number
Email Address

*Response required

VII.B Type of Business*

☐ C Corporation
☐ S Corporation
☐ Limited Liability C Corporation
☐ Partnership
☐ Limited Liability Partnership
☐ Sole Proprietor/Individual
☐ Other
*Response required

VII.C Other - Type of Entity

Please provide the entity type.

VII.D Type your Legal Company Name Here*

State your Company's Name Here. This will be verified against the California Secretary of State's Website.

*Response required

VII.E Vendor Forms

Please download the below documents, complete, and upload.

- New_Vendor_Packet.pdf

VII.F EX PARTE COMMUNICATIONS CERTIFICATION*

I certify that Bidder and Bidder's representatives have not had any communication with a City Councilmember concerning this IFB at any time after the date and time that this IFB was publicly advertised.

☐ Yes
☐ No
*Response required

VII.G EX PARTE EX PARTE COMMUNICATIONS CERTIFICATION CONTINUED*

If stated "Yes" above, please explain the circumstances in the following space, or state "None."

*Response required

VII.H DEBARRED, SUSPENDED, DISQUALIFICATIONS QUESTIONNAIRE*

Has the Company, any officer of the Company, or any employee of the Company who has proprietary interest in the Company, ever been debarred, suspended, disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or safety regulation?

☐ Yes
☐ No
*Response required

VII.I DEBARRED, SUSPENDED, DISQUALIFICATIONS QUESTIONNAIRE CONTINUED*

If stated "Yes" above, please explain the circumstances in the following space, or state "None."

*Response required

VII.J DISCLOSURE OF GOVERNMENT POSITIONS*

Each Bidder shall disclose below whether any owner or employee of the firm currently hold positions as elected or appointed officials, directors, officers, or employees of a governmental entity or held such positions in the past twelve months. List below or state "None."

*Response required

VII.K Attachments

If needed, please upload any additional attachments here.

VII.L Certification of Compliance *

Please download the below documents, complete, and upload.

- Certification-Compliance_wi...

*Response required

VII.M CARB Compliance Form*

Please download the below documents, complete, and upload. This is also required for all subs.

- CARB_Compliance_(NEW_01-01-...

*Response required

VII.N Iran Contracting Act of 2010 Compliance Affidavit*

Please download the below documents, complete, and upload.

- Iran_Contracting_Act_of_201...

*Response required

VII.O Provide your Sam.gov Unique Entity ID number.*

Be registered upon proposal submission and provide your Sam.gov Unique Entity ID number. Active Registration Status Required.

Maximum response length: 25 characters

*Response required

VII.P Upload Proof of Good Faith Advertising efforts*

*Response required

VII.Q Rate Sheet & Additive or Deductive Item With Bid*

Upload your rate sheet listing job titles, hourly rates, markup, discounts, and any other cost for any additional work that might be required to complete the project. If a change order is required, the cost will be based off this rate sheet.

*Response required

VII.R Do You Acknowledge & Following The 200 CFR Grant Requirements*

Your company will follow all the required requirements listed in the attachment, "200 CFR GRANTS."

☐ Yes
☐ No
*Response required

VII.S Grant Agreement 4600014457 (Attached)*

I understand & will meet all of the grant requirements stated within this agreement.

☐ Yes
☐ No
*Response required

VIII. Terms & Conditions

VIII.A Award

Bid results can be viewed on-line after the bid closes.

The City reserves the right to reject any and all bids and to waive any informality related thereto.

It is the intention of the City to make a recommendation for award of the bid to the lowest responsive and responsible bidder. The City reserves the right to increase or decrease quantities or to remove items before award to remain within the limitations of the availability of approved funds. The apparent low Bidder will be notified prior to recommendation for award if such adjustments are deemed necessary.

Award may be made for all items or for individual items whichever is in the best interest of the City.

Bidder understands that bid may be made by individual item(s) and agree to abide by the terms and conditions of the bid.

A. Terms contrary to the terms and conditions listed in the bids will render the bid as Non-Responsive.

B. The City may delete any items that it feels would be in the best interest of the City to purchase individually.

The City has adopted a local 5% bid preference for those bidders located within the City limit. This preference may be applied to the total bid price during evaluation of the bid responses.

VIII.B Invoicing

Successful vendor shall invoice as items are delivered.

A. Payment will normally be made within 30 days of receipt of material.

B. Please place the Purchase Order Number on the invoice.

C. Bill To and Ship To the Same address as listed on the purchase order.

VIII.C Termination

The City may cancel this contract if product is of inferior quality, problems are not corrected in a timely manner, and vendor fails to maintain the required inventory. Once a contract is terminated, it is just cause to suspend bidder from bidders list for a minimum of three (3) years.

Failure to comply with the technical specifications of the bid. The City reserves the right to audit the required inventory and cancel the contract if the vendor fails to maintain the inventory required by this bid.

The City may also suspend the manufacturer from bidding if manufacturer does not give full support to this contract.

VIII.D DISQUALIFICATION OF BIDDERS

More than one bid from an individual, a firm or partnership, a corporation or an association under the same or different name will not be considered.

VIII.E REJECTION OF BIDS

Bids may be rejected if they show any alterations of form, additions not called for, conditional or alternative bids uncalled for, incomplete bids, erasures, or irregularities of any kind; however, the City reserves the right to waive irregularities, or informalities.

VIII.F BID PROTEST PROCEDURES

Failure to comply with the rules set forth herein may result in rejection of the protest. Protests based upon restrictive specifications or alleged improprieties in the Bid procedure which are apparent or reasonably should have been discovered prior to receipt of Bids shall be filed in writing with the IFB Facilitator at least 10 calendar days prior to the deadline for receipt of Bids. The protest must clearly specify in writing the grounds and evidence on which the protest is based.

Protests based upon alleged improprieties that are not apparent or which could not reasonably have been discovered prior to submission date of the Bids, such as disputes over the staff recommendation for contract award, shall be submitted in writing to the IFB Facilitator, within forty-eight hours from receipt of the notice from the City advising of staff's recommendation for award of contract. The protest must clearly specify in writing the grounds and evidence on which the protest is based. The IFB Facilitator will respond to the protest in writing at least three days prior to the meeting at which staff's recommendation to the City Council will be considered. Should Bidder decide to appeal the response of the IFB Facilitator, and pursue its protest at the Council meeting, it will notify the IFB Facilitator of its intention at least two days prior to the scheduled meeting.

VIII.G PUBLIC RECORDS

All Bids submitted in response to this IFB become the property of the City and pursuant to the Public Records Act (Gov. Code, § 6250 et seq.) are public records, and as such may be subject to public review at least 10 days before selection.

The Company must notify the City in advance of any proprietary or confidential materials contained in the Bid and provide justification for not making such material public. The City shall have sole discretion to disclose or not disclose such material subject to any protective order that the Company may obtain. Note that under California law, pricing is not a trade secret.

Submission of a Bid shall indicate that, if Bidder requests that the City withhold from disclosure information identified as confidential, and the City complies with the Bidder's request, Bidder shall assume all responsibility for any challenges resulting from the non-disclosure, indemnify and hold harmless the City from and against all damages (including but not limited to attorney's fees that may be awarded to the party requesting the Bidder information), and pay any and all costs and expenses related to the withholding of Bidder information. Bidder shall not make a claim, sue, or maintain any legal action against the City or its directors, officers, employees, or agents concerning the disclosure, or withholding from disclosure, of any Bidder information. If Bidder does not request that the City withhold from disclosure information identified as confidential, the City shall have no obligation to withhold the information from disclosure and may release the information sought without any liability to the City.

The City reserves the right to make use of any information or idea contained in the Bid. All materials, ideas and formats submitted in response to this IFB will become the property of the City upon receipt.

VIII.H CANCELLATION

The City retains the right to cancel this IFB at any time, should it be deemed to be in the best interest of the City. No obligation either expressed or implied exists on the part of the City to make an award based on the submission of any Bids.

VIII.I CONFLICT OF INTEREST

The Bidder warrants and represents that it presently has no interest and agrees that it will not acquire any interest which would present a conflict of interest under California Government Code sections 1090 et seq., or sections 87100 et seq., during the performance of services under any Agreement awarded. The Bidder further covenants that it will not knowingly employ any person having such an interest in the performance of any Agreement awarded. Violation of this provision may result in any Agreement awarded being deemed void and unenforceable.

VIII.J TERMS AND CONDITIONS

By submitting a bid, bidder agrees to adhere to all of the terms and conditions in the Agreement or the Purchase Order Terms and Conditions (sample is located in "Attachments") ***without exceptions***. Failure to adhere to and furnish the applicable requirements listed in the Agreement or the Purchase Order Terms and Conditions within the required time period shall be just cause for the rescission of the award. If the successful Company refuses or fails to adhere to and furnish the applicable requirements, the City may award to the next lowest responsive, and responsible bidder.

VIII.K INSURANCE AND BONDS

The Contractor shall not begin Work until it has given the City evidence of all required insurance coverage (including all additional insured endorsements), a Bond guaranteeing the Contractor's faithful performance of the Contract, and a Bond securing the payment of claims for labor and materials.

VIII.L SIGNATURES

The Bidder shall execute all documents requiring signatures and shall cause to be notarized all documents that indicate such a requirement. Bids submitted as joint ventures must so state and be signed by each joint venturer. The Bidder shall provide evidence satisfactory to the City, such as an authenticated resolution of its board of directors, a certified copy of a certificate of partnership acknowledging the signer to be a general partner, or a power of attorney, indicating the capacity of the person(s) signing the Bid to bind the Bidder to the Bid and any Contract arising therefrom. Alternatively, Bids submitted by corporations must be executed as specified in Corporations Code Section 313, and Bids submitted by partnerships must be executed by all partners comprising the partnership.

VIII.M NO COMPENSATION FOR COSTS INCURRED PRIOR TO CONTRACT EXECUTION

All costs incurred by the selected Bidder prior to Contract award and execution of the Contract by the City shall be at the Bidder's sole risk. City shall have no liability for costs incurred prior to its execution of the Contract.

VIII.N TAXES

Except as may be otherwise specifically provided herein, all sales and/or use taxes assessed by federal, State or local authorities on materials used or furnished by the Contractor in performing the Work shall be paid by the Contractor. The Bidder shall calculate payment for all sales, unemployment, pension and other taxes imposed by federal, State, and local law and shall include these payments in computing the Bid.

VIII.O LISTING SUBCONTRACTORS; SELF-PERFORMANCE

Each Bidder shall submit a list of the proposed Subcontractors on the Project, as required by the Subletting and Subcontracting Fair Practices Act (Public Contract Code Section 4100, *et seq*.). Contractor shall self-perform not less than 50% of the Work, in accordance with Section 3-2 of the Standard Specifications.

VIII.P EXECUTION OF CONTRACT

The selected Bidder shall execute the Contract in the form included in these Contract Documents within fifteen (15) Days from the date of delivery of the Contract Documents to the Bidder. Additionally, the selected Bidder shall also secure all insurance and Bonds as herein specified, and provide copies to the City, within fifteen (15) Days from the date of delivery of the Contract Documents to the Bidder. Failure or refusal to execute the Contract or to conform to any of the stipulated requirements shall be just cause for the annulment of the award and forfeiture of the Bidder's security. In such event, the City may declare the Bidder's security forfeited to the extent permitted by law, and the City may award the Contract to the next lowest responsible Bidder or may reject all bids.

Bid Summary: IFB 24-092, Project 2022-07W, M-12A Well Site Equipping & Improvements

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total
1	Mobilization and Demobilization - See Section 01025 Measurement and Payment, 1.03, C for details.	1	LS	$120,000.00	$120,000.00
2	Demolition - - See Section 01025 Measurement and Payment, 1.03, D for details.	1	LS	$40,500.00	$40,500.00
3	Site Grading and Asphalt Concrete - See Section 01025 Measurement and Payment, 1.03, E for details.	1	LS	$100,000.00	$100,000.00
4	Well Building Construction - See Section 01025 Measurement and Payment, 1.03, F for details.	1	LS	$606,100.00	$606,100.00
5	Electrical and Instrumental Equipment for New Well Pump - See Section 01025 Measurement and Payment, 1.03, G for details.	1	LS	$435,600.00	$435,600.00
6	Well Pumps, Piping and Appurtenances - See Section 01025 Measurement and Payment, 1.03, H for details.	1	LS	$940,300.00	$940,300.00
7	Well Testing and Start-Up - See Section 01025 Measurement and Payment, 1.03, I for details.	1	LS	$30,900.00	$30,900.00
8	All Other Work - See Section 01025 Measurement and Payment, 1.03, J for details.	1	LS	$500.00	$500.00
9	Furnish and Deliver Motor Control Center 'MCC' as shown on drawing E-08 and Specifications.	1	LS	$145,000.00	$145,000.00
10	Furnish and Deliver the Main Service Switchboard 'MSB' as shown on drawing E-08 and Specifications.	1	LS	$22,000.00	$22,000.00
	Total				**$2,440,900.00**

CITY OF BANNING
STAFF REPORT

TO:	**CITY COUNCIL**
FROM:	**Robert Fisher, Acting City Manager**
PREPARED BY:	**Shah Nawaz, Deputy Water/Wastewater Director** **Art Vela, Director of Public Works**
MEETING DATE:	**February 25, 2025**
SUBJECT:	**Consideration of Resolution 2025-30, Awarding a Progressive Design-Build Agreement for Phase 1 to AECOM Lyles JV for Project No. 2022-01W "Wastewater Treatment Plant and Recycled Water Upgrades" in the Amount of $3,998,627, and Approving a 10% Contingency for a Total Project Budget of $4,398,490**

RECOMMENDATION:

Adopt Resolution 2025-30.

BACKGROUND:

Wastewater Treatment Plant

The City of Banning Wastewater Treatment Plant (WWTP), also known as the Water Reclamation Facility, provides for the collection, treatment, and disposal of municipal sewage. The WWTP dates back to 1925 and began to see significant additions beginning in 1950's and the last major renovation occurring in the early 2000's. Currently, the WWTP treatment process consists of preliminary, primary, secondary, disinfection (currently not in use), and sludge disposal.

The WWTP has a design treatment capacity of 3.6 million gallons per day (MGD) and typical average daily discharges range from 2.0 MGD to 2.1 MGD into 10 unlined evaporation/percolation ponds. The treated effluent then percolates into the groundwater of the San Gorgonio Hydraulic Unit. Groundwater from this basin is used for municipal and industrial applications.

In 2007, the City contracted Parsons to evaluate treatment technologies for a 1.5 MGD water reclamation facility (WRF) for the production of recycled water. Treatment alternatives investigated included oxidation ditch (OD), conventional activated sludge (CAS), and membrane bioreactor (MBR). The purpose of the evaluation was to determine the best option to comply with future Title 22 requirements for the beneficial reuse of recycled water. Parsons determined an MBR system was the best treatment option and completed a 90% design package of the WRF. Unfortunately, the project never reached 100% design and was terminated for various reasons.

2016 Regional Water Quality Control Board Order

On June 30, 2016, the California Regional Water Quality Control Board, Colorado River Basin Region (RWQCB) adopted Board Order R7-2016-0015 (Board Order), which describes the Waste Discharge Requirements (WDRs) and other terms and conditions of operation for the City's WWTP. The Board Order requires the WWTP to remove constituents that present the greatest risk to groundwater quality such as nitrogen, coliforms, and total dissolved solids (TDS).

According to the United States Environmental Protection Agency (US EPA), the maximum contaminant level (MCL) for Nitrate as Nitrogen (TN) is 10 mg/L. Currently, the average TN concentration in the WWTP's effluent is 29 mg-N/L, well above the future TN limit of 10 mg-N/L specified in the Board Order. As a result, the Board Order required the City to conduct a nitrogen removal analysis and to summarize the findings in a technical report that includes a tentative work plan and time schedule for the installation and implementation of nitrogen removal treatment alternatives. The final technical report (Nitrogen Removal Feasibility Study), attached hereto, was completed and submitted to the RWQCB by the due date of June 30, 2020.

The City has had plans for the development of a Title 22 compliant recycled water source dating back to the early 2000's and for this reason, the scope of the Nitrogen Removal Feasibility Study was expanded beyond complying with TN limits and included discharge requirements related to the use of recycled water.

Additionally, the Board Order requires that the City submit a plan for capacity improvements to the RWQCB once the WWTP reaches 80% of its design capacity, or 2.88 MGD, which is fast approaching due to increased development activity within the City.

2018 Integrated Master Plan

In 2016 the Public Works Department set out to develop new master plans for the City's water, wastewater and future recycled water systems, which were previously updated in 2006. The final document resulted in a combined plan titled the Integrated Master Plan (IMP). The objective of the IMP was to develop capital improvement plans that would guide the City in the planning and development of water, wastewater and recycled water system facilities to meet system performance for existing customers as well as to support anticipated demands through the City's buildout.

The IMP projected that the City would reach 80% capacity by 2025 (although could be later if development slows down) and have a buildout wastewater flow of 6.35 MGD.

2020 UWMP

On June 8, 2021 the City Council approved Resolution 2021-50, adopting the 2020 Urban Water Management Plan (UWMP). The UWMP is a planning document with a 20-year planning horizon that assess the water supply and water demand for the City. As part of the assessment all current water supplies and in the future water supplies are include as part of the City's water supply portfolio, which includes the use of "recycled water" to supplement potable demands (i.e. irrigation demands) and for groundwater recharge.

Owner Advisor

On December 13, 2022, City Council adopted Resolution 2022-14UA, awarding a Professional Services Agreement to N2W Engineering ("N2W") to provide Owner Advisor ("OA") services for the Wastewater Treatment Plant Improvement project.

N2W has assisted the City in further review of available technologies and confirmed through a Feasibility Report that an MBR system would be the best solution for the City. Additionally, they prepared two grant applications for the City: (1) Water Recycling Funding Program Planning grant application which led to an award of $300,000 and (2) WaterSMART: Title XVI WIIN Act Water Reclamation and Reuse Program for which the City received a Notice of Funding Opportunity No. R23AS00464 (attached) in the amount of $16,194,576.

N2W also assisted in the preparation of a scope of work for a Request for Qualifications that led to the shortlisting of 3 design-build entities that prepared and submitted proposals for Phase 1 (Design) of the WWTP Upgrade Project.

Selection of Progressive Design Build Entity

On March 22, 2024, the City issued a Request for qualification (RFQ) seeking prospective Progressive Desing-Build (PDB) entities for the project. Statement of Qualifications (SOQs) were received from PDB entities on May 3, 2024. The City evaluated responsive SOQs in accordance with the RFQ; shortly thereafter, the City shortlisted the following three (3) PDB entities:

1. AECOM Lyles JV
2. Innovative Construction Solutions
3. PERC Water Corporation

Only these three (3) PDB entities were eligible to receive the Request for Proposal (RFP) which was issued on August 9, 2024. These PDB entities were requested to advance the design and provide detailed input as to the design and construction of the Project, including benefits to the Project's reliability, ease and extent of upgrades and expansion and interconnection, and sustainability. Award of the Progressive Design-Build Contract was made utilizing a best value selection process and consisted of an evaluation of multiple factors as listed below in this RFP:

- Project Team, Experience, and Approach (25 Points)
- Technical Approach (25 Points)
- Construction & Startup Process (20 Points)
- Phase 1 – Cost and Fee Schedule (10 Points)
- Interview (20 Points)

An evaluation committee consisting of two City Employees and two Owner's Advisors was assembled to score each proposal based on the evaluation factors listed above. The resulting evaluation scores are as follows:

PDB Entity	**Score (out of 100)**
AECOM Lyles JV	82.44
Innovative Construction Solutions	81.24
PERC Water Corporation	77.75

As a result, staff recommends awarding the Progressive Design-Build Agreement ("Agreement") for Phase 1 of the Wastewater Treatment Plant and Recycled Water Upgrades project to AECOM Lyles JV in the amount of $3,998,627.

If awarded, staff anticipates the Phase 1 (Design) scope of work to commence in early March 2025 through April 2026.

Phase 1 Services
This Phase includes all the planning, engineering, and permitting to prepare a complete design-to-develop a Guaranteed Maximum Price (GMP) and a construction schedule for Phase 2.

It shall be noted that at the completion of Phase 1 scope of work and upon agreement on the GMP by the City, AECOM Lyles JV will proceed with Phase 2 (Construction) for equipment procurement, construction, engineering design support during construction, construction management, commissioning and acceptance testing. Following the completion of Phase 1, the current estimated duration for Phase 2 is approximately another 2 years.

JUSTIFICATION:

The Wastewater Treatment Plant and Recycled Water Upgrades project includes the design and construction of major complex treatment technologies that will allow the City to comply with impending wastewater discharge requirements and to produce recycled water. A PDB approach is a collaborative delivery method that involves the design-builder throughout the design and construction process resulting in a project that will meet the City's needs for the best value.

AECOM Lyles JV was ranked the highest following the RFP.

FISCAL IMPACT:

The recommended Progressive Design-Build Agreement for Phase 1 of the Wastewater Treatment Plant and Recycled Water Upgrades project to AECOM Lyles JV is in the amount of $3,998,627. Staff requests a 10% contingency in the amount of $399,862 for any unforeseen changes in scope of work or conditions. The total project budget for Phase 1, including the Agreement and contingency, is for an amount of $4,398,490.

The current adopted budget for Fiscal Year 2024/2025 includes the required funding for the Agreement, which will be funded as follows:

- Account No. 681 -8000- 454.95-12 : $1,000,000
- Account No. 682-8050-454.95-10: $3,398,490

ALTERNATIVES:

Do not approve Resolution 2025-30 and provide alternative direction to staff.

BUDGETED?:

Yes

CONTRACT/AGREEMENT:

Yes

ATTACHMENTS:

1. Resolution 2025-30, WWTP Design Build award.docx
2. Banning_DB_545_Agreement.pdf
3. Resolution No. 2021-050 (For Reference Purposes Only).pdf
4. Resolution No. 2022-14UA (For Refrence Purposes Only).pdf
5. RWQCB Order R7-2016-0015.pdf
6. Banning Nitrogen Removal Feasibility Study FINAL.pdf
7. BOR Notice of Funding Opportunity No. R23AS00464.pdf
8. AECOM-Lyles Proposal for RFP-24-074.pdf
9. AECOM-Lyles Pricing Proposal - Supporting Information.pdf
10. Banning DB 535 General Conditions.pdf

RESOLUTION 2025-30

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BANNING, CALIFORNIA, AWARDING A PROGRESSIVE DESIGN-BUILD AGREEMENT FOR PHASE 1 TO AECOM LYLES JV FOR PROJECT NO. 2022-01W "WASTEWATER TREATMENT PLANT AND RECYCLED WATER UPGRADES" IN THE AMOUNT OF $3,998,627 AND APPROVING A 10% CONTENGENCY FOR A TOTAL PROJECT BUDGET OF $4,398,490

WHEREAS, the City of Banning owns and operates a wastewater treatment plant WWTP) also knows as the Water Reclamation Facility which includes a current treatment process consisting of preliminary, primary, secondary, disinfection and sludge disposal; and

WHEREAS, the WWTP has a design treatment capacity of 3.6 million gallons per day (MGD) and typical average daily discharges ranging from 2.0 MGD to 2.1 MGD into 10 unlined evaporation/percolation ponds; and

WHEREAS, the City has recognized a need to construct major improvements to the WWTP in order to comply with California Regional Water Quality Control Board, Colorado River Basin Region (RWQCB) Board Order R7-2016-0015; to increase treatment capacity to support increasing demands; and to enhance the City's water supply portfolio by developing a recycled water supply; and

WHEREAS, the City Council approved Resolution 2021-50, adopting the 2020 Urban Water Management Plan (UWMP). The UWMP is a planning document with a 20-year planning horizon that assess the water supply and water demand for the City. As part of the assessment all current water supplies and in the future water supplies are include as part of the City's water supply portfolio, which includes the use of "recycled water" to supplement potable demands (i.e. irrigation demands) and for groundwater recharge; and

WHEREAS, on August 9, 2024 the City released a request for proposals (RFP) and received three (3) proposals from pre-qualified Progressive Design-Build Firms. Based on the evaluation and scoring criteria, and the results of an interview conducted by City staff, it was determined that AECOM Lyles JV scored the highest and has the qualifications and experience to successfully complete the scope of services as the Progressive Design-Builder on the Wastewater Treatment Plant and Recycled Water Upgrades project; and

WHEREAS, staff recommends awarding the Progressive Design-Build Agreement for Phase 1 of the Wastewater Treatment Plant and Recycled Water Upgrades project to AECOM Lyles JV in the amount of $3,998,627; and

WHEREAS, the total project budget for Phase 1, including the Agreement and 10% contingency, is for an amount of $4,398,490; and

WHEREAS, the current adopted budget for Fiscal Year 2024/2025 includes a budgeted amount of $3,000,000 in Account No. 681-8000-454.95-12, and another $3,000,000 in Account No. 682-8050-454.95-10. The 10% contingency will be funded from Account 682.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Banning as follows:

SECTION 1. The City Council approves the Progressive Design-Build Agreement for Phase 1 with AECOM Lyles JV for Project No. 2022-01W "Wastewater Treatment Plant and Recycled Water Upgrades" in the Amount of $3,998,627 and Approving a 10% Contingency for a Total Project Budget of $4,398,490.

SECTION 2. The City Council authorizes the City Manager to make non-substantive changes to the Progressive Design-Build Agreement and to execute the Progressive Design-Build Agreement with AECOM Lyles JV on behalf of the City Council.

SECTION 3. The City Council authorizes the City Manager, or designee, to make necessary budget adjustments, appropriations, and transfers related to this resolution and to approve change orders within the 10% contingency.

SECTION 4. The City Clerk shall certify to the adoption of this resolution and shall cause a certified resolution to be filed in the book of original resolutions.

PASSED, APPROVED AND ADOPTED this 25th day of February, 2025.

Sheri Flynn, Mayor
City of Banning

ATTEST:

Caroline Patton, Administrative City Clerk
City of Banning

APPROVED AS TO FORM:

John Pinkney, City Attorney
Slovak, Baron, Empey, Murphy & Pinkney, LLP

CERTIFICATION:

I, Caroline Patton, Administrative City Clerk of the City of Banning, California, do hereby certify that the foregoing Resolution 2025-30, was duly adopted by the City Council of the City of Banning, California, at a regular meeting thereof held on the 25th day of February, 2025 by the following vote, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

Caroline Patton, Administrative City Clerk
City of Banning, California

EXHIBIT A

Progressive Design-Build Agreement for Phase 1 to AECOM Lyles JV for “Wastewater Treatment Plant and Recycled Water Upgrades” Project

Progressive Design-Build Agreement for Water and Wastewater Projects

This Progressive Design-Build Agreement has been developed in conjunction with and endorsed by the Water Collaborative Delivery Association.

Water Collaborative Delivery Association
Better Projects, Together.

Document No. 545
Second Edition, 2024

© Design-Build Institute of America
Washington, D.C.

CITY OF BANNING

This **AGREEMENT** is made as of the _____ day of _____ _____ in the year of 20_____, by and between the following parties, for services in connection with the Project identified below:

OWNER:
Arturo Vela
Public Works Director
City of Banning
99 E. Ramsey Street
Banning, CA 92220

DESIGN-BUILDER:
AECOM & WML VIII, A Joint Venture
26501 Madison Avenue
Murrieta, CA 92562

PROJECT:
Design and Construction of the City of Banning Wastewater Treatment Plant and Recycled Water Upgrades Project
2242 Charles Street
Banning, CA 92220

In consideration of the mutual covenants and obligations contained herein, Owner and Design-Builder agree as set forth herein.

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Article 1

Design-Builder's Services and Responsibilities

1.1 General Services.

1.1.1 Design-Builder has demonstrated its competence and professional qualifications necessary for the satisfactory performance of the services designated herein by virtue of its experience, training, education and expertise.

1.1.2 Owner has provided Design-Builder with Project background documents, including but not limited to, the Design Criteria Report and Preliminary Design Drawings, (Exhibit A) depicting the Owner's program requirements and objectives for the Project, collectively referred to as the Basis of Design Documents. Owner's Basis of Design Documents may include conceptual documents, design specifications, design performance specifications, and other technical materials and requirements prepared by or for Owner.

1.1.3 Prior to the execution of construction Contract(s), Design-Builder has advanced the Owners' Design Criteria Report and Preliminary Drawings, and has provided additional, different or innovative approaches to the design and construction of the Project, upon which the Design-Builder has provided fixed Design-Build price(s).

1.1.4 Design-Builder shall have the sole and exclusive responsibility and liability for the design, construction and performance of the Project based on the scope and terms of the Agreement and, notwithstanding the information contained in the Owner's Project background documents, and to ensure compliance with all applicable Governmental Rules, Regulations, and Requirements.

1.1.5 All professional services work performed in connection with this Contract shall be performed in a manner consistent with the standard of care ordinarily exercised by those who provide architectural, engineering, planning and design services for projects of similar size, scope and complexity for water treatment facilities in the United States, and consistent with the standard of care ordinarily exercised by those who specialize in such specialty services. In addition, all work is to be performed within the standard of care for California architects, engineers, planners and designers. Neither review nor approval of Design-Builder's work by Owner, any employee, any agent/consultant of Owner, or any other person shall in any way relieve Design-Builder from its duty to utilize this standard of care in the performance of its duties. Design-Builder agrees to provide its professional services in a manner that is in the Owner's economic and governmental best interests, consistent with this standard of care and the Design-Builder's professional obligations.

1.1.6 In compliance with Government Code section 7550, the Design Builder shall include a separate section in the proposal prepared pursuant to this Agreement,

which contains a list of all the subcontractors and dollar amounts of all contracts and subcontracts required for the preparation of work described in this Agreement.

1.1.7 Cooperation. The Design-Builder shall assist the Owner's staff and reasonably cooperate with the Owner and all other designated representatives during the design and construction of the Project. The Owner shall cooperate and cause its agencies to promptly review all documentation and submittals.

1.1.8 Management. The Design-Builder shall implement suitable management systems and work plans for the Project relative to Project safety, quality assurance and managing and controlling the Work.

1.1.9 Reports. The Design-Builder shall prepare and submit to the Owner, during both the Design Phase and the Construction Phase, monthly progress reports on the Work accomplished during the prior monthly period, which reports shall be prepared in a manner and in a format reasonably acceptable to the Owner and Design-Builder, and mutually agreed by both parties. Such reports shall be furnished at the time of submission of each monthly Application for Payment or Invoice. As part of such report, the Design-Builder shall provide an updated Schedule, including Critical Path Method (CPM) illustrating the progress which has been made, by reference to the CPM, and specifically whether the Work is on schedule or behind schedule and actions being taken to correct Schedule slippage. The monthly report shall also set forth the Design-Builder's projected progress for the forthcoming month.

1.1.10 Close Out. The Design-Builder shall comply with all Owner requirements for the turnover of the facilities, including final regulatory submittals, submittal of close-out documents.

1.2 Phased Services.

1.2.1 Phase 1 Services (Design and Preconstruction)

1.2.1.1 Phase 1 Services. Design-Builder shall perform the services of design, pricing and other services for the Project based on Owner's Design Criteria and Preliminary Drawings, as may be revised, submitted and accepted by Owner. Design-Builder shall perform such services to the level of completion required for Design-Builder to establish the Guaranteed Maximum Price, upon which acceptance by the Owner, the Design-Builder and Owner will establish the Contract Price for Phase 2, as set forth in Section 1.3 below. The Contract Price for Phase 2 shall be developed during Phase 1 on an “open-book” basis. Design-Builder’s Compensation for Phase 1 Services is set forth in Article 6 herein. The level of completion required for Phase 1 Services is defined in Exhibit B, Scope of Work (either as a percentage of design completion or by defined deliverables), upon which the GMP(s) are based. Design-Builder shall perform such services to the level of completion required for Design-Builder to complete the Project.

1.2.1.2 The Contract Price for Phase 2 is to be documented through the Contract Price Amendment(s) for Phase 2, as set forth in Section 1.3 below. Design work following the establishment of the Contract Price Amendment(s) shall also be considered Phase 1 work. Further, if the Design-Builder's Guaranteed Price Proposal is rejected in accordance with Section 1.3.2.3 (iii) below, any design work required to complete the design shall be considered Phase 1 work. Design-Builder's compensation for Phase 1 services is set forth in Section 6 herein.

1.2.1.3 Owner reserves the right to release multiple amendments for various early work packages associated with Phase 2 work. Design-Builder shall provide all guaranteed price proposals required to support the amendments to this agreement.

1.2.1.4 Design-Builder shall review and prepare a written evaluation of Owner -provided Project Criteria, including recommendations to the Owner for different and innovative approaches to the design and construction of the Project. The parties shall meet to discuss Design-Builder's written evaluation of The Owner's Project Criteria and agree upon what revisions, if any, should be made to such criteria. The work involved in progressing from draft Owner Project's Criteria to final Owner's Project Criteria shall be compensated as part of the Design-Builder's Phase 1 services.

1.2.1.5 Basis of Design. The Design-Builder shall provide Basis of Design Report (BODR) based on the mutually agreed-upon project schedule, and comprehensive budget for the Cost of the Work prepared by the Design-Builder. The documents shall establish the conceptual design of the Project illustrating the scale and relationship of the Project components. The BODR may include study models, perspective sketches, electronic modeling or combinations of these media. Preliminary selections of major project's systems and construction materials shall be noted on the drawings or described in writing. These documents shall be presented to the Owner for review and approval.

1.2.1.6 Design Development Documents. The Design-Builder shall provide design development documents based on the approved BODR and updated comprehensive budget for the Cost of the Work. The design development documents shall illustrate and describe the refinement of the design of the Project, establishing the scope, relationships, forms, size and appearance of the Project by means of plans, sections and elevations, typical construction details, and equipment layouts. The design development documents shall include specifications that identify major material and systems and establish in general their quality levels. These documents shall be presented to the Owner for review and approval.

1.2.1.7 Construction Documents. The Design-Builder shall provide Construction Documents based on the approved design development documents and updated comprehensive budget for the Cost of the Work.

The Construction Documents shall set forth in detail the requirements for construction of the Project. The Construction Documents shall include drawings and specifications that establish in detail the quality levels of materials and systems required for the Project. These documents shall be presented to the Owner for review and approval.

1.2.1.8 Review of Construction Documents and Field Conditions. Notwithstanding review and approval by the Owner, the Design-Builder shall be responsible for all errors, inconsistencies, or omissions in the Construction Documents. The Design-Builder shall take field measurements and verify field conditions and shall carefully compare such field conditions and conditions and other information known to the Design-Builder with the Construction Documents before commencing activities. If necessary to meet the schedule for this project, or if requested by the Owner, the Design-Builder may issue multiple Construction Document packages to permit phased construction of the Project. The Owner will facilitate this process by reviewing such packages on a timely basis. Such review and approval by the Owner shall not relieve the Design-Builder of its obligation to coordinate all aspects of the work.

1.2.2 Phase 2 Services. Design-Builder's Phase 2 services shall consist of the procurement of all materials and equipment for the Project, the performance of construction services for the Project, the start-up, testing and commissioning of the Project, and the provision of warranty services, all as further described in the Contract Price Amendment. Upon receipt of Design-Builder's proposed Contract Price for Phase 2, Owner may proceed as set forth in Section 1.3.

1.3 Guaranteed Price Proposal. Upon completion of the Phase 1 Services or when design work has progressed to an appropriate, mutually agreed stage, Design-Builder shall submit to Owner the Guaranteed Price Proposal (the "Proposal") or a defined portion of a Guaranteed Price (GP) for the construction of the Project upon which the parties may agree, for the construction for the Project for the Contract Price, which may be based on Lump Sum or Design-Builder's Fee and Cost of the Work with a Guaranteed Maximum Price (GMP).

1.3.1 The Proposal shall include the following unless the parties mutually agree otherwise:

1.3.1.1 The Contract Price that may be based on a Lump Sum or Design-Builder's Fee and Cost of the Work, with a GMP (which can be developed starting at the 60% design level), which shall be the sum of:

i Design-Builder's Fee as defined in Section 6.4 hereof;

ii The estimated Cost of the Work as defined in Section 6.7 hereof, inclusive of any Design-Builder's Contingency as defined in Section 6.8 hereof; and

iii If applicable, any prices established under Section 6.8 hereof;

1.3.1.2 Details associated with Lump Sum implementation of the contract. Such details should include a Lump Sum discount (if applicable), a listing of project milestones, details regarding how invoicing for Work will correspond to those project milestones, and other such details as necessary for Lump Sum implementation of the Guaranteed Price.

1.3.1.3 The Design-Builder developed Construction Documents will serve as the basis for the Guaranteed Price Proposal.

1.3.1.4 A list of the assumptions and clarifications made by Design-Builder in the preparation of the Guaranteed Price Proposal, which list is intended to supplement the information contained in the drawings and specifications.

1.3.1.5 The Scheduled Substantial Completion Date upon which the Proposal is based, to the extent said date has not already been established under Section 5.2.1 hereof, and a schedule upon which the Scheduled Substantial Completion Date is based and a Project Schedule for the Work;

1.3.1.6 Any applicable dates for Substantial Completion upon which the proposed Guaranteed Price is based.

1.3.1.7 A list of all Construction Documents used as a basis for the Guaranteed Price Proposal.

1.3.1.8 If applicable, a list of Allowance Items, Allowance Values, and a statement of their basis;

1.3.1.9 If applicable, a schedule of alternate prices;

1.3.1.10 If applicable, a schedule of unit prices;

1.3.1.11 If applicable, a statement of Additional Services which may be performed but which are not included in the Proposal, and which, if performed, shall be the basis for an increase in the Contract Price and/or Contract Time(s);

1.3.1.12 If applicable, a Savings provision;

1.3.1.13 If applicable, Performance Incentives;

1.3.1.14 Duration at which the Guaranteed Price Proposal is valid (minimum – 60 calendar days).

1.3.1.15 The time limit for acceptance of the Proposal (minimum – 60 calendar days); and

1.3.1.16 An Owner's permit list, a list detailing the permits and governmental approvals that Owner will bear responsibility to obtain.

1.3.2 Review and Adjustment to Proposal.

1.3.2.1 After submission of the Proposal, Design-Builder and Owner shall meet to discuss and review the Proposal. If Owner has any comments regarding the Proposal, or finds any inconsistencies or inaccuracies in the information presented, it shall promptly give written notice to Design-Builder of such comments or findings. If appropriate, Design-Builder shall, upon receipt of Owner's notice, make appropriate adjustments to the Proposal.

1.3.2.2 Acceptance of Proposal. If Owner accepts the Proposal, as may be amended by Design-Builder, the Contract Price and its basis shall be set forth in an amendment to this Agreement, when mutually agreed between the parties (Contract Price Amendment). Once the parties have agreed upon the Contract Price and Owner has issued a Notice to Proceed with Phase 2, Design-Builder shall perform the Phase 2 Services, all as further described in the Contract Price Amendment, as it may be revised.

1.3.2.3 Failure to Accept the Proposal. If Owner rejects the Proposal, or fails to notify Design-Builder in writing on or before the date specified in the Proposal that it accepts the Proposal, the Proposal shall be deemed withdrawn and of no effect. In such event, Owner and Design-Builder shall meet and confer as to how the Project will proceed, with Owner having the following options:

i Owner may suggest modifications to the Proposal, whereupon, if such modifications are accepted in writing by Design-Builder, the Proposal shall be deemed accepted and the parties shall proceed in accordance with Section 1.3.2.2 above;

ii Owner may determine that the design is not yet sufficiently complete for acceptance or rejection of the Proposal. As such, Owner may direct Design-Builder to continue to proceed with the Phase 1 work and further advance the design before submitting a revised Proposal.

iii Owner may determine that it does not intend to proceed with Phase 2 services with the Design-Builder. In such a case, the Owner may authorize the Design-Builder to proceed until the completion of Phase 1 work, at which time, Owner may elect to publicly bid the Phase 2 work. In such occurrence, the Design-Builder and the Owner agree to transfer the contract responsibility from the contractual Design-Builder to the Designer-of-Record.

iv Owner may terminate this Agreement for convenience in accordance with Article 8 hereof; provided, however, in this event, Design-Builder shall not be entitled to the payment provided for in Article 8 hereof.

1.3.2.4 If Owner fails to exercise any of the above options, Design-Builder shall have the right to (a) continue with the Work as if Owner had elected to proceed in accordance with Section 1.3.2.3(ii). above, and be paid by

Owner accordingly, unless and until Owner notifies it in writing to stop the Work; (b) suspend performance of Work in accordance with Article 11 of the General Conditions of Contract, provided, however, that in such event Design-Builder shall not be entitled to the payment provided for in Section 8.2 hereof; or (c) may give written notice to Owner that it considers this Agreement completed. If Owner fails to exercise any of the options under Section 1.3.2 within ten (10) days of receipt of Design-Builder's notice, then this Agreement shall be deemed completed. If Owner terminates the relationship with Design-Builder under Section 1.3.2(iv), or if this Agreement is deemed completed under this paragraph, then Design-Builder shall have no further liability or obligations to Owner under this Agreement.

Article 2

Contract Documents

2.1 The Contract Documents are comprised of the following:

2.1.1 All written modifications, amendments, minor changes and Change Orders to this Agreement;

2.1.2 The Contract Price Amendment referenced in Section 1.3.2.2 above or the Proposal accepted by Owner in accordance with Section 1.3 above;

2.1.3 This Agreement, including all exhibits (list for example, performance standard requirements, performance incentive arrangements, markup exhibits, allowances, unit prices or exhibit detailing offsite reimbursable personnel) but excluding, if applicable, the Contract Price Amendment;

2.1.4 The General Conditions of Contract;

2.1.5 Construction Documents prepared and approved in accordance with Section 2.4 of the General Conditions of Contract;

2.1.6 Exhibit B, Scope of Work; and

2.1.7 The following other documents, if any:

2.1.7.1 Applicable Laws and Regulations

2.1.7.2 Permits

2.1.7.3 Properly Executed Change Orders

2.1.7.4 Addenda

2.1.7.5 Executed Design-Build Agreement (DBIA Document No. 545), including Exhibits

2.1.7.6 General Conditions (DBIA Document No. 535)

2.1.7.7 Design Criteria Report

2.1.7.8 Design-Builder's Proposal /GP Design-Build Proposal

2.1.7.9 Technical Specifications

2.1.7.10 Project Plans/Drawings (detailed plans having greater precedence)

2.1.7.11 Request for Proposals

Article 3

Interpretation and Intent

3.1 Design-Builder and Owner, at the time of acceptance of the Proposal by Owner in accordance with Section 1.3 hereof, shall carefully review all the Contract Documents, including the various documents comprising the Owner's Project background documents for any conflicts or ambiguities. Design-Builder and Owner will discuss and resolve any identified conflicts or ambiguities prior to execution of the Agreement, or if applicable, prior to Owner's acceptance of the Proposal.

3.2 The Contract Documents are intended to permit the parties to complete the Work and all obligations required by the Contract Documents within the Contract Time(s) for the Contract Price. The Contract Documents are intended to be complementary and interpreted in harmony so as to avoid conflict, with words and phrases interpreted in a manner consistent with construction and design industry standards. In the event inconsistencies, conflicts or ambiguities between or among the Contract Documents are discovered after Owner's acceptance of the Proposal, Design-Builder and Owner shall attempt to resolve any ambiguity, conflict or inconsistency informally, recognizing that the Contract Documents shall take precedence in the order in which they are listed in Section 2.1 hereof. (Note, the parties are strongly encouraged to establish in the Contract Price Amendment or Proposal (as applicable) the priority of the various documents comprising such exhibit or proposal.)

3.3 Terms, words and phrases used in the Contract Documents, including this Agreement, shall have the meanings given them in the General Conditions of Contract.

3.4 If Owner's Project Criteria contain design specifications: (a) Design-Builder is entitled to reasonably rely on the accuracy of the information represented in the design specifications and their compatibility with other information set forth in Owner's Project Criteria, including any design performance specifications; and (b) Design-Builder shall be entitled to an adjustment in its Contract Price and/or Contract Time(s) to the extent Design-Builder's cost and/or time of performance have been adversely impacted by such inaccurate design specification.

3.5 The Contract Documents form the entire agreement between Owner and Design-Builder and by incorporation herein are as fully binding on the parties as if repeated herein. No oral representations or other agreements have been made by the parties except as specifically stated in the Contract Documents.

Article 4

Ownership of Work Product

4.1 Work Product. All drawings, specifications and other documents and electronic data, including such documents identified in the General Conditions of Contract, furnished by Design-Builder to Owner under this Agreement ("Work Product") are deemed to be instruments of service and Design-Builder shall retain the ownership and property interests therein, including but not limited to any intellectual property rights, copyrights and/or patents, subject to the provisions set forth in Sections 4.2 through 4.5 below.

4.2 Owner's License upon Project Completion and Payment in Full to Design-Builder. Upon Owner's payment in full for all Work performed under the Contract Documents, Design-Builder shall grant Owner a fully paid up, perpetual license to use the Work Product in connection with Owner's occupancy of the Project, conditioned on Owner's express understanding that its alteration of the Work Product without the involvement of Design-Builder is at Owner's sole risk and without liability or legal exposure to Design-Builder or anyone working by or through Design-Builder, including Design Consultants of any tier (collectively the "Indemnified Parties"), and on Owner's obligation to provide the indemnity set forth in Section 4.5 herein.

4.3 Owner's License upon Owner's Termination for Convenience or Design-Builder's Election to Terminate. If Owner terminates this Agreement for its convenience as set forth in Article 8 hereof, or if Design-Builder elects to terminate this Agreement in accordance with Section 11.4 of the General Conditions of Contract, Design-Builder shall, upon Owner's payment in full of the amounts due Design-Builder under the Contract Documents, grant Owner a fully paid up, perpetual license to use the Work Product to complete the Project and subsequently occupy the Project, and Owner shall thereafter have the same rights as set forth in Section 4.2 above, conditioned on the following:

4.3.1 Use of the Work Product is at Owner's sole risk without liability or legal exposure to any Indemnified Party, and on Owner's obligation to provide the indemnity set forth in Section 4.5 herein, and

4.4 Owner's License upon Design-Builder's Default. If this Agreement is terminated due to Design-Builder's default pursuant to Section 11.2 of the General Conditions of Contract, then Design-Builder grants Owner a fully paid up, perpetual license to use the Work Product to complete the Project and subsequently occupy the Project, and Owner shall thereafter have the same rights and obligations as set forth in Section 4.2 above. Notwithstanding the preceding sentence, if it is ultimately determined that Design-Builder was not in default, Owner shall be deemed to have terminated the Agreement for convenience, and Design-Builder shall be entitled to the rights and remedies set forth in Section 4.3 above.

4.5 Owner's Indemnification for Use of Work Product. Owner recognizes that in the event of an early termination of the Work, whether for convenience or for cause, Design-Builder will not have the opportunity to finish or to finalize its Work Product. Therefore, if Owner uses the Work Product, in whole or in part, or if Owner is required to indemnify any Indemnified Parties based on the use or alteration of the Work Product under any of

the circumstances identified in this Article 4, Owner shall defend, indemnify and hold harmless the Indemnified Parties from and against any and all claims, damages, liabilities, losses and expenses, including attorneys' fees, arising out of or resulting from the use or alteration of the Work Product, to the fullest extent permitted by applicable law.

4.6 Obligations on Subcontractor. Any sub-contract entered into by Design-Builder relating to this Contract, to the extent allowed hereunder, shall include a like provision (on Owner's ownership in Work Products) for work to be performed under this Contract to Contractually bind or otherwise oblige its subcontractor performing work under this Contract such that Owner's ownership rights of all Work Products are preserved and protected as intended herein. Failure of Design-Builder to comply with this requirement or to obtain the compliance of its subcontractor with such obligations shall subject Design-Builder to all remedies allowed under law and termination of this Contract.

4.7 Use of Work Products and Trade Secrets by Third Parties. Design-Builder shall not make available, provide or disclose any Work Product to any third party without prior written consent of Owner. Design-Builder further agrees that it will not disclose nor cause others to disclose any of Owner's trade secrets or other potentially patentable matters including inventions, discoveries, improvements, and methods, developed during the performance of this Contract. Design-Builder shall be liable for any loss of patentable rights as a result of such disclosure whether such disclosure is inadvertent or not.

4.8 Non-Infringement Warranty. Design-Builder hereby represents and warrants that neither the Work Product, including Owner's use thereof, nor performance of all obligations under this Contract shall in any way, directly or contributorily, infringe upon any third party's intellectual property rights, including, without limitation, patents, copyrights, trademarks, trade secrets, right of public Owner and proprietary information. This section shall survive expiration or termination of this Contract.

4.9 In Design-Builder's defense of the Owner, negotiation, compromise, and settlement of any such infringement legal action, the Owner shall retain discretion in and control of the litigation, negotiation, compromise, settlement, and appeals therefrom.

4.10 Where any Work Product furnished by Design-Builder is in a form of software or firmware ("Vehicle"), and if any part of the such Vehicle (a) becomes the subject of a legal action, (b) is adjudicated as infringing a third party's Intellectual Property right, or (c) has its use enjoined or license terminated; Design-Builder shall, with the Owner's consent, do one of the following immediately. Design-Builder shall at its expense either:

4.10.1 Procure for the Owner the right to continue using said part of the Vehicle; or

4.10.2 Replace the Vehicle with a functionally equivalent, non-infringing product.

4.11 Exercise of any of the above-mentioned options shall not cause undue business interruption to the Owner or diminish the intended benefits and use of the Work Product by the Owner under the specifications herein.

4.12 Rights and remedies available to the Owner hereinabove shall survive the expiration or other termination of this Contract. Further, the rights and remedies are cumulative of those provided for elsewhere in this Contract and those allowed under the laws of the United States, the State of California, and the County of San Bernardino. This Paragraph shall survive the expiration or other termination of this Contract.

4.13 Unless expressly stated otherwise, for all pre-existing third-party and Design-Builder's intellectual property (if any), including software, required to operate or use any Work Product delivered by Design-Builder, Design-Builder hereby grants and will cause others to grant Owner (including its agents and consultants) an irrevocable license to use such pre-exiting intellectual property internally by Owner (including its agents and consultants).

Article 5

Contract Time

5.1 Date of Commencement. The Phase 1 Services shall commence within five (5) days of Design-Builder's receipt of Owner's Notice to Proceed unless the parties mutually agree otherwise in writing. The Work shall commence within five (5) days of Design-Builder's receipt of Owner's Notice to Proceed for Phase 2 Services ("Date of Commencement") if the Proposal is accepted and the Contract Price Amendment is agreed upon, unless the parties mutually agree otherwise in writing.

5.2 Substantial Completion and Final Completion.

5.2.1 Substantial Completion of the entire Work shall be achieved no later than (To be included in the Phase 2 Amendment) calendar days after the Date of Commencement ("Scheduled Substantial Completion Date").

5.2.2 The parties agree that the definition for Substantial Completion set forth in Section 1.2.38 of the General Conditions of Contract applies.

5.3 Interim milestones and/or Substantial Completion of identified portions of the Work shall be achieved as follows:

5.3.1 Completion of Basis of Design Report

5.3.2 Submittal of the Proposal(s)

5.4 Final Completion of the Work or identified portions of the Work shall be achieved as expeditiously as reasonably practicable. Final Completion is the date when all Work is complete pursuant to the definition of Final Completion set forth in Section 1.2.21 of the General Conditions of Contract.

5.5 All of the dates set forth in this Article 5 ("Contract Time") shall be subject to adjustment in accordance with the General Conditions of Contract.

5.6 Time is of the Essence. Owner and Design-Builder mutually agree that time is of the essence with respect to the dates and times set forth in the Contract Documents.

5.7 Liquidated Damages.

5.7.1 Design-Builder understands that if Substantial Completion is not attained by the Scheduled Substantial Completion Date, Owner will suffer damages which are difficult to determine and accurately specify. Design-Builder agrees that if Substantial Completion is not attained by the Scheduled Substantial Completion Date (the "LD Date"), Design-Builder shall pay Owner five thousand Dollars ($5,000) as liquidated damages for each calendar day that Substantial Completion extends beyond the LD Date.

5.7.2 Design-Builder understands that if Final Completion is not attained by the Scheduled Final Completion Date, Owner will suffer damages which are difficult to determine and accurately specify. Design-Builder agrees that if Final Completion is not attained by the Scheduled Final Completion Date (the "LD Date"), Design-Builder shall pay Owner twenty-five hundred Dollars ($2,500) as liquidated damages for each calendar day that Final Completion extends beyond the LD Date.

5.7.3 The parties agree that the Liquidated Damages set out in section 5.7.1 and 5.7.2, above, shall constitute Owner's sole remedy for delay.

5.8 Owner's Review Time. The parties have established the following maximum and minimum amount of time for Owner to review Design Submissions and the Project Schedule or any updates thereto unless the parties agree in writing otherwise.

5.8.1 Owner shall have a minimum of fifteen working days of receipt by Owner to review all Design Submissions, the Project Schedule, and any updates thereto.

5.8.2 Owner shall review and (if applicable) provide a response to Design-Builder on all Design Submissions, the Project Schedule and any updates thereto within fifteen working days of receipt by Owner.

Article 6

Contract Price

6.1 Contract Price.

6.1.1 Owner shall pay Design-Builder on a time and material basis in accordance with a not to exceed of three million, nine hundred and ninety-eight thousand, six hundred and twenty-seven dollars ($3,998,627) for the Phase 1 Services, subject to adjustments made in accordance with the General Conditions of Contract. Unless otherwise provided in the Contract Documents, the Phase 1 Services compensation is deemed to include all sales, use, consumer and other taxes mandated by applicable Legal Requirements.

6.1.2 Owner and the Design-Builder agree to execute the amendment to this Agreement for Phase 2 related work after successful completion and acceptance by the Owner of the Proposal(s) and amendment(s). For Phase 2 Services, Owner shall pay Design-Builder in accordance with Article 6 of the General Conditions of Contract a contract price ("Contract Price") equal to the negotiated Contract Price Amendment, or equal to Design-Builder's Fee (as defined in Section 6.4 hereof) plus the Cost of the Work (as defined in Section 6.7 hereof), subject to any GMP established in Section 6.8 hereof or as set forth in the Contract Price Amendment and any adjustments made in accordance with the General Conditions of Contract.

6.2 Markups for Changes. If the Contract Price requires an adjustment due to changes in the Work, and the cost of such changes is determined under Section 9.4.1 of the General Conditions of Contract, the following markups shall be allowed on such changes:

6.2.1 For additive Change Orders, including additive Change Orders arising from both additive and deductive items, it is agreed that Design-Builder shall receive fifteen percent (15%) of the additional costs incurred for that Change Order for overhead and profit.

6.2.2 For deductive Change Orders, including deductive Change Orders arising from both additive and deductive items, the deductive amounts shall include an amount equal to the sum of five percent (5%) for profit applied to the direct costs of the net reduction (which amount will account for a reduction associated with Design-Builder's Fee) applied to the direct costs of the net reduction.

6.3 Not Used

6.4 Basis of Compensation. Design-Builder's compensation for Phase 1 work will be provided on the basis of actual hours of work performed, hourly rates agreed upon by Owner and Design-Builder, and the not-to-exceed prices.

6.5 For certain trades, Owner and Design-Builder may agree upon lump sum or not-to-exceed prices for services such as geotechnical exploration of the site, utility potholing, piloting equipment, surveying, etc. after selection of Design-Builder. Prices negotiated will be consistent with the Design-Builder's proposal for the work.

6.6 Phase 1 Invoices. Prior to the first invoice for Phase 1 Work, the Design-Builder shall submit a sample invoice to the Owner for approval showing a detailed breakdown structure and percent complete for different tasks of Phase 1 of the project.

6.7 Cost of the Work.

6.7.1 The term "Cost of the Work" shall mean costs reasonably incurred by Design-Builder in the proper performance of the Work. The Cost of the Work shall include only the following:

6.7.1.1 Wages of direct employees of Design-Builder performing the Work at the Site or, with Owner's agreement, at locations off the Site, provided, however, that the costs for those employees of Design-Builder performing

design services shall be calculated on the basis of prevailing market rates for design professionals performing such services or, if applicable, those rates set forth in an exhibit to this Agreement.

6.7.1.2 Wages or salaries of Design-Builder's supervisory and administrative personnel engaged in the performance of the Work and who are located at the Site or working off-Site to assist in the production or transportation of material and equipment necessary for the Work.

6.7.1.3 Wages or salaries of Design-Builder's personnel stationed at Design-Builder's principal or branch offices, but only to the extent said personnel are identified in Exhibit C and performing the function set forth in said Exhibit. The reimbursable costs of personnel stationed at Design-Builder's principal or branch offices shall include a ten percent (10%) markup to compensate Design-Builder for the Project-related overhead associated with such personnel.

6.7.1.4 Costs incurred by Design-Builder for employee benefits, premiums, taxes, insurance, contributions and assessments required by law, collective bargaining agreements or which are customarily paid by Design-Builder, to the extent such costs are based on wages and salaries paid to employees of Design-Builder covered herein.

6.7.1.5 The reasonable portion of the cost of travel, accommodations and meals for Design-Builder's personnel necessarily and directly incurred in connection with the performance of the Work.

6.7.1.6 Payments properly made by Design-Builder to Subcontractors and Design Consultants for performance of portions of the Work, including any insurance and bond premiums incurred by Subcontractors and Design Consultants.

6.7.1.7 Costs incurred by Design-Builder in repairing or correcting defective, damaged or nonconforming Work (including any warranty or corrective Work performed after Substantial Completion), provided that such Work was beyond the reasonable control of Design-Builder, or caused by the ordinary mistakes or inadvertence, and not the negligence, of Design-Builder or those working by or through Design-Builder. If the costs associated with such Work are recoverable from insurance, Subcontractors or Design Consultants, Design-Builder shall exercise best efforts to obtain recovery from the appropriate source and provide a credit to Owner if recovery is obtained.

6.7.1.8 Costs, including transportation, inspection, testing, storage and handling of materials, equipment and supplies incorporated or reasonably used in completing the Work.

6.7.1.9 Costs less salvage value of materials, supplies, temporary facilities, machinery, equipment and hand tools not customarily owned by the workers

that are not fully consumed in the performance of the Work and which remain the property of Design-Builder, including the costs of transporting, inspecting, testing, handling, installing, maintaining, dismantling and removing such items.

6.7.1.10 Costs of removal of debris and waste from the Site.

6.7.1.11 The reasonable costs and expenses incurred in establishing, operating and demobilizing the Site office, including the cost of facsimile transmissions, long-distance telephone calls, postage and express delivery charges, telephone service, photocopying and reasonable petty cash expenses.

6.7.1.12 Rental charges and the costs of transportation, installation, minor repairs and replacements, dismantling and removal of temporary facilities, machinery, equipment and hand tools not customarily owned by the workers, which are provided by Design-Builder at the Site, whether rented from Design-Builder or others, and incurred in the performance of the Work.

6.7.1.13 Premiums for insurance and bonds required by this Agreement or the performance of the Work.

6.7.1.14 All fuel and utility costs incurred in the performance of the Work.

6.7.1.15 Sales, use or similar taxes, tariffs or duties incurred in the performance of the Work.

6.7.1.16 Legal costs, court costs, and costs of mediation and arbitration arising from Design-Builder's performance of the Work; provided they are not due to the Design-Builder's negligence, wrongful acts, or breach of this Agreement; as determined by agreement of the parties, or final judicial decision. Such costs do not include costs incurred by the Design-Builder in connection with a dispute resolution process that results in Design-Builder's payment to settle a third party claim.

6.7.1.17 Legal costs, court costs, and costs of mediation and arbitration reasonably arising from claims based on the Owner's negligence, wrongful acts, or breach of this Agreement; as determined by agreement of the parties, or final judicial decision. Such costs include costs incurred by the Design-Builder that arise out of a dispute resolution process that results in Owner's payment to settle a third party claim.

6.7.1.18 Costs for permits, royalties, licenses, tests and inspections incurred by Design-Builder as a requirement of the Contract Documents.

6.7.1.19 The cost of defending suits or claims for infringement of patent rights arising from the use of a particular design, process or product

required by Owner, paying legal judgments against Design-Builder resulting from such suits or claims, and paying settlements made with Owner's consent.

6.7.1.20 Deposits which are lost, except to the extent caused by Design-Builder's negligence.

6.7.1.21 Costs incurred in preventing damage, injury or loss in case of an emergency affecting the safety of persons and property.

6.7.1.22 Accounting and data processing costs related to the Work.

6.7.1.23 Other costs reasonably and properly incurred in the performance of the Work to the extent approved in writing by Owner.

6.7.2 Non-Reimbursable Costs. The following shall be excluded from the Cost of the Work:

6.7.2.1 Compensation for Design-Builder's personnel stationed at Design-Builder's principal or branch offices.

6.7.2.2 Overhead and general expenses, which may be recoverable for changes to the Work.

6.7.2.3 The cost of Design-Builder's capital used in the performance of the Work.

6.7.2.4 If the parties have agreed on a GMP, costs that would cause the GMP, as adjusted in accordance with the Contract Documents, to be exceeded.

6.8 The Guaranteed Maximum Price.

6.8.1 Design-Builder guarantees that it shall not exceed the GMP of _____ _____ Dollars ($ To be included in the Phase 2 Amendment_____). Documents used as a basis for the GMP shall be identified in the Contract Price Amendment to this Agreement. Design-Builder does not guarantee any specific line item provided as part of the GMP, and has the sole discretion to apply payment due to overruns in one line item to savings due to underruns in any other line item. Design-Builder agrees, however, that it will be responsible for paying all costs of completing the Work which exceed the GMP, as adjusted in accordance with the Contract Documents.

6.8.2 The GMP includes a Contingency in the amount of _____ _____ Dollars ($ To be included in the Phase 2 Amendment_____) which is available for Design-Builder's exclusive use for unanticipated costs it has incurred that are not the basis for a Change Order under the Contract Documents. By way of example, and not as a limitation, such costs may include: (a) trade buy-out

differentials; (b) overtime or acceleration; (c) escalation of materials; (d) correction of defective, damaged or nonconforming Work, design errors or omissions, however caused; (e) Subcontractor defaults; or (f) those events under Article 8 of the General Conditions of Contract that result in an extension of the Contract Time but do not result in an increase in the Contract Price. The Contingency is not available to Owner for any reason, including changes in scope or any other item which would enable Design-Builder to increase the GMP under the Contract Documents. Design-Builder shall provide Owner notice of all anticipated charges against the Contingency, and shall provide Owner as part of the monthly status report required by Section 2.1.2 of the General Conditions of Contract an accounting of the Contingency, including all reasonably foreseen uses or potential uses of the Contingency in the upcoming three (3) months. Design-Builder agrees that with respect to any expenditure from the Contingency relating to a Subcontractor default or an event for which insurance or bond may provide reimbursement, Design-Builder will in good faith exercise reasonable steps to obtain performance from the Subcontractor and/or recovery from any surety or insurance company. Design-Builder agrees that if Design-Builder is subsequently reimbursed for said costs, then said recovery will be credited back to the Contingency.

6.9 Allowance Items and Allowance Values.

6.9.1 Any and all Allowance Items, as well as their corresponding Allowance Values, are set forth in the Contract Price Amendment or the Proposal.

6.9.2 Design-Builder and Owner have worked together to review the Allowance Items and Allowance Values based on design information then available to determine that the Allowance Values constitute reasonable estimates for the Allowance Items. Design-Builder and Owner will continue working closely together during the preparation of the design to develop Construction Documents consistent with the Allowance Values. Nothing herein is intended in any way to constitute a guarantee by Design-Builder that the Allowance Item in question can be performed for the Allowance Value.

6.9.3 No work shall be performed on any Allowance Item without Design-Builder first obtaining in writing advance authorization to proceed from Owner. Owner agrees that if Design-Builder is not provided written authorization to proceed by the date set forth in the Project schedule, due to no fault of Design-Builder, Design-Builder may be entitled to an adjustment of the Contract Time(s) and Contract Price.

6.9.4 The Allowance Value includes the direct cost of labor, materials, equipment, transportation, taxes and insurance associated with the applicable Allowance Item. All other costs, including design fees, Design-Builder's overall project management and general conditions costs, overhead and Fee, are deemed to be included in the original Contract Price, and are not subject to adjustment notwithstanding the actual amount of the Allowance Item.

6.9.5 Whenever the actual costs for an Allowance Item is more than or less than the stated Allowance Value, the Contract Price shall be adjusted accordingly by Change Order, subject to Section 6.9.4. The amount of the Change Order shall reflect the difference between actual costs incurred by Design-Builder for the particular Allowance Item and the Allowance Value

6.9.6 Interim Milestones – Not Used

Article 7

Procedure for Payment

7.1 Contract Price Progress Payments.

7.1.1 Design-Builder shall submit to Owner on the fifth (5th) day of each month, beginning with the first month after the Date of Commencement, Design-Builder's Application for Payment in accordance with Article 6 of the General Conditions of Contract.

7.1.2 Owner shall make payment within thirty (30) days after Owner's receipt of each properly submitted and accurate Application for Payment in accordance with Article 6 of the General Conditions of Contract, but in each case less the total of payments previously made, and less amounts properly withheld under Section 6.3 of the General Conditions of Contract.

7.1.3 Not Used.

7.2 Retainage on Progress Payments.

7.2.1 Owner will retain five percent (5%) of each Application for Payment provided, however, that when fifty percent (50%) of the Work has been satisfactorily completed by Design-Builder and Design-Builder is otherwise in compliance with its contractual obligations, Owner may choose to not retain any additional retention amounts from Design-Builder's subsequent Applications for Payment. Owner will also reasonably consider reducing retainage for Work completed early in the Project.

7.2.2 There will be no retainage withheld during Phase 1 of the Project.

7.2.3 Substitution of Securities. At the request and expense of the Design-Builder, in accordance with California Public Contract Code Section 22300, in lieu of Owner withholding the five percent (5%) retention, the Design-Builder may: (1) substitute a deposit of securities at least equivalent to the retention to be paid, or (2) request Owner to pay retention directly to an escrow agent. If the Design-Builder requests that retention be paid into an escrow account, the Design-Builder and Owner shall enter into an escrow agreement in the exact form set forth in the Public Contract Code Section 22300. All forms or correspondence pertaining to Security Deposit in Lieu of Withhold shall be addressed to Owner for review by the legal counsel for Owner.

7.3 Final Payment. Design-Builder shall submit its Final Application for Payment to Owner in accordance with Section 6.6 of the General Conditions of Contract. Owner shall make payment on Design-Builder's properly submitted and accurate Final Application for Payment (less any amount the parties may have agreed to set aside for warranty work) within thirty (30) days after Owner's receipt of the Final Application for Payment, provided that Design-Builder has satisfied the requirements for final payment set forth in Section 6.6 of the General Conditions of Contract.

7.4 Record Keeping and Finance Controls. Design-Builder acknowledges that this Agreement is to be administered on an "open book" arrangement relative to Costs of the Work. Design-Builder shall keep full and detailed accounts and exercise such controls as may be necessary for proper financial management, using accounting and control systems in accordance with generally accepted accounting principles and as may be provided in the Contract Documents. During the performance of the Work and for a period of three (3) years after Final Payment, Owner and Owner's accountants shall be afforded access to, and the right to audit from time to time, upon reasonable notice, Design-Builder's records, books, correspondence, receipts, subcontracts, purchase orders, vouchers, memoranda and other data relating to the Work, all of which Design-Builder shall preserve for a period of three (3) years after Final Payment. Such inspection shall take place at Design-Builder's offices during normal business hours unless another location and time is agreed to by the parties. Any multipliers or markups agreed to by Owner and Design-Builder as part of this Agreement are only subject to audit to confirm that such multiplier or markup has been charged in accordance with this Agreement, but the composition of such multiplier or markup is not subject to audit.

Article 8

Termination for Convenience

8.1 The Owner, through its City Council resolution or recorded minute action, may terminate for convenience any part of the remaining work under the Contract at any time, or from time to time, by written notice to the Design-Builder. Such notice shall specify the extent to which the performance of work is terminated and the effective date of such termination.

8.2 Upon receipt of such notice, the Design-Builder shall:

8.2.1 Immediately discontinue work on the date and to the extent specified in the notice and place no further orders or subcontracts for materials, services, or facilities, other than as may be required for completion of such portion of work that is not terminated;

8.2.2 Promptly obtain cancellation upon terms satisfactory to Owner of all purchase orders, subcontracts, rentals or any other contracts existing for the performance of the terminated work or assign those contracts to Owner as directed;

8.2.3 Assist Owner in the maintenance, protection, and disposition of work in progress, plant, tools, equipment, property, and materials acquired by the Design-Builder or furnished by the Design-Builder under this Contract; and

8.2.4 Complete performance of the Work which is not terminated.

8.3 Upon any such termination, the Design-Builder shall waive any claims for damages on account thereof; but as the sole right and remedy of the Design-Builder, Owner shall pay Design-Builder substantiated costs in accordance with the following:

8.3.1 All amounts due and not previously paid to the Design-Builder for work completed in accordance with the Contract prior to such notice of termination, and for work thereafter completed as specified in such notice, up to but not exceeding the contract value for the work using the progress schedule, schedule of values and other project controls as applicable;

8.3.2 Reasonable costs incurred in demobilization and the disposition of residual material, plant and equipment; and

8.3.3 There shall be no claim or right to lost profits on unperformed work under any theory or any circumstances. There shall be no other right or claim for loss, cost, damage, expense or liability. These limits apply to a termination for convenience and also to any termination for default subsequently determined wrongful and therefore treated as a termination for convenience.

8.4 Design-Builder shall submit within twenty-one (21) days after receipt of notice of termination a proposal for an adjustment to its compensation including all incurred costs described herein. Should the logistics of such a termination preclude pricing any item of cost, the Design-Builder shall estimate costs to the best of its ability. Owner shall review, analyze, and verify such proposal, and negotiate an equitable adjustment, subject to City Council approval as needed, and the Contract shall be amended in writing accordingly.

8.5 No compensation will be paid to the Design-Builder for unabsorbed or under absorbed overhead, nor shall the Design-Builder be paid for loss of anticipated profits in any form.

8.6 If an agreement cannot be reached concerning an equitable adjustment, Owner may issue a unilateral Change Order.

Article 9

Representatives of the Parties

9.1 Owner's Representatives.

9.1.1 Owner designates the individual listed below as its Senior Representative ("Owner's Senior Representative"), which individual has the authority and responsibility for avoiding and resolving disputes under Section 10.2.4 of the General Conditions of Contract: *Arturo Vela, Public Works Director, City of Banning; 99 E. Ramsey Street, Banning, CA 92220; (951) 922-3134*

9.1.2 Owner designates the individual listed below as its Owner's Representative, which individual has the authority and responsibility set forth in Section 3.4 of the General Conditions of Contract: *Arturo Vela, Public Works Director, City of Banning; 99 E. Ramsey Street, Banning, CA 92220; (951) 922-3134*

9.2 Design-Builder's Representatives.

9.2.1 Design-Builder designates the individual listed below as its Senior Representative ("Design-Builder's Senior Representative"), which individual has the authority and responsibility for avoiding and resolving disputes under Section 10.2.4 of the General Conditions of Contract: *Joe Lawrence, Design-Build Manager; 26501 Madison Avenue, Murrieta, CA 92562; (559) 647-6650*

9.2.2 Design-Builder designates the individual listed below as its Design-Builder's Representative, which individual has the authority and responsibility set forth in Section 2.1.1 of the General Conditions of Contract: *Marcos Reyes, Construction Manager; 26501 Madison Avenue, Murrieta, CA 92562; (951) 973-7393*

Article 10

Bonds and Insurance

10.1 Insurance. Design-Builder and Owner shall procure the insurance coverages set forth in the Insurance Exhibit attached hereto and in accordance with Article 5 of the General Conditions of Contract.

10.2 Bonds and Other Performance Security. Prior to commencement with Phase 2, Design-Builder shall provide the following performance bond and labor and material payment bond or other performance security:

Performance Bond.

☒ Required ☐ Not Required

Payment Bond.

☒ Required ☐ Not Required

Article 11

Other Provisions

11.1 Listing of Exhibits and documents incorporated herein:

i. Exhibit A – Design Criteria Report and Preliminary Design Drawings
ii. Exhibit B – Scope of Work and Schedule
iii. Exhibit C – Supporting Pricing Information
iv. Exhibit D – List of Reference Documents
v. Exhibit E – Design-Builder's Proposal
vi. Exhibit F – Permits and Approvals
vii. (Not Used)
viii. Exhibit H – Insurance Terms
ix. Exhibit I – Funding, Grant, and Environmental Permits Requirements (To be included in the Phase 2 Amendment)
x. (Not Used)
xi. Exhibit K – Form of Performance Bond
xii. Exhibit L – Form of Payment Bond
xiii. Exhibit M – Wage Determination Schedules

Article 12

Limitation of Liability

12.1 Limitation. To the fullest extent permitted by law, and notwithstanding any other provision of this Agreement, the total liability, in the aggregate, of Design-Builder, its Design Consultants, and Subcontractors, surety (if any) and their respective officers, directors, employees and agents, and any of them, to Owner and anyone claiming by, through or under Owner, for any and all claims, losses, liabilities, costs or damages whatsoever arising out of, resulting from or in any way related to the Project or this Agreement from any cause, including but not limited to the negligence, indemnity, professional errors or omissions, strict liability, breach of contract or warranty (express or implied), shall not exceed one-hundred percent (100%) of the Contract Price. The parties agree that specific consideration has been given by Design-Builder for this limitation and that it is deemed adequate.

Article 13

Mutual Waiver of Consequential Damages

13.1 NOTWITHSTANDING ANYTHING HEREIN TO THE CONTRARY (EXCEPT AS SET FORTH IN SECTION 13.2.1 BELOW), NEITHER DESIGN-BUILDER NOR OWNER SHALL BE LIABLE TO THE OTHER FOR ANY CONSEQUENTIAL LOSSES OR DAMAGES, WHETHER ARISING IN CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHERWISE, INCLUDING BUT NOT LIMITED TO LOSS OF USE, PROFITS, BUSINESS, REPUTATION OR FINANCING.

13.1.1 The consequential damages limitation set forth in Section 13.1 shall not: (i) affect the payment of liquidated damages or lost early completion bonus, if any, set forth in Article 5 of the Agreement, which both parties recognize has been established, in part, to reimburse Owner or reward Design-Builder for some damages that might otherwise be deemed to be consequential; or, (ii) apply to claims and liabilities for bodily or personal injury, death, or property damage claims required to be indemnified by Design-Builder.

In executing this Agreement, Owner and Design-Builder each individually represents that it has the necessary financial resources to fulfill its obligations under this Agreement, and each has the necessary corporate approvals to execute this Agreement, and perform the services described herein.

OWNER: **DESIGN-BUILDER:**

_____	_____
(Name of Owner)	*(Name of Design-Builder)*
_____	_____
(Signature)	*(Signature)*
_____	_____
(Printed Name)	*(Printed Name)*
_____	_____
(Title)	*(Title)*
Date: _____	Date: _____

Exhibit A

Design Criteria Report and Preliminary Design Drawings

Design Criteria Report

City of Banning Wastewater Treatment Plant Recycled Water Upgrades

21 June 2024



Prepared by: N2W Engineering



Executive Summary

The City of Banning (City or Banning) owns and operates the Banning Wastewater Treatment Plant (WWTP). The objective of the Banning WWTP and Recycled Water Upgrades Project (Project) is to enhance the WWTP to comply with impending Regional Water Quality Control Board Order (Board Order) requirements and Title 22 standards for recycled water.

The scope of this report includes defining the following:

- Reclaimed Water Demand
- Anticipated Regulatory Approvals
- Description of Existing Unit Processes
- Influent Characteristics
- Effluent Limits

Furthermore, the following critical items are included in the proposed improvements:

- Overview
- Design Flows
- Process Modeling, Evaluation, and Selection
- Description of New Unit Processes
- Engineering Design Guidelines
    - Mechanical
    - Civil
    - Structural
    - Architectural
    - HVAC
    - Electrical
    - Instrumentation and Controls
    - SCADA
    - Miscellaneous

The existing treatment plant includes primary and secondary treatment processes, with chlorine disinfection prior to disposal into on-site percolation ponds. The primary treatment involves a mechanical bar screen, with a manual bypass screen, followed by a vortex grit chamber and primary clarifiers. Screenings are processed through a washer compactor before being collected in a bin for disposal. Grit is processed in a hydrocyclone and classifier before being dropped into a bin for disposal. The screened and degritted effluent is settled in two primary clarifiers. Secondary treatment consists of trickling filters and secondary clarifiers. Secondary sludge is pumped to the headworks for co-thickening with the primary sludge. The sludge can be thickened before being conveyed to the digesters, but the gravity sludge thickener is currently bypassed. Digested sludge is applied to the drying beds.

After investigating some options for upgrading the trickling filter system, it was determined that the option that would best meet the City's objectives was decommissioning the trickling filter system and replacing it with a membrane bioreactor (MBR) system. MBR produces the best water quality, positioning the City to supply WWTP effluent to recycled water customers. The Sun Lakes Country Club will be the City's primary recycled water customer, with an expected demand of 0.76 Million Gallon per Day (MGD).

A preliminary BioWin model was created for the proposed facilities. The effluent limits aim to achieve Board Order and Title 22 requirements. Two different activated sludge process configurations were modeled. One is a conventional modified Ludzack-Ettinger (MLE) process configuration, where the return of activated sludge (RAS) and mixed liquor return (MLR) from the aerobic zone are both delivered to the anoxic zone. In an effort to avoid the recycling of high dissolved oxygen loads to the anoxic zone resulting from an elevated RAS flow and DO concentrations, which would inhibit denitrification, an alternate MLE configuration was considered. This alternative configuration involves rerouting the RAS to the aerobic zone and relying on the MLR to introduce both nitrate and biomass to the anoxic zone.

The proposed upgrades to the existing Banning WWTP include:

- Enhancements to the ferric sulfate storage and dosing system
- Addition of one primary clarifier, if needed.
- Construction of a new MBR system, which includes
    - Installation of new fine screens (2 mm)
    - Construction of new aeration basins
    - Installation of new aeration blowers, each with new aeration diffusers and an internal mixed liquor return pump
    - Installation of new membrane tanks
    - Installation of new mixed liquor pumps
    - Installation of new scour blowers
    - Installation of waste activated sludge pumps
- Construction of a new chlorine contact basin with new effluent pumps
- Installation of rotary drum thickeners
- Conversion of the existing secondary digester into a primary digester, including the installation of mixing pumps and a heat exchanger.
- Installation of a new RO facility, either at the WWTP or at Sun Lakes Country Club
    - Construction of salt evaporation ponds or a brine line, depending on which RO facility location is selected

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Appendices

Appendix A: Conceptual Design Drawings

1. Introduction

The City of Banning (City) owns and operates the Banning Wastewater Treatment Plant (WWTP). The City engaged N2W Engineering to complete the preliminary design of the WWTP upgrades at the current rated capacity of 3.6 MGD.

The WWTP effluent is currently in compliance with discharge requirements, but it requires significant upgrades to comply with impending total nitrogen (TN) discharge limits by the Regional Water Quality Control Board (RWQCB). In addition, the existing Trickling Filters (TFs), which perform secondary treatment, have reached their end of life. By replacing existing equipment with new facilities that can treat the water to Title 22 standards for recycled water, this will allow the City to meet the impending RWQCB requirements as well as use the WWTP effluent to serve existing and future non-potable water customers.

Several upgrade options were initially considered in consultation with the City, including options for upgrading the TFs by replacing the plastic media, followed by denitrification filters to achieve the required TN limits. This effort included assessing the condition of the TFs. Preliminary cost estimates confirmed that it would serve the City better to construct a new membrane bioreactor (MBR) facility and decommission the existing TFs. The new MBR system would not only provide better results but would also allow for reuse by producing an effluent suitable for direct use in a reverse osmosis (RO) desalination facility.

This design criteria report (DCR) documents the upgrades required to meet the new limits.

1.1 Assumptions

This DCR has been prepared based the following assumptions:

1. The planned rehabilitation and upgrades for the Project will be designed and constructed via a Progressive Design Build (PDB) delivery.
2. The City has a limited budget for the Project, and the progressive design process would be conducted to maximize benefits for the City within the available budget.

1.2 Reclaimed Water Demand

The City has an existing non-potable water system that delivers water from a non-potable groundwater well, Well M7, to Sun Lakes Country Club for irrigation use. The City has begun constructing a 24-inch diameter pipeline to connect the existing non-potable water pipe to the WWTP. The backbone pipeline is expected to be completed, tested, and accepted by mid-2024. Once reclaimed water becomes available from the upgraded WWTP, the WWTP will replace Well M7 to serve Sun Lakes Country Club as part of this Project. Typical annual demand for the Sun Lakes Country Club is 850 AFY (0.76 MGD).

Since the Sun Lakes Country Club is located on the westerly end of the City, other potential customers listed in Table 1 will be within proximity to receive recycled water. Figure 1 on the following page shows the planned backbone pipeline and laterals to the potential recycled water customers.

Table 1 Potential recycled water users

Customer	Recycled Water Demand (AFY)	Recycled Water Demand (MGD)
Existing Customers Currently Using Potable Water or Ground Water from Non-Potable Wells		
Sun Lakes Country Club	850	0.76
Banning High School	175	0.16
Dysart Park	87	0.08
Lions Park	79	0.07
Subtotal	1,191	1.07

Projected Future Developments		
Rancho San Gorgonio Development	217	0.19
Five Bridges Development	223	0.20
Neighborhood Park	35	0.03
Subtotal	475	0.42
Total	**1,666**	**1.49**

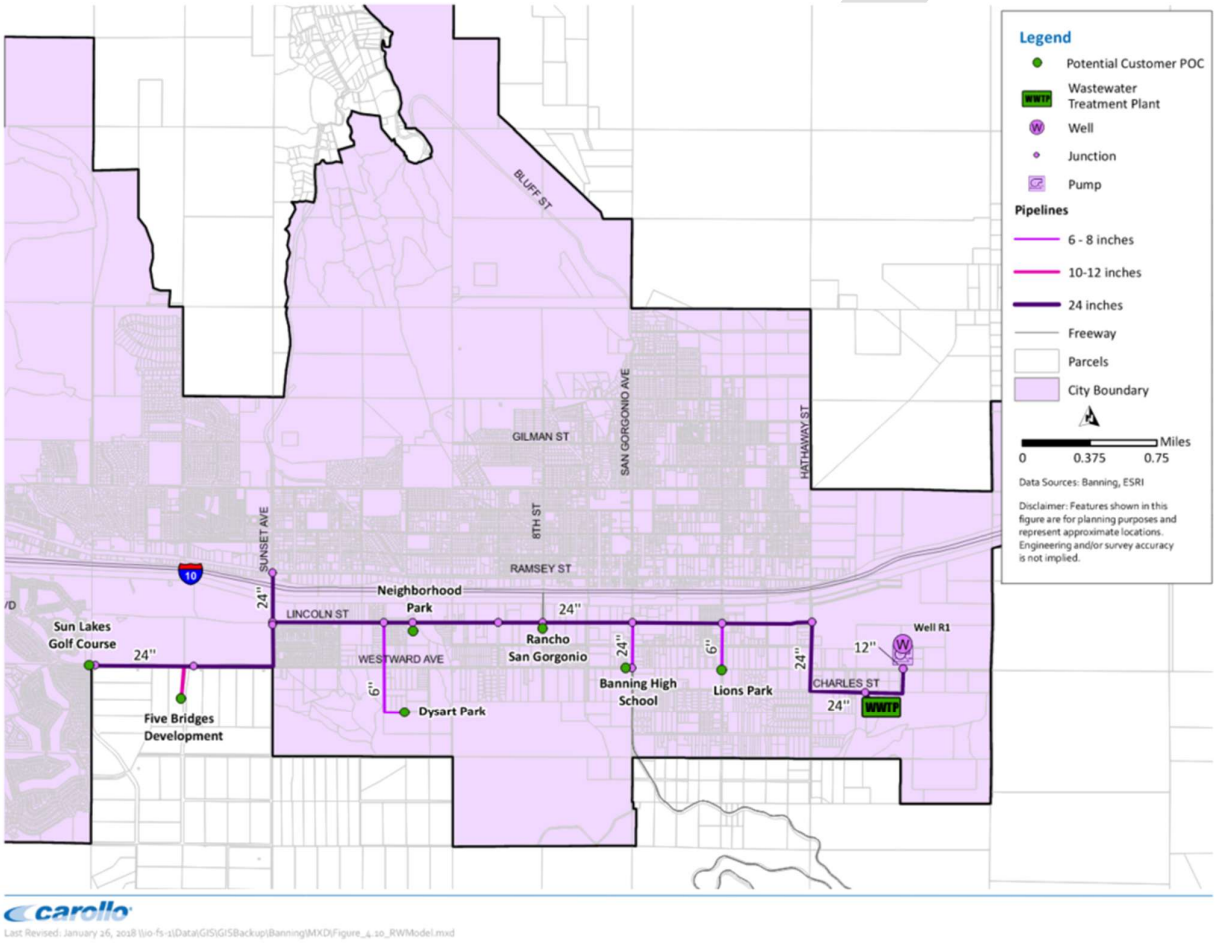

Figure 1 City of Banning potential recycled water customers (courtesy of Carollo)

This Project will only involve meeting the 0.76 MGD demands of the Sun Lakes Country Club. Constructing the laterals to the other customers will be a future development. More information regarding the City's reclaimed water needs can be found in the 2024 Feasibility Study (attached to the RFP).

1.3 Anticipated Regulatory Approvals

Permit review and issuance, as well as compliance and verification, are essential parts of this Project, involving close coordination with regulatory agencies. The Project must be evaluated under the California Environmental Quality Act (CEQA), and the City of Banning will have to provide discretionary approval for the Project as the CEQA Lead Agency. If the Lead Agency determines the Project will not have a significant effect on the environment, the Project may qualify for a Categorical Exemption. If impacts to the environment are anticipated, then an Initial Study Mitigated Negative Declaration (IS/MND) or Environmental Impact Report (EIR) may be appropriate to facilitate Project

development. Pursuant to CEQA Guidelines Section 15124(d)(2), actions necessary to fully develop the Project as proposed include:

- Adoption of the Project under CEQA
    - Categorical Exemptions under CEQA
        - Section 15301: Existing Facilities and or;
        - Section 15302: Replacement or Reconstruction) or;
    - Certification of an IS/MND or EIR

A previous IS-MND is included as an attachment to the RFP for reference only. The City is in the process of updating to include new CEQA and NEPA requirements; the completion of the update is anticipated in Q1 of 2025.

The following agencies have jurisdiction over the Banning WWTP in relation to the proposed Project improvements, and the City of Banning will need to coordinate with multiple agencies regarding the review and approval of permit applications to construct and commission the proposed improvements. Potential regulatory approvals that may be required at the regional, state, and federal levels include various approvals from and coordination with the following:

- City of Banning (CEQA Lead Agency)
    - Community Development
        - Building Permit
    - Public Works
        - Encroachment Permit
- County of Riverside
    - Department of Environmental Health
        - Solid Waste Facility Requirements
    - Fire Department – Hazardous Materials Division
        - Hazardous Material Business Plan
- California State Waterboard Region 7: Colorado River
    - Industrial User Waste Discharge Requirements
    - Stormwater Pollution Prevention Plan (SWPPP) Updates - Proposed changes to the facility that may affect the existing National Pollution Discharge Elimination System (NPDES) General Permit (for stormwater discharges associated with industrial activities) requirements and/or stormwater monitoring, the existing SWPPP must be updated
    - Title 22 Engineering Report for the Production, Distribution, and Use of Recycled Water
    - Title 27 Engineering Report for Brine Evaporation Ponds (if required)
- South Coast Air Quality Management District
    - Authority to Construct Permit
    - Permit to Operate

2. Description of Existing Unit Processes

2.1 Plant Overview

The Banning WWTP has a capacity of 3.6 million gallons per day (MGD) and is designed to treat wastewater to secondary standards. The WWTP consists of primary treatment, secondary treatment, solids handling, disinfection

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(currently not in use), and evaporation/percolation ponds. The primary treatment system consists of a mechanical bar screen, compactor, grit removal system, and cyclone separator. Effluent from headwork is gravity fed to two primary clarifiers. Primary effluent is pumped to two Trickling Filters, each rated for 1.8 MGD. The Trickling Filter effluent is sent to two secondary clarifiers.

Secondary effluent flows through a chlorine contact chamber and is then discharged to 10 unlined evaporation/percolation ponds which recharges the Cabazon Groundwater Basin. This recharge is provided only through surface percolation, and no injection wells are used by the City.

Primary and secondary sludge is processed via two primary anaerobic digesters. A second-stage digester is currently used as a sludge holding tank before thickened sludge is sent to the sludge drying beds. Sludge is allowed to dry and then is hauled offsite for final disposal. A gravity thickener was used to thicken secondary sludge but is currently not in service.

The quantities of wastewater generated are proportional to the City's population and the water used by its residents. The average flow of wastewater collected in the City in 2022 was 2.06 MGD.

An overall process schematic of the existing WWTP is shown in Figure 2.

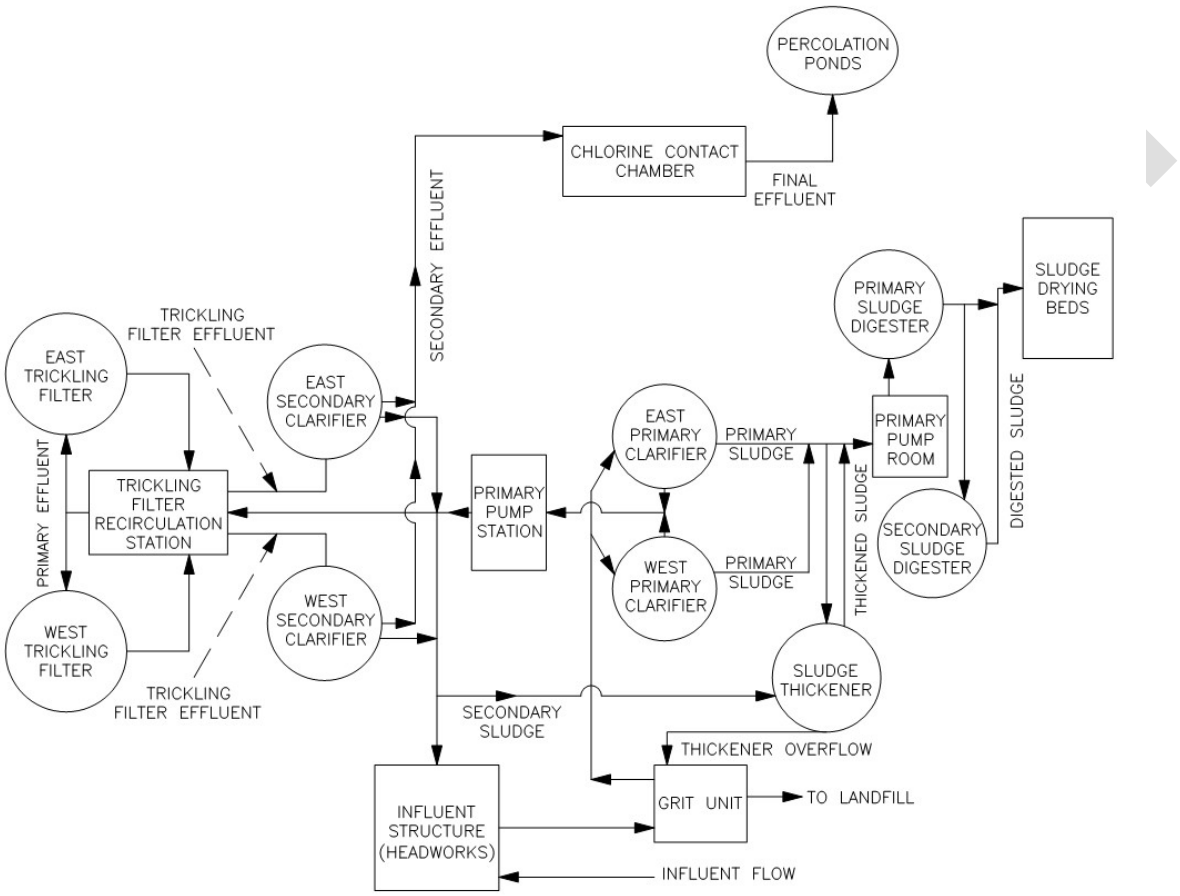

Figure 2 Process schematic for existing WWTP

2.2 Headworks

The existing headworks consist of a chemical feed system, bar screens, screening compactor, grit tank, and grit washer and cyclone. The chemical feed system includes a ferric sulfate feed tank and dosing pump skid; this system is in operation for 3-4 months of the year. There are two bar screens: one 0.25-inch opening multi rake mechanical bar screen (in operation) and one 1.5-inch manual screen (not in operation). The 0.25-inch bar screen is designed to handle 3.6 MGD average daily flow and maximum design flow of 5 MGD. The screening shaftless conveyor compactor has a maximum solid loading rate equal to the solids generated by the rated plant flow of 3.6 MGD. The

18-foot diameter vortex grit basin is designed to handle up to 30 MGD, assuming an HRT of 2 min, and the grit washer and cyclone have maximum flow rates of 3.6 MGD.

2.3 Primary Clarifiers

There are two existing circular primary settling clarifiers that can accommodate an average flow of up to 3.6 MGD. The dimensions of the existing units are summarized in Table 2.

Table 2 Existing primary clarifier design characteristics

Units	West	East
Design Flow Rate	1.6	2
Diameter, ft	45	50
Side Water Depth, ft	6.5	7
Surface Area, sf	1,600	1,965
Volume, gal	77,300	102,900

2.4 Equalization Basin and Pump Station

Currently, the City is in the process of designing an Equalization (EQ) Basin and Primary Effluent Pump Station. The EQ basin will be located in the existing stormwater detention pond and will have a capacity of 3.5 million gallons. The pump station will have three submersible pumps, each rated at 3.6 MGD. Since primary clarifier effluent will be directed to the new EQ basin, this EQ pump station will replace the existing primary effluent pump station.

2.5 Chlorine Contact Tank

An existing chlorine contact tank is located at the WWTP, but the use of a disinfectant has been discontinued. The existing tank is sized for 2.4 MGD and 60 minutes of contact time. The dimensions of the existing tank are summarized in Table 3.

Table 3 Existing chlorine contact tank design characteristics

Parameter	Value
Length, ft	60
Width, ft	20
Side Water Depth, ft	12 (with 1 ft freeboard)
Tank Volume, gal	107,712

2.6 Effluent Pump Station and Percolation Ponds

The final effluent pump station consists of two (2) 15 HP final effluent pumps located on a reinforced concrete chamber adjacent to the chlorine contact tank.

The final effluent is pumped to 10 unlined evaporation/percolation ponds which recharge to the Cabazon Groundwater Basin. The total surface area of these ponds is 26.5 acres with an operating depth of 2 feet.

2.7 Solids Handling

Sludge generated at the WWTP is anaerobically digested. The existing digestion system includes two primary digesters and one secondary digester. Currently, only the primary digesters are mixed, heated, and used for digestion, while the secondary digester is unmixed and unheated and is only used for sludge holding and some thickening. Assuming 20 days SRT and 4% solids concentration, the existing primary digesters can accommodate sludge generated from a wastewater flow of 2.3 MGD under the current trickling filter treatment system. A summary

of the dimensions of the existing three digesters is shown in Table 4. A gravity sludge thickener is onsite but is not operated based on past operating experience. Treated sludge is gravity fed to the facility's drying beds where it remains until approximately 85% of the moisture is removed. Dried sludge is then hauled off for beneficial reuse as a fertilizer and soil amendment.

Table 4 Existing anaerobic digesters design characteristics

Units	East Primary	West Primary	Secondary
Diameter, ft	35	35	35
Side Water Depth, ft	26	26	21
Water Surface Elevation, ft	24	24	19
Total Volume, gal	172,718	172,718	136,735
Design SRT, days	20	20	20
Design Sludge Flow Capacity, gpd	8,636	8,636	6,837

3. Influent Characteristics

The average monthly data plant data for calendar year 2022 are summarized in Table 5.

Table 5 Average monthly plant data for calendar year 2022

Parameter	Influent	Primary Effluent	Secondary Effluent
Flow, MGD	2.07	NA	2.06
pH, -	7.59	NA	7.61
TSS, mg/L	318	91	20.3
BOD, mg/L	317	175	25.3
TKN, mg/L	NA	NA	12.3
NO2-N, mg/L	NA	NA	0.55
NO3-N, mg/L	NA	NA	13.9
TN, mg/L	NA	NA	26.8
Temp, °F	76	NA	70

NA = Not Available

The table shows that the primary clarifier achieved approximately 71% TSS removal and 45% BOD removal based on the average values. This compares well with typical industry values of 60% and 30%, respectively.

The parameters for the solids handling system are summarized in Table 6.

Table 6 Average digester operating parameters for calendar year 2022

Parameter	Value
Feed Volatile Solids, %	86%
Digestate Volatile Solids, %	72%
Volatile Solids Reduction, %(1)	58%
Hydraulic Retention Time, days	18.2
Temperature, degrees Fahrenheit	96.0

Parameter	Value
pH, -	7.2
Alkalinity, mg/L as $CaCO_3$	1,963
Volatile Acids, mg/L	61
Volatile Acids/Alkalinity	0.033

(1) Estimated using the Van Kleeck equation

To add some critical information, a round of sampling was completed in December 2023. Three 24-hour composite samples were collected, but only one sample was analyzed for nitrogen species. The average results are summarized in Table 7 below.

Table 7 Average results for sampling performed in December 2023

Parameter	Influent	Primary Clarifier Feed	Primary Effluent	Secondary Effluent
Total Alkalinity, mg/L as $CaCO_3$	337	297	310	140
Biochemical Oxygen Demand	355	297	193	53
Dissolved BOD	118	113	117	ND
c-Biochemical Oxygen Demand	280	267	187	42
Nitrate as N	ND	ND	ND	23
Nitrite as N	ND	ND	ND	0.50
Ammonia-Nitrogen	32	36	39	9.3
Kjeldahl Nitrogen	56	54	52	21
Dissolved Kjeldahl Nitrogen	33	37	31	9.4

NA = Not Detected

Influent TKN is a key parameter when designing a system to achieve a certain effluent total nitrogen concentration. Limited influent TKN data is available, as summarized in Table 8.

Table 8 Influent TKN and related data

Date	BOD, mg/L	TSS, mg/L	TKN, mg/L	BOD/TKN
4/5/2022	430	600	77	5.6
10/4/2022	250	260	46	5.4
1/5/2023	330	260	53	6.2
12/21/2023	380		56	6.8
Average	**348**	**373**	**58.0**	**5.7**

The limited data shows an average influent TKN concentration of 58 mg/L.

4. Effluent Limits

4.1 RWQCB Board Order

On June 30, 2016, the RWQCB adopted Board Order R7-2016-0015 (Board Order), which describes the Waste Discharge Requirements (WDRs) and other terms and conditions of operation for the WWTP. The Board Order

requires the WWTP to remove constituents that present the greatest risk to groundwater quality such as nitrogen, coliforms, and total dissolved solid (TDS). According to the United States Environmental Protection Agency (US EPA), the maximum contaminant level (MCL) for Nitrate as Nitrogen is 10 mg/L. Per the Board Order, it is assumed all nitrogen available converts to nitrate/nitrite so Total Nitrogen (TN) is used as the measurement of concern. The wastewater effluent limitations per the Board Order are outlined in Table 9.

Table 9 WWTP effluent limitations per Board Order R7-2016-0015

Parameter	30-Day Average	7-Day Average
20°C BOD_5	30 mg/L	45 mg/L
TSS	30 mg/L	45 mg/L
pH	6.0 - 9.0	
30-Day Daily Dry Weather Discharge	< 3.6 MGD	
DO	Upper Zone of the Ponds > 1.0 mg/L	
TDS	Not to Exceed 300 mg/L above the Water Supply	
TN	10 mg-N/L	

The WDRs identified TN and TDS as constituents of concern. The WDRs state that effluent TDS is not to exceed a level of 300 mg/L above the potable water supply "reasonably protects present and anticipated beneficial uses of groundwater in the area," (typical incremental addition of dissolved salts from domestic water usage is 150 to 380 mg/L.) The level of TDS in Banning's potable water supply is approximately 200 mg/L, which would result in an effluent TDS limit of approximately 500 mg/L. The new TN limit is therefore the primary parameter of interest to the design of the new membrane bioreactor (MBR) plant.

Currently, there is no set timeframe for the City to comply with the Board Order.

4.2 Title 22

The City plans to serve recycled water from the WWTP to the Sun Lakes Country Club (and other irrigation customers in the future). The WWTP effluent must therefore meet the State Water Resources Control Board, Division of Drinking Water (DDW) water recycling criteria outlined in the California Code of Regulations Title 22 requirements. These criteria are summarized in Table 10 below.

Table 10 California Code of Regulations Title 22 requirements

Parameter	Limit
Average Daily Turbidity, nephelometric turbidity unit NTU(1)	<2
Chlorine Residual, milligram-minutes per liter (mg-min/L)(2)	450
Total Coliform, most probable number (MPN), per 100 milliliters (mL)(3)	2.2

(1) Effluent cannot exceed 5 NTU more than 5% of the time. Effluent cannot exceed 10 NTU at any time. Coagulant must be added if the influent to the filter exceeds 5 NTU for more than 15 minutes, or 10 NTU at any time.
(2) Under minimal modal contact time (CT) of 90 minutes. This corresponds to a residual of 5 mg/L or less, or any process that achieves 5-log virus removal.
(3) No more than one sample per month can exceed an MPN of 23 per 100 mL.

4.3 Beaumont Basin Plan

The City's primary recycled water customer will be the Sun Lakes Country Club, which is located above the Beaumont Basin. In order to serve the Sun Lakes Country Club, the water must meet the Beaumont Basin Plan Maximum Benefit Objectives listed in Table 11 below.

Table 11 Beaumont Basin Plan Maximum Benefit Objectives

Parameter	Limit
Effluent Total Dissolved Solids (TDS), mg/L	<330
Effluent Total Nitrogen (TN), mg/L	<5.0

The Beaumont Basin Plan will not apply to any of the other potential recycled water users listed in Table 1 in Section 1.2.

5. Proposed Improvements

5.1 Overview

The Banning WWTP will be upgraded to meet the Title 22 regulations and the Board Order's future TN limit. The MBR system would facilitate reuse by producing an effluent that is suitable to be fed directly to the reverse osmosis (RO) desalination facility, which will be necessary to comply with the Beaumont Basin Maximum Benefit Objectives of TDS and TN.

5.2 Design Flows and Loads

The average dry weather flow for the new facility will be 3.6 MGD. The average influent characteristics are assumed to be similar to that indicated by the available data and presented in Table 5 in Section 3.

The average influent characteristics used for design are summarized in Table 12.

Table 12 Influent characteristics used for design

Parameter	Influent
pH, -	7.6
TSS, mg/L	318
BOD, mg/L	317
TKN, mg/L	58
BOD/TKN	5.5
NO2-N, mg/L	0
NO3-N, mg/L	0
Total Alkalinity, mg/L as CaCO3	337
Temperature, degrees Fahrenheit	66
Temperature, degrees Celsius	19

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5.3 Process Modeling, Evaluation, and Selection

5.3.1 Approach

The main goal of the process modeling was to determine the volumes of the aeration basins required to meet the new effluent limits, in particular, a total nitrogen concentration of 10 mg/L. Due to the limited influent and plant operating data, a more conservative design approach was used than what would be used for a plant where more data is available so that the design could be optimized. The specific design goals and limits are summarized in Table 13.

Table 13 Design goals and limits

Parameter	Value
Effluent Ammonia-Nitrogen, mg/L	<0.25
Effluent Total-Nitrogen, mg/L	<7.5
Aerobic Solids Retention Time, days	>8

Due to the limited data available, the BioWin model settings were left as default as much as possible. One change was to revise the membrane tank aeration settings from the default coarse bubble aeration to fine bubble aeration. This resulted in reasonable model-estimated DO concentrations (2.0 – 4.0 mg/L, depending on the conditions modeled and the loads used). Another change was to adjust the half saturation DO concentration (KDO) for nitrite oxidizing bacteria (NOBs). The default KDO setting in the model is 0.50 mg/L, which is double the K_{DO} for AOBs. The K_{DO} for NOBs was reduced to match the K_{DO} for AOBs (0.25 mg/L).

5.3.2 Process Configurations

Two different activated sludge process configurations were modeled. A conventional modified Ludzack-Ettinger (MLE) process configuration where the return activated sludge (RAS) and mixed liquor return (MLR) from the aerobic zone are both delivered to the anoxic zone, as shown in Figure 3.

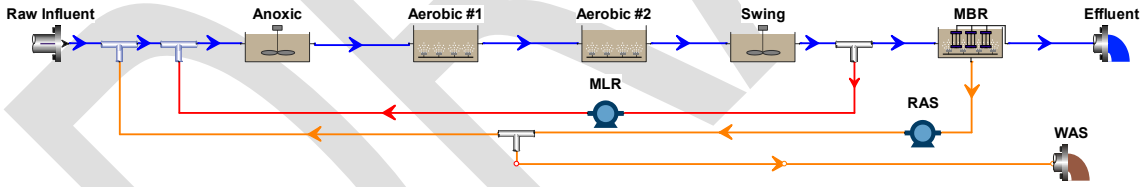

Figure 3 Modified Ludzack-Ettinger process configuration

In MBR systems, the concern with the MLE configuration is that the combination of the high DO concentration in the membrane tank and the high RAS ratio of 4.0 can result in excessive DO loads returned to the anoxic zone. Since the heterotrophic bacteria that perform denitrification would consume oxygen rather than nitrate, excessive DO may limit denitrification in the anoxic zone. An alternative process MLE configuration often used in MBR systems routes the RAS to the aerobic zone and relies on the MLR to return both nitrate and biomass to the anoxic zone, as shown in Figure 4.

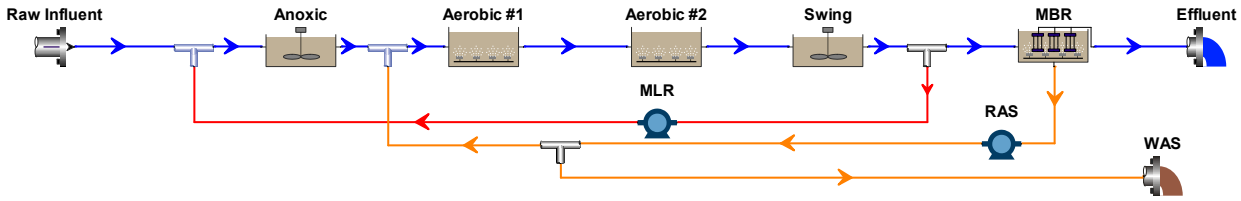

Figure 4 Alternative Modified Ludzack-Ettinger process configuration

Both process configurations were shown to be successful for this Project. However, the alternative configuration required excessive MLR ratios (more than 10 times the influent flow). In addition, the alternative configuration requires splitting the RAS flow equally between all aeration basins in service mid-basin, on top of the equal split of primary effluent required at the inlet of the aeration basins. SRT calculations for the alternative configuration are also more complex since there are three different mixed liquor suspended solids (MLSS) concentrations in the system (anoxic zone, aeration basin excluding anoxic zone, and membrane tank) as opposed to just two for the MLE configuration.

The model process used for design can be the Modified Ludzack-Ettinger Process Configuration, Alternative Modified Ludzack-Ettinger Process Configuration, or equal.

5.4 Description of New Unit Processes

The WWTP will be upgraded as described below. Where applicable, the new equipment will match existing equipment as much as possible.

To ensure sufficient redundancy, all major process units, including primary clarifiers, aeration basins, membrane tanks and chlorine contact basins, should be designed to provide the required treatment with the largest unit out of service during max month flows and loads. Assume a maximum-month flow peak factor of 1.2 and load peak factor of 1.25.

Conceptual design drawings of the proposed WWTP upgrades, including a process flow diagram (PFD), plant hydraulic profile, site layout, and piping and instrumentation diagram (P&ID) are included in Attachment A. All conceptual drawings are subject to change by the Design Build Entity (DBE).

5.4.1 Headworks

The DBE is to perform a condition assessment on the existing ferric sulfate system and design improvements as necessary. See Tables 42 through 44 in Section 6.1.3 for design guidelines.

5.4.2 Primary Clarifier

The 3.6 MGD capacity of the two existing primary clarifiers does not allow for peak daily flow or redundancy. Therefore, a third primary clarifier is recommended for the Project. See Table 45 in Section 6.1.4 for design guidelines.

5.4.3 Secondary Treatment System

The existing trickling filters and secondary clarifiers will be replaced with a new MBR system consisting of aeration basins and membrane tanks. The requirements of the new secondary treatment system process units are summarized in Table 14 and Table 15.

Table 14 Mechanical fine screen design criteria

Parameter	Value
Minimum No. of Standby Screens	1
Total Capacity Goal, MGD	3.6
Size of Screens Opening, Micron	2000
External Water Source Required	Yes (high pressure spray)

Table 15 MBR system design criteria

Parameter	Value
Effluent Ammonia-Nitrogen, mg/L	<0.25

Parameter	Value
Effluent Total Nitrogen (TN), mg/L	<7.0
Aerobic Solids Retention Time (aSRT), days	>8
Total Capacity Goal of Aeration Basins, MGD	3.6
Total Capacity Goal of Membrane Tanks, MGD	3.6

Additional design guidelines can be found in Table 46 in Section 6.1.5 for additional design guidelines.

5.4.4 Chlorine Contact Tank

The existing chlorine contact tank is rated for 2.4 MGD and 60 minutes of contact time. In order to achieve 3.6 MGD capacity and the 90 minutes of contact time required under Title 22, a second chlorine contact tank is recommended.

The requirements of the new chlorine contact tank are summarized in Table 16.

Table 16 Chlorine contact tank design criteria

Parameter	Value
Chlorine Contact Tank (CCT)	Meet California Title 22 Requirements
Total Capacity Goal of CCTs (Existing and New), MGD	3.60

Additional design guidelines can be found in Table 47 in Section 6.1.6 for additional design guidelines.

5.4.5 Solids Handling

In order to accommodate the 3.6 MGD plant capacity, it is recommended that the existing digesters be reconfigured. The existing secondary digester can be converted into a primary digester by adding recirculation pumps and heating elements to the system. This will provide a total capacity of 482,000-gallons and 24,000 gpd of wasted sludge if the three existing digesters are operated in parallel.

Additionally, it is recommended that a new mechanical sludge thickener, such as a rotary screw or drum thickener, be installed to improve the total solids content in the digester influent.

See Table 48 in Section 6.1.7 for design guidelines.

5.4.6 RO Facility

In order to comply with the Beaumont Basin Maximum Benefit Objectives to supply Sun Lakes Country Club with recycled water, a portion of the MBR permeate will be fed to a reverse-osmosis (RO) facility. There are two options for the RO facility. Option 1 is to install an RO facility at the WWTP. Brine will be disposed of in salt evaporation ponds to be constructed at the WWTP site. Option 2 is to install the RO facility at the point-of-use, the Sun Lakes Country Club. Under Option 2, brine can be disposed of into the sewer, which would ultimately return to the WWTP, or through a brine line to be built from the RO facility to the Beaumont Wastewater Treatment Plant.

The minimum requirements of the new RO facility are summarized in Table 13.

Table 17 RO facility design criteria

Parameter	Value
Effluent Total Dissolved Solids (TDS), mg/L	<330
Effluent Total Nitrogen (TN), mg/L	<5.0
Minimum Total Blended Flow, MGD	0.76

Additional design guidelines can be found in Table 49 in Section 6.1.8.

6. Engineering Design Guidelines

6.1 Mechanical

The following tables contain the Engineering Design Guidelines for mechanical criteria. The DBE is responsible to review and finalize these requirements for complete functioning facilities.

Table 18 General mechanical requirements

Item	Parameter	Criteria	Notes
0	Scope	This document applies to General Mechanical Requirements	
1	Stainless Steel Treatment	All fabricated stainless steel shall be pickle and passivated (P&P) to ASTM380 to remove free iron, heat tint oxides, weld scale, and other impurities. P&P shall be done by full emersion of fabricated parts.	
		SST items include: piping, structural elements, supports, fabricated items. cut items, and other parts. Field cutting and drilling of holes in SST boxes or fabricated items shall be field cleaned and P&P. Field cutting shall be approved on a case by case basis.	
2	PVC Flanges and Plastic Flanges	Vanstone flanges are NOT allowed	
3	Factory Acceptance Testing (FAT)	Contractor shall certify, a minimum of 48 hours before the date of the FAT witness by the City, that all manufacturer QC activities and the approved factory test plan have been successfully completed without failures/deficiencies/damage/incompleteness /not passing. Contractor shall submit successfully completed, signed off factory test(s) by the manufacturer to the City. If not provided, City can cancel the FAT witness and DBE shall be responsible for all costs and impacts associated with rescheduling the FAT witness.	This is applicable if the City plans to perform the FAT witness.
4	Mechanical Equipment Installation Tolerances	Tolerances for all installations by DBE of mechanical equipment (valves, gates, flowmeters, pumps, blowers, etc.) shall be within allowable manufacturers' requirements.	

6.1.1 Valves

Table 19 Valves, general

Item	Parameter	Criteria	Notes
0	Scope	This document applies to all valves.	
1	Valve Location	Valves shall be accessible (i.e., not buried, with chain operator or valve box), unless otherwise necessary and noted. Valves shall be installed in locations with enough room for maintenance personnel to maintain valves with the proper equipment. Minimize locating valves with actuators in classified areas, when possible.	

Item	Parameter	Criteria	Notes
2	Valve and Gate Automation	Apply automation on critical pipes and channels to enhance equipment O&M.	Automation and connection to SCADA is preferred.
3	Valve Maintenance	Incorporate dismantling joints into design layout to ease removal of valves.	
		Consider access hatches, rollup doors, and lifting devices for large and critical valves.	
4	Actuator Type	Incorporate pneumatic/electric actuators for proportional control (modulating) valves and gates, unless otherwise noted or not available.	Provide chain operator for valves over 6-ft high.
		Buried valves shall have extension stems to grade with square nuts and cast iron or steel pipe extensions. Stem supports shall prevent shearing of the stem.	
5	Actuator Sizing	Oversize actuator to allow for aging/corrosion/scaling/ clogging of equipment.	
6	Surge Control	Specify speed of opening and closing to avoid significant increase in pressures.	
7	Factory Testing Data	Submit Factory Acceptance Test data before shipment of the valve. The data shall also include certification of quality and test results for factory-applied coatings.	
8	Labeling and Valve Tags	Label all valves with manufacturer's name and working pressure cast in raised letters on valve body.	
		A Type 316 SS tag that includes the valve Reference Number shall be mounted to the valve with Type 316 SS attachments.	
9	Painting and Coating (General)	Required for the exterior surfaces of valves.	
		Required for the wet interior surfaces of ferrous valves.	
	Painting and Coating (Buried Valves)	Epoxy coated and wrapped with polyethylene encasement.	
	Painting and Coating (Above-ground Valves)	Ferrous interior surfaces: Epoxy.	
		Ferrous exterior surfaces: Epoxy.	
		Non-ferrous surfaces: Coat machined, polished, and non-ferrous surfaces (including gears, bearing surfaces and similar unpainted surfaces) with corrosion prevention compound which shall be maintained during storage and until equipment begins operation.	
10	Pressure Testing, Field	Conduct on closed valves.	
		Test system at pressure equal to 1.5 of design pressure. Maximum system pressure test shall not exceed valve manufacturer's maximum pressure limit.	
11	Bolts, Nuts, Studs, Washers, Gaskets	All bolts, nuts, studs and washers shall be of Type 316 stainless steel. Buried service shall be stainless-steel 316 with bituminous coating.	
		Gaskets shall be full-face type. Gasket material shall conform to manufacturer's recommendations.	
12	End Connections	2.5-inch and smaller may be provided with threaded or flanged end connections	
		3-inches and larger require flanged end connections	
		Unless otherwise shown or otherwise specified, all flanged valves shall have ends conforming to AWWA C115, 125 lb. flange.	

Item	Parameter	Criteria	Notes
13	Manufacturer	A single manufacturer shall be made responsible for coordination of design, testing, and furnishing each valve.	
		Where 2 or more valves of the same type and size are required, the valves shall be furnished by the same manufacturer.	
		Shall have a successful record of not less than 5 years in the manufacture of the valves indicated	
		Require manufacturer to provide Certificate of Proper Installation.	

Table 20 Gate valves

Item	Parameter	Criteria	Notes
0	Scope	This document applies to gate valves.	
1	Type	Types: -Resilient-seated (conform to AWWA C509). -Metal-seated double disk	
2	Manufactures	Manufacturers: Mueller -Or equal	
3	Pressure	Rated 250 PSI.	Minimum.
4	Materials	Body: -Ductile iron. Trim: 316 SS	
5	End Connections	Type: -Exposed: flanged ends conforming to ANSI B16.1, Class 125. -Buried: mechanical joint ends conforming to ANSI A21.11. Bell and spigot end connections by City approval only.	
6	Size	Maximum 16”.	

Table 21 Check valves

Item	Parameter	Criteria	Notes
0	Scope	This document applies to swing check, slanting disc, chemical check, and air service check valves.	
1	Swing Check	Type: -Full opening passages. -Flanged cover piece (for access to disc). -Outside lever and spring. -Air cushioned or hydraulic cushioned, controlled closing.	
		Size: 3-inches and larger.	
		Pressure: Rated 250 PSI working pressure.	
		Manufacturers: APCO/DeZurik. -Or equal	
		Body: Heavy Cast or Ductile Iron.	
2	Slanting Disc	Type: -55 degree seating angle. -Guaranteed not to stick in closed position. -Flanged connections for Dashpot or Hydraulic Snubber. -Position indicator.	
		Pressure: Rated 250 PSI working pressure.	
		Manufacturers: APCO/DeZurik. -Or equal	

Item	Parameter	Criteria	Notes
		Body: Ductile Iron, Carbon Steel, and Stainless Steel.	
3	Chemical (Type Check Valve)	Type: -Self-contained, straight-through design. -Used for all liquid chemical feed systems.	
		Material: Chlorinated poly(vinyl chloride (CPVC), conforming to ASTM8F441.	
		Manufacturers: Ryan Herco. -GF Plastic Systems. -Asahi/America. -Or equal	
4	Air Service (Type Check Valve)	Type: -Double Door Check Valve. - Wafer or Lugged Style -Operate without hammer or shock. -Spring loaded. -Normally closed.	
		Body: 316 Stainless Steel.	
		Manufacturers: APCO/DeZurik. -Or equal	
		Hinge and stop pins 316 SS.	
5	End Connections (all check valve types)	Flanged (conforming to ANSI/ASME B16.1), Class 125.	
6	Position Switches (all check valve types)	Housing: 316 Stainless Steel.	
		Manufacturers: -Westlock Silver Bullet Model 316. -Or equal.	

Table 22 Double offset butterfly valves

Item	Parameter	Criteria	Notes
0	Scope	This section applies to all types of double offset butterfly valves for reclaimed water applications	Double Offset, AWWA
1	Materials	Ductile Iron Body (A536 65-41-12)	
		Flanged End Connection (AWWA)	
		Shaft Seal: Dry Shaft or Wet Seal	EPDM O-rings or Chevron V-Type Packing (pressure energized seal only)
		Trim: 316 SS	
2	Size	8” and above	6” and under refer to Gate Valve Guidelines
3	Maximum Flow Velocity	16 fps (Bi-Directional Sizing Required)	
4	Manufacturers	DHC (BTD), VAG (EKN AWWA), or City pre-approved equal	
5	Pressure Class	Class 250B and Class 150B Class 250 with ANSI 125 flanges (Back Spotting of Flanges Required)	
6	Disc	Ductile iron ASTM A536 65-45-12, 316 Stainless Steel	
		Double offset disc design for all valves	

Item	Parameter	Criteria	Notes
		Prior to application of required coating install stainless steel seat edge (where applicable).	
		Mechanically secured to shaft with Type 304 stainless steel, straight through taper pins and locking nuts (where applicable).	Material selection for pins shall be based on pressure class
		No travel stops for disc on interior of body	
		Bubble tight with rated pressure applied from either side of valve.	
		Bi-directional for control of flow from either direction.	
7	Rubber Seats	Rubber seats shall be in-body or disc and the retainer shall be a (1-piece) 316 stainless steel seat retainer.	
8	Disc Seating Edge	Type 316 Stainless Steel or Nickel Aluminum Bronze.	
		Seat shall completely cover and envelope the entire leading edge of the disc.	
		Valves disc that do not completely cover the disc edge or that have coated disc edges are not acceptable.	
9	Shaft Seals	Shaft seals shall be EPDM O-ring or Chevron V-type pressurized seals only.	
10	Coating	Fusion Bonded Epoxy	
		Epoxy shall be a minimum of 10 mils DFT	
11	Operators	Sized for bi-directional flow	
		AWWA Worm Gear: 300 ft-lb input torque to stop	
12	Input Torque	Required input torque with maximum hand wheel pull of 80lbs and 150 ft. lbs. for 2” operating nuts. Per AWWA C504	
13	Gear Reducers	Totally enclosed, permanently lubricated and sealed gear reducers.	
		Self-locking with open and close stops provided to limit valve disc travel.	
		Worm Gear (SAMBO AWWA or City pre-approved equal).	
		Buried service gears shall be minimally 90% grease packed with a generous slathering of all interior surfaces.	
		Submit calculations for valve torque requirements to Engineer as part of Shop Drawing submittal package. Velocity for dynamic torque must be 16 fps.	Mill Test Reports Shall Be Required for Plain Stem Valve Metallic Components (Operators Excluded)
14	Compliance	Compliant with AIS requirements (for SRF AIS Funding) - Manufactured using Iron and Steel products produces in the United States.	
		In Accordance with AWWA C504.	

Table 23 Pressure reducing/pressure relief valves

Item	Parameter	Criteria	Notes
0	Scope	This document applies to pressure reducing, pressure sustaining, flow control, level control, and pressure relief valves.	
1	Type	Single diaphragm globe or angle valve.	
		Hydraulically operated, adjustable, pilot controlled.	
2	Materials	Body Materials: Ductile Iron (ASTM A 536).	
		Trim: 316 SS.	
3	Pressure	Rated: 250 PSI.	

4	Manufacturers	Manufacturers: Cla-Val Company. -Or equal	

Table 24 Diaphragm valves

Item	Parameter	Criteria	Notes
0	Scope	This document applies to diaphragm valves.	
1	Service Types	Service Types: -Chemical. -Water.	
2	Body	Materials: PVC; CPVC; PVDF; and 316SS where appropriate.	
3	Diaphragm	Materials: -EPDM. -TFE	
4	Manufacturers	Manufactures: -ITT Grinnel. -Asahi/America. -Hayward -RG Sloane -Chemtrol	

Table 25 Air release and vacuum valves

Item	Parameter	Criteria	Notes
0	Scope	This document applies to air release, air and vacuum, and combination air valves.	
1	Air Release Valve (ARV)	Type: Float operated, compound lever.	
		Include isolation valve to allow removal of valve without shutting down the equipment.	
2	Air and Vacuum Valves (AVV)	Float has no direct contact with air and water.	
		Float is centered or peripheral guided for positive shutoff into seat.	
		Seat shall be fastened into the valve cover.	
3	Combination Air Valves (CAV)	Type: Single-body construction designed to provide all functions within one housing.	
4	Air Valve for Vertical Turbine Pumps	Types: -3-inches and smaller: AVV with throttling device. -4-inches and larger: Dual body CAV mounted on top of surge check.	
5	Pressure	See Air Valve Sizing Table in 2.1.8	
6	Materials	Body: Cast Iron, Ductile Iron, Stainless steel or composite materials.	
		Trim: 316 SS.	
7	Manufacturers	Manufacturers : -APCO/DeZurik. -A.R.I. Flow Control Accessories. -Or equal	

Table 26 Air valve sizing

Air Valve Sizing				
Service	**Valve Type**	**Pressure Range**	**Manufacturer and Model**	**Notes**
Potable / Reclaimed Water	ARV	≤ 150 PSI	-A.R.I. S-050 or Equal.	
		> 150 PSI	-A.R.I. S-015 or Equal.	
		> 500 PSI	-A.R.I. S-016 or Equal.	

Air Valve Sizing				
Service	**Valve Type**	**Pressure Range**	**Manufacturer and Model**	**Notes**
	AVV	≤ 150 PSI	-A.R.I. K-060 or Equal.	
		> 150 PSI	-A.R.I. K-060 or Equal.	
		> 500 PSI	-A.R.I. K-064 or Equal.	
	CAV	≤ 150 PSI	-A.R.I. D-040 or Equal.	
		> 150 PSI	-A.R.I. D-060-C HF or Equal.	
		> 500 PSI	-A.R.I. D-064-C HF or Equal.	
Sewer / Wastewater Treatment Plants	ARV	≤ 150 PSI	-A.R.I. S-050 or Equal.	
	AVV	≤ 150 PSI	-A.R.I. K-020 or Equal.	
	CAV	≤ 150 PSI	-A.R.I. D-023 or Equal.	

Table 27 Sluice/slide gates

Item	Parameter	Criteria	Notes
0	Scope	This document applies to sluice or slide gates.	
1	Design Requirement	The design requirements for the slide, frame and guides shall be either “Standard” or “Heavy Duty”.	
		The “Standard” or “Heavy Duty” gate design shall be determined by the “gate factor”	
		The “gate factor” is the product of the width times the design head	
		If the “gate factor” exceeds 120, the “Heavy Duty” design shall be used.	
		The “Heavy Duty” gate may also be selected regardless of the “gate factor” number, if it is designated in the Gate Schedule	
2	Manufacturers	Manufacturers: -Rodney-Hunt. -Waterman. -Whipps. -Golden Harvest. - Fontaine-Aquanox -Or approved equal.	
3	Materials	Body: Stainless Steel, Type 316.	Type of material should be reviewed for suitability for environment. 316 L should be used for all welded components
		Gate: Stainless Steel, Type 316.	
		Trim: 316 SS.	
		Slide gates, seals: - UHMWPE for sides and top - Neoprene or EPDM for bottom	
4	Standard Frame	In addition to the minimum requirements of AWWA C561, latest edition, the guide fabrication with UHMWPE shall support the slide fully in open position.	
		Design for the maximum design head specified, with a minimum safety factor of 4 with regard to ultimate tensile, compressive and shear strengths published in referenced ASTM Material standards.	
		Where frames extend above the operating floor, the frame design is to be self-supporting so that no further reinforcing or support is required. For cases where extreme height requires additional bracing, such bracing shall be provided by the gate manufacturer, and shall be submitted for approval by the Engineer.	
		From Stainless Steel plate and/or structural members to provide a rigid, one piece frame and guide. Minimum thickness of all members 1/4 –inch. Bolt together frame and guide designs are not acceptable.	

Item	Parameter	Criteria	Notes
		Design shall allow for embedded mounting directly to a wall with stainless steel anchor bolts and grout or mounting to a wall thimble with stainless mounting studs and a mastic gasket material. Mounting style shall be as shown on the contract drawings and gate schedule.	
		The structural portion of the frame and guide that incorporated the seat/seals shall be framed or welded into a one-piece shape for rigidity. Frame and guide designs that consist of two or more bolted.	
		Structural members for water loads transferred through the assembly bolts are specifically not acceptable.	
		Gussets shall be “wraparound” gussets. The gussets shall extend over the guide section to ensure the guide surfaces are at 90 degrees. The wraparound gussets shall be welded to guide groove as well as welded to and extend fully to the outside width of the wall base plate. Gussets to be on vertical guide members and bottom invert guide member to stabilize guide groove dimensions, prevent twisting of guide groove transfer force to wall mounting plate at each anchor location besides the wall opening.	
		Invert seal shall be mounted in the frame with mechanical fasteners. As an alternate, the invert seal may be mounted to the slide with mechanical fasteners.	
		Allow replacement of the frame’s top, bottom and side seals without dismantling or removing the frame from the concrete or wall thimble.	
		Mounting surface of the frame to be flat and provide leak-tight closure between the frame and the mounting surface.	
		Face mounted, wall thimble mounted or embedded frame, as shown on the contract drawings or in the Gate Schedule.	
		Ultra-high molecular weight polyethylene (UHMWPE) per ASTM D4020 to be inserted into guide for contact with slide.	
		Minimum UHMWPE contact width of 1 inch.	
		A rigid stainless invert member shall be provided across the bottom of the opening. The invert member shall have a face continuous with the sides of the frame on downward opening weir gates.	
		A rigid stainless steel top seal member shall be provided across the top of the opening on gates designed to cover submerge openings.	
		Anchor bolts shall not pass through the sealing surface of the frame or guides.	
5	Heavy Duty Frame	Formed Stainless Steel Plate and/or structural members to provide rigid, one-piece frame. Note: multi-piece frame will only be considered when shipping restriction does not allow one-piece. If a multi-piece frame is proposed, submit this deviation for approval by the ENGINEER.	
		The structural portion of the frame that incorporates the seat/seals shall be formed or welded into one-piece shape for rigidity. Frame and guide designs that consist of two or more bolted structural members for	

Item	Parameter	Criteria	Notes
		water loads transferred through the assembly bolts are specifically not acceptable.	
		Minimum section thickness of all members shall be 1/4-inch. When the “gate factor” exceeds 240, minimum section thickness of all members shall be 3/8-inch.	
		Engagement dimensions must be increased to accommodate Heavy Duty Slide.	
6	Gates: Standard Slide	In addition to the minimum requirements of AWWA C561	
		All materials shall be stainless steel as called for in the gate schedule.	
		Rectangular or square.	
		Fabricated with a flat plate reinforced with structural members and/or formed plate stiffeners to form a rigid, one-piece slide. Minimum section thickness of all members, except seal retainers, shall be 1/4-inch	
		Reinforcing stiffeners shall be welded to the slide and mounted horizontally. Vertical stiffeners shall be welded on the outside of the horizontal stiffeners and gate surface for additional reinforcement and stress distribution.	
		Deflection shall not exceed 1/720 of the span of the gate or 1/16” whichever is less, when under the maximum design head	
		Design for the maximum design head specified, with a minimum safety factor of 4 with regard to ultimate tensile, compressive and shear strengths published in the referenced ASTM material standards	
		The stem connector shall be constructed of two angles or plates and shall be welded to the slide and to at least one horizontal stiffener. A minimum of two bolts shall connect the stem to the stem connector	
7	Gates: Heavy Duty Slide Design	Stainless steel plate with structural members and/or formed plate stiffeners to form rigid, one-piece slide. Note: multi-piece slide will only be considered when shipping restriction does not allow one-piece. If a multi-piece slide is proposed, submit this deviation for approval by the ENGINEER.	
		Minimum section thickness of all members, except seal retainers, shall be 1/4-inch. When “gate factor” exceeds 240, the minimum section thickness of all members, except seal retainers, shall be 3/8-inch.	
		Heavy Duty slide shall include an increased section at insertion into the guides (thick-edge design). When the “gate factor” exceeds 120, the minimum gate edge thickness inserting into the guide groove shall be a 1 ½” plate, or a boxed fabrication, suitably designed, to achieve for each foot of slide height a minimum section modulus of 3.50 $inch^3$ as well as at sections through the horizontal ribs. When the “gate factor” exceeds 240, the minimum gate edge thickness inserting into the guide groove shall be a minimum 2” thick plate, or a boxed fabrication, suitably designed, to achieve for each foot of slide height, a minimum section modulus of 7.00 $inch^3$ as well as at all sections through the horizontal reinforcement ribs.	
8	Seals	Seal shall be self-adjusting.	

Item	Parameter	Criteria	Notes
		- UHMWPE for side and top seals - Shall be neoprene or EPDM for bottom seals.	
		All gates shall be provided with a self-adjusting, low coefficient of friction, UHMW polyethylene seat/seal system with a continuous compression cord to ensure contact between the seals/seats and the slide, and to restrict leakage in accordance with the performance requirements listed in this specification. Self-Adjusting seals shall be on the sides and top of upward opening gates and shall be on the sides and bottom of downward opening gates.	
		The seal system shall have been factory tested to confirm negligible wear (less than 0.01”) and proper sealing. The factory testing shall consist of an accelerated wear test comprised of a minimum of 25,000 open-close cycles using a well-agitated sand/water mixture to simulate fluidized grit, and a re-test of leakage to confirm compliance with this specification’s leakage limits.	
		Resilient J-seals, P-seals or crown seals shall not be acceptable.	
		Pressure pads, or any other arrangement requiring adjustment to maintain seal compression shall not be acceptable.	
		All seals must be bolted or otherwise mechanically fastened. Arrangements with seals that are force fit or held in place with adhesives are unacceptable.	
		The seals shall be mounted so as not to obstruct the waterway opening.	
		All upward opening gates shall be provided with a resilient seal to seal the bottom portion of the gate. The seal shall be attached to the invert member of the frame. As an alternate, the invert seal may be mounted to the bottom of the slide. Invert seal shall be held in place with stainless steel attachment hardware	
		The seal system shall be durable and shall be designed to accommodate high velocities and frequent cycling without loosening or suffering damage.	
		All seats/seals shall be field replaceable without removing the frame from the wall or wall thimble.	
9	Stems	Shall be full depth ACME threads with a 16-microinch finish.	
		Stainless steel	
		The stem shall be constructed of solid stainless steel bar for the entire length. Extension pipes are not acceptable.	
		The stem shall be threaded to allow full travel of the slide unless the travel distance is otherwise shown on the Contract Drawings or Gate Schedule.	
		Minimum outside diameter at the stem thread shall be 1.50	
		Stems shall have rolled threads or machine-cut-and-polished threads of the American Standard full depth ACME type with a surface finish on the thread flanks of 16 micro-inch or better. Stub ACME threads or metric DIN 103 threads are not acceptable.	

Item	Parameter	Criteria	Notes
		The selected stem configuration shall provide the most efficient combination of stem diameter/pitch/lead and keep the operating temperature at the stem nut to a minimum during operation. If the proposed stem configuration will result in any deviation from the specified speed range, the proposed deviation must be submitted for approval by the ENGINEER.	
		Stem diameter, stem guide quantity and stem guide spacing shall provide a slenderness ratio (l/r) not exceeding 200.	
		Tensile strength shall be suitable to withstand the stem design force, as defined in AWWA C561, with a safety factor of 5 on the ultimate tensile strength published in the referenced ASTM material standards.	
		Compressive strength shall be suitable to resist buckling at two times the stem design force, as defined in AWWA C561. Determine critical buckling load using Euler Column formula defined in AWWA C561, where C=2.	
		Stems of more than one section shall be joined with silicon bronze (ASTM B584 C87200 or C87300) or stainless steel couplings which shall be threaded and keyed to the stem or threaded and bolted to the stem. Fasteners shall include an anti-loosening feature such as thread locking compound or nylon-insert nuts. Fasteners shall be stainless steel and shall be lubricated at assembly.	
		Stems, on manually operated gates, shall be provided with adjustable manganese bronze (ASTM B584 C86300 or C86500 or the wrought equivalent) stop collars to prevent over closing of the slide.	
		Gates having width greater than 2 times the height shall be provided with 2 stems and 2 lifting mechanisms connected by a tandem shaft.	
		Cross drill and connect the stem to the slide structural sections. Fasteners shall include an anti-loosening feature such as thread locking compound or nylon-insert nuts. Fasteners shall be stainless steel and shall be lubricated at assembly.	

Table 28 Miscellaneous valves

Item	Parameter	Criteria	Notes
0	Scope	This document applies to ball valves; solenoid valves; and pet cocks.	
1	Ball Valves	General: Line size ball valve and union shall be installed upstream of each solenoid valve, in-line flow switch, or other in-line electrical device for isolation during maintenance.	
	PVC Ball Valves (Sizes 1/2-inch to 4-inches)	Materials: Body, ball, stem and connector - Schedule 80 PVC or CPVC.	
		Type: Double block (or full block) designed to prevent seal carrier blow-out.	
		<u>Pressure:</u> -Rated to 150 PSI at 70°F. -90° ON/OFF actuation.	

Item	Parameter	Criteria	Notes
		Manufacturers: -Hayward (Sizes 1/2-inch to 4-inches). -Spears. -M&T Plastic Inc. (Sizes 1/2-inch to 6-inches) -The Harrington Corp. (Sizes 1/2-inch to 4-inches). -Ryan Herco Products Corp. (Sizes 1/2-inch to 4-inches). -or approved equal.	
	Bronze or SS Ball Valves (Sizes 1/2-inch to 4-inches)	Type: -For general water and air service. -Top entry type. -Screwed ends. -Full bore ports. -Hand lever operators.	
		Materials: -All-bronze or SS. -Teflon seats.	
		Pressure: Minimum rating of 250 PSI for Bronze or 1,000 PSI WOG (cold, non-shock).	
		Manufacturers: -Apollo Ball Valve Division. -Or equal.	
2	Solenoid Valves	Type: -Two-way, normally closed (i.e., closes when de-energized). -Packless construction. -Threaded ends. -Threaded conduit connection. -Strainer to be installed upstream of each valve.	
		Materials: -Seat: Resilient Buna "N" and Teflon. -Body: Forged brass or stainless steel body and ball where appropriate -Internal parts (in contact with fluid): Series 300 and 400 stainless steel.	
		Manufacturers: ASCO/DeZurik. -Or equal	
3	Pet Cocks (2.5-inch and smaller)	Provide lever or tee handle operator.	
		Materials: All brass (ASTM B 16).	
		Manufacturers: Lunkenheimer Figure 478 or 479. -Or equal	

Table 29 Valve actuators

Item	Parameter	Criteria	Notes
0	Scope	This document applies to all valve actuating equipment. This includes manual and automated electric and pneumatic actuators.	
1	Chain actuators	Required for manual shut-off valves mounted higher than 6-feet above working level.	
2	Spur Gear and Hand wheel	Required for: -Gate valves 8-inches and larger. -Where chain actuator is required.	
3	Automated Electric Actuators	Manufacturers: AUMA. -Or equal	Must meet area classification requirements.

Item	Parameter	Criteria	Notes
4	Automated Pneumatic Actuators	Manufacturers: Fisher. -Or equal	
5	Manual Operator (exposed)	Types: -Worm gear drive and nut. -Hand wheel or chain.	
		Chain wheel, sprocket, and aluminum chain required if mounted more than 6 feet above the operating floor.	
6	Manual Operator (buried valves)	Provide valve box, 2-inch square operating nut, and position indicator.	
		Extension: required if top of valve nut is greater than 12-inches below top of valve box.	
7	Valve Boxes (buried valves)	Material: -Cast iron. -Concrete. -Or similar.	
		Cover Size: allow operation of valve actuators.	
		Cover Marking: -Potable Water: Water. -Recycled Water: RW. -Sanitary Sewer: Sewer.	

Table 30 Pipe and valve schedule

Item	Pipe Material	Preferred Type of Valve	Preferred Manufacturers
Process (> 3")			
FORCEMAIN	HDPE, Steel, Ductile Iron, ANSI A21, 51 (AWWA C151) AWWA C900	Plug	DeZurik
INFLUENT / EFFLUENT	Steel, AWWA C200, Welded.	Plug (in vault),	DeZurik, Clow
		Gates	Waterman, Fontaine-Aquanox
SECONDARY EFFLUENT		Plug (in vault)	DeZurik, Clow
TERTIARY EFFLUENT		Butterfly (in vault)	DeZurik, Pratt
FINAL EFFLUENT		Butterfly (in vault)	DeZurik, Pratt
		Gates	Waterman, Fontaine-Aquanox
RECYCLED WATER		Butterfly (in vault)	DeZurik, Pratt
		Gates	Waterman, Fontaine-Aquanox
PRIMARY EFFLUENT	Steel, AWWA C200, Welded or Ductile Iron, ANSI A21, 51 (AWWA C151).	Plug (in vault)	DeZurik, Clow
SLUDGE / SCUM / FROTH	Ductile Iron, ANSI A21, 51 (AWWA C151), Glass-lined or Steel Sch. 40, ASTM A120, Glass-lined, HDPE (below ground only).	Plug	DeZurik, Clow
CIRCULATED SLUDGE		Plug	DeZurik, Clow
RAW SLUDGE		Plug	DeZurik, Clow
THICKENED SLUDGE		Plug	DeZurik, Clow
MIXED LIQUOR		Plug	DeZurik, Clow

Item	Pipe Material	Preferred Type of Valve	Preferred Manufacturers
RAS / WAS / SUPERNATANT	Ductile Iron, ANSI A21, 51 (AWWA C151), Glass-lined, HDPE (below ground only).	Plug	DeZurik, Clow
THICKENER PRESSURIZED RECYCLE		Plug	DeZurik, Clow
THICKENER SUBNATANT		Plug	DeZurik, Clow
DIGESTER SUPERNATANT		Plug	DeZurik, Clow
DIGESTED SLUDGE	Ductile Iron, ANSI A21, 51 (AWWA C151), Glass-lined or PVC, ASTM D2241, HDPE (below ground only).	Plug	DeZurik, Clow
DRAIN	Ductile Iron, ANSI A21, 51 (AWWA C151).	Plug	DeZurik, Clow
STORM DRAIN	RCP, AWWA C302.	Plug	DeZurik, Clow
STRUCTURE UNDERDRAIN	Ductile Iron, ANSI A21, 51 (AWWA C151).	Plug	DeZurik, Clow
SANITARY SEWER	Extra Strength. PVC or HDPE	Plug	DeZurik, Clow
STRUCTURE UNDERDRAIN COLLECTOR	Ductile Iron, ANSI A21, 51 (AWWA C151).		
PLANT INFLUENT	Glass-Lined Ductile Iron, ANSI A21, 51 (AWWA C151), HDPE (below ground only).	Plug (in vault).	DeZurik, Clow
			Waterman, Fontaine
GRIT SLURRY	Ductile Iron AWWA C151, HDPE (below ground only).	Plug	DeZurik, Clow
Misc. Piping, all sizes			
FUEL OIL RETURN	Steel, ASTM A120; Sch. 40, Black, Welded.	Ball	Watts, Apollo
FUEL OIL SUPPLY		Ball	Watts, Apollo
LUBE OIL		Ball	Watts, Apollo
WASTE LUBE OIL		Ball	Watts, Apollo
HOT WATER RETURN	Steel, ASTM A120, Sch. 40, Black, Welded. Ductile Iron, ANSI A21, 51 (AWWA C151), HDPE (below ground only).	Ball	Watts, Apollo
HOT WATER SUPPLY	Steel, ASTM A120, Sch. 40, Black, Welded. Ductile Iron, ANSI A21, 51 (AWWA C151), HDPE (below ground only).	Ball	Watts, Apollo Maximum temperature is 200 degrees F
INSTRUMENT AIR	Stainless Steel 316SS, ASTM A312, Sch. 80.	Ball	Swagelok
DIGESTER GAS (Low Pressure)	Stainless Steel 316SS, ASTM A312, Sch. 10.	Butterfly, Eccentric Plug	DeZurik
VACUUM	Stainless Steel 316SS, ASTM A312, Sch. 80.	Ball	Swagelok
PLANT AIR	Stainless Steel 316SS, ASTM A312, Sch. 80	Ball	Swagelok
FIRE PROTECTION SPRINKLER SYSTEM	Steel, ASTM A120, Sch. 40, Black.	By Code	By Code

Item	Pipe Material	Preferred Type of Valve	Preferred Manufacturers
ENGINE COOLING WATER RETURN	Steel, Ductile Iron, ANSI A21, 51 (AWWA C151).		
SUMP PUMP DISCHARGE	Ductile Iron, ANSI A21, 51 (AWWA C151).	Plug	DeZurik, Clow
ENGINE EXHAUST	Steel, ASTM A120, Sch. 40, Black, Welded. Stainless Steel 316SS, ASTM A312, Sch. 40S.	N/A	Caterpillar
	Follow Caterpillar recommendations.		
LIQUIFIED AERATION	Stainless Steel 316SS, ASTM A312, Sch. 40S.	Butterfly, eccentric butterfly	DeZurik, Fisher
LIQUID PETROLEUM GAS	Steel, ASTM A106 or A53, Sch. 80, Seamless, Black.	By code	
RAIN WATER LEADER	Steel, ASTM A120, Sch. 40, Black, Welded.		
DEFOAMING CHEMICAL SOLUTION	PVC, Sch. 80.	Ball	Asahi/America, Spears
PLANT DRAIN	PVC, Sch. 80 or Ductile Iron, ANSI A21, 51 (AWWA C151).	Plug	DeZurik
POTABLE WATER	Distraction / Transmission: - PVC (AWWA C900 or C905, CPVC (ASTMF 441), Sch. 80 - Ductile Iron, ANSI A21, 51 (AWWA C151) - Welded Steel Plumbing: - Sch. 80 PVC		
LANDSCAPING SPRINKLER SYSTEM	PVC, Sch. 80 or Copper, ASTM B88, Type K.		
DEMINERALIZED WATER	PVC, Sch. 80 or FRP.	Ball	Asahi/America, Spears
PLANT OVERFLOW	Steel, AWWA C200, Welded or RCP, AWWA C302.	Gates	Waterman, Clow
RAW WATER	Steel, AWWA C200, Welded or RCP, AWWA C302.		
SANITARY DRAINS AND VENTS	Steel, ASTM A120, Sch. 40, Black, Welded.		
SAMPLE LINES (SEE LIST AT RIGHT)	Ductile Iron, ANSI A21, 51 (AWWA C151) or PVC, Sch. 80.	Ball	Swagelok
CHEMICAL DRAIN AND VENT	Polypropylene, ASTM D2146, Sch. 40, Heat Fused Joints or Tempered Class Pipe.	Ball	Asahi/America, Spears

Item	Pipe Material	Preferred Type of Valve	Preferred Manufacturers
UTILITY WATER (NON-POTABLE WATER)	Copper, ASTM B88, Type K or Ductile Iron, ANSI A21, 51 (AWWA C151); Distraction / Transmission: - PVC (AWWA C900 or C905, CPVC (ASTMF 441), Sch. 80 - Ductile Iron, ANSI A21, 51 (AWWA C151) - Welded Steel Plumbing: - Sch. 80 PVC		
FROTH SPRAY	PVC, Stainless Steel 316SS, ASTM A312, Sch. 40S.		
FOUL AIR	FRP.		
Chemical Storage and Feed Facilities			
HYPOCHLORITE	Sch. 80 CPVC. Double contained in buried and unburied locations	Ball	Asahi/America, Spears
LIQUID ALUM		Ball	Asahi/America, Spears
POLYMER - ANIONIC		Ball	Asahi/America, Spears
POLYMER - CATIONIC		Ball	Asahi/America, Spears
POLYMER - NONIONIC			
CAUSTIC SODA	Steel, ASTM A106 or A53, Sch. 40, Seamless, Black	Ball	Asahi/America, Spears
SULFUR DIOXIDE (GAS OR LIQUID STATE)	Steel, ASTM A106 or A53, Sch. 80, Seamless, Black.		
SULFURIC ACID	Stainless Steel 316SS if <10% concentration, ASTM A312, Sch. 40S. Pipe joints to be welded.	PVDF ball or diaphragm valves, or TFE lined steel plugs for >10% acid concentration.	
LIME SLURRY	Flexible Rubber Hose.		
Channel Control/Isolation			
HEADWORKS	N/A	Sluice	Fontaine, Hydrogate, Whipps

6.1.2 Pumps

Table 31 Pumps, general

Item	Parameter	Criteria	Notes
0	Scope	This document provides guidelines for general pump requirements, which shall be applicable to pump installations.	
1	Configuration	The pumps and pumping appurtenances shall be by a single manufacturer responsible for furnishing and functional operation of complete pump system.	

Item	Parameter	Criteria	Notes
2	General	No cavitation shall be allowed in pumps operating within the stable operating range for the specified operating conditions. For the purposes of this provision, cavitation shall be recognized and accepted as being present in a pumping unit if cavitation noise can be perceived either by the human ear or by acoustic instruments or devices. The presence or absence of cavitation noise shall be verified by the City and/or its consultant during both the factory/field performance tests of the pumps and during operation of the pumps up to the end of the warranty period. To assist in revealing potential cavitation during the factory/field performance tests, in addition to all other required tests, the Manufacturer shall force the pumps to operate at the specified minimum net positive suction head available for each of the following conditions: minimum flow rate, design flow rate and head, and maximum flow rate.	
3	Testing	Engineer to ensure pumps and motors are tested at factory. Minimum of 7 certified sets of test data shall be submitted. Acceptance criteria shall be in accordance with ANSI/HI 14.6" Grade 1U	Verity the testing range falls within operational performance range: Flow +10%, Head +6%
4	Design	Specify pump type and identify process. Specify performance curve and pump data. Specify electrical requirements and controls. Assemble drawings showing location and process. Specify pump drive and motor. Shall require Contractor to produce bearing calculations, indicate points on H/Q curves, pump detailed description, installation drawings.	
5	Mechanical Seal	Where indicated for the pump seal, they shall be of the best quality, using the Manufacturer's suggested materials best suited for the specific application. For drainage and liquids containing sediments, the seals shall be fresh-water flushed, using lantern rings.	Mechanical Seals If using mechanical seals, use Couplers or Split Seal if in a location that is difficult to access.
		Mechanical Seals: rotating balanced O-ring type. Water lubrication - cooling. Materials: Metal parts except springs: 316 stainless steel. Springs: Hastelloy C. Seal faces: Tungsten carbide, except where required for chemical resistance or in the presence of oxidants. In such cases, follow pump manufacturer's recommendation. Elastomers: Viton.	
6	Flanges (suction and discharge)	Cast Iron (ANSI/ASME B16.1), Class 25, 125, 250, and 800. Or ANSI/ASME B16.5. Or ASTM A-36 steel plate with a minimum wall thickness of ¼ inch.	
7	Lubrication	Vertical pump shafts (clean water) - Product water lubricated; Deep-well/dry barrels - Water or oil lubricated bearings, seals, and enclosed line shafts. Vertical propeller, mixed-flow, and turbine pumps or bowl sizes 10-inches and larger (other than deep well pumps) - Stainless steel tube attached to the column for grease lubrication of the bottom bearing	
8	Vortex Suppressors	Provide for vertical pumps with marginal submergence.	
		In accordance with Hydraulic Institute requirements	

Item	Parameter	Criteria	Notes
9	Pump Casing	Ductile Iron, Austenitic (ASTM A 439).	
		Cast iron, Stainless steel or Bronze.	
		Stainless Steel, Type 416 or 316, SAE63 Bronze.	
		Hot-dipped galvanized (not buried or submerged), stainless steel (buried or submerged).	
10	Pump Guards	All rotating surfaces must be guarded.	
		Pump guards are to be provided by the manufacturer.	

Table 32 Horizontal centrifugal pumps

Item	Parameter	Criteria	Notes
0	Scope	This document applies to horizontal, variable-speed, non-clog or non-clog mixed flow centrifugal pumps.	
1	Operation	1200* rpm, maximum, ventilated spaces.	*Maximum shaft speed dependent on casing/ impeller diameter
		Waste Activated Sludge or Return Activated Sludge, up to 15,000 mg/l suspended sludge, 6.5-8.5 pH, 65-85 degrees F.	
2	Liquids	Unscreened municipal wastewater solids.	
		Unscreened industrial wastewater solids.	
3	Materials	Casing - Cast iron.	
		Suction and discharge flanges - provide by pressure class.	
		Volute lining - Fusion bonded epoxy.	
		Impeller - Silicon bronze.	
		Shaft - Stainless steel type 316.	
		Bearings - minimum 100,000 hours, grease lubricated.	
4	Drive	Horizontal inverter-duty.	
5	Manufacturers	See Pump Schedule.	

Table 33 Submersible Sump Pumps

Item	Parameter	Criteria	Notes
0	Scope	This document applies to submersible sump pumps.	
1	Operation	Intermittent and continuous, submerged.	
2	Liquids	Process water.	
		Surface runoff.	
		Washdown.	
3	Materials	Shaft: Stainless Steel 316.	
		Impeller: cast iron or SAE63 bronze.	
		Seal: mechanical, single or double, in an oil reservoir.	
		Hardware: exposed shall be stainless steel 316.	
		Connection: flange or screw with neoprene pressure hose.	
4	Drive	Submersible electric.	
5	Manufacturers	See Pump Schedule.	

Table 34 Submersible wastewater pumps

Item	Parameter	Criteria	Notes
0	Scope	This document applies to submersible wastewater pumps.	
1	Operation	Constant speed, on/off cycling, submerged partially submerged or dry condition up to 65' depth.	

2	Liquids	Process drainage from cleaning and maintenance activities, up to 15,000 mg/l suspended sludge, 50-95 degrees F.	
		Unscreened wastewater solids, RAS, WAS.	
	Materials	Casing: Cast iron Class 30.	
		Pump lining - Fusion bonded epoxy.	
		Shaft: Stainless steel 316.	
		Impeller: Cast stainless steel.	
		Seal: tandem double mechanical, in an oil reservoir.	
		Hardware: exposed shall be stainless steel 316.	
		Bearings: bronze.	
		Maximum efficiency, minimum, percent: 65.	
3	Manufacturers	See Pump Schedule.	

Table 35 Sludge dewatering piston pumps

Item	Parameter	Criteria	Notes
0	Scope	This document applies to dewatering sludge piston pumps.	
1	Operation	Continuous duty, reciprocating, dual piston, single discharge.	
		Sludge cake, 20-30% solid concentrations.	
2	Liquids	Digested dewatered municipal wastewater sludge.	
		Inorganic solids with moderate abrasive characters.	
3	Type	Pistons: Steel or stainless steel face and core.	
		Piston head: Buna-N (Nitrile) rubber bonded to steel core.	
		Rods: High strength steel, hard chrome plated; or chrome steel.	
4	Drive	TBA	
5	Manufacturers	See Pump Schedule.	

Table 36 Positive displacement rotary lobe pumps

Item	Parameter	Criteria	Notes
0	Scope	This document applies to positive displacement rotary lobe pumps.	
1	Operation	Permeate/Backwash.	
2	Mounting	On concrete pad in weather exposed location. Baseplate shall be galvanized.	
3	Materials	Casing: Stainless steel, Type 316.	
		Shaft: stainless steel 316.	
		Shaft Sleeve: Stainless steel, Type 316.	
		Pump: Minimum of two tri-lobe rotors driven through positive timing gears, bearing assembly direct.	
		Hardware: Stainless steel, Type 316.	
		Feed Pump: Inverter-duty, NEMA 4X control panel with VFD, 480 Vac.	
4	Manufacturers	See Pump Schedule.	

Table 37 Progressive cavity pumps

Item	Parameter	Criteria	Notes
0	Scope	This document applies to progressive cavity pumps for sludge feed service.	
1	Operation	Digested moderately abrasive sludge, organic solids and small inorganic particles, 6-9 pH, 60-105 degrees F.	

2	Materials	Pump body: Cast iron. Shaft: 416 chrome steel or AISI 4120 chromium nitride coating. Rotor and Stator: Two-stage convoluted rotor, convoluted stator. Hardware: Stainless steel, Type 316. Rotor Drive Configuration: Gear joints: Alloy steel, grease lubricated crowned, with ridge spline design. Pivot joints: alloy steel, cartridge design cross journal connected by connecting rod. Pin joints: High temperature grease lubricated, positively sealed and lubricated. Shaft seals and bearings: bearings shall be 100,000 hour minimum, grease lubricated.	
3	Drive	Closed coupled block: direct coupled motor and gear reducer or gear motor Bearing assembly -V-belt: V-belt drive.	
4	Manufacturers	See Pump Schedule.	

Table 38 Vertical turbine pumps

Item	Parameter	Criteria	Notes
0	Scope	This document applies to vertical turbine pumps.	
1	Operation	Recycled water, 6-8 pH, 50-75 degrees F.	
2	Materials	Pump body: Epoxy-coated cast iron. Shaft: 316 stainless steel. Hardware: Stainless steel, Type 316. Rotor Drive Configuration: Gear joints: Alloy steel, grease lubricated crowned, with ridge spline design. Pivot joints: alloy steel, cartridge design cross journal connected by connecting rod. Pin joints: High temperature grease lubricated, positively sealed and lubricated. Shaft seals and bearings: bearings shall be 100,000 hour minimum, grease lubricated.	
3	Drive	Vertical, solid/hollow shaft, high efficiency & thrust, variable speed.	
4	Manufacturers	See Pump Schedule.	

Table 39 Axial & mixed flow pumps

Item	Parameter	Criteria	Notes
0	Scope	This document applies to centrifugal axial and mixed flow pumps.	
1	Operation	Suction speed shall be calculated IAW ANSO/HI 1.3. Suction specific speed shall not exceed 12,500.	
		Return activated sludge, up to 15,000 mg/l suspended sludge, 6.5-8.5 pH, 65-85 degrees F.	
2	Liquids	Unscreened municipal wastewater solids.	
		Unscreened industrial wastewater solids.	
3	Type	Rigid sphere, 3" min passing through the pump from inlet to discharge.	
4	Drive	Electric motors only.	
5	Manufacturers	See Pump Schedule.	

Table 40 End-suction centrifugal pumps

Item	Parameter	Criteria	Notes
0	Scope	This document applies to horizontal, end- suction centrifugal pumps.	
1	Operation	Utility water - potable, recycled.	
		Boiler, heat loops, brine solutions.	
2	Materials	Casing - Cast iron.	
		Suction and discharge flanges - provide by pressure class.	
		Volute lining - Fusion bonded epoxy.	
		Impeller - Silicon bronze.	
		Shaft - Stainless steel type 316.	
		Seals - mechanical.	
		Bearings - minimum 100,000 hours, grease lubricated.	
3	Manufacturers	See Pump Schedule.	

Table 41 Pump schedule

Item	Pump Type	Preferred Manufacturers	Notes
Process Stream			
Influent Pumping-Dry Pit	Vertical, non-clog centrifugal.	Flygt non-clog, Vaughan	
Influent Pumping-Wet Well	Submersible.	Flygt, Vaughan, ABS-Sulzer	
Primary Sludge	Progressive cavity.	Seepex, Moyno	
	Centrifugal.	WEMCO Hidrostal non-clog impeller, Vaughan	
Scum	Submersible chopper centrifugal.	Flygt non-clog, Vaughan Recirculation, ABS-Sultzer	
		WEMCO Hidrostal.	
Secondary Scum	Submersible chopper centrifugal.	Flygt non-clog, Vaughan, ABS-Sulzer	
	Centrifugal.	Allis Chalmers, Vaughan	
	Vertical Turbine Solid Handling.	Fairbanks Morse	
	Low head propeller (axial/mixed flow)		
RAS/WAS Sump	Submersible sump.	ABS-Sulzer, Flygt	
Waste Activated Sludge (WAS)	Centrifugal screw pumps.		
	Centrifugal.	Worthington / Fairbanks Morse.	
Thickened Waste Activated Sludge (TWAS)	Progressive Cavity.	Allweiler, Seepex, Moyno.	
Digester Feed Blended Primary/TWAS	Progressive Cavity.		
Digester Mixing	Chopper centrifugal.	WEMCO Hidrostal, Vaughan.	
Digester Secondary Heat Loop	ANSI Horizontal end suction.	Aurora.	
Digester Sludge Heating Recirculation	Chopper or screw centrifugal.	WEMCO Hidrostal, Vaughan.	

Item	Pump Type	Preferred Manufacturers	Notes
Digested Sludge Transfer	Progressive cavity.	Allweiler (NEMO, Seepex are both good alternatives), Moyno.	
Dewatering Feed	Progressive cavity. Rotary Lobe.	Allweiler. Vogelsang.	
Dewatered Sludge	Dewater sludge piston.	Schwing Bioset, Putzmiester.	
Aeration Basin	Submersible.	ABS-Sulzer	
Return Water	Submersible.	Flygt, Vaughan, ABS-Sulzer	
Primary Heat Loop	ANSI Horizontal end suction.		
Utility Water	ANSI Horizontal end suction.		
Boiler Recirculation	ANSI Horizontal end suction.		
Recycled Water	Vertical Turbine.		

6.1.3 Chemical Storage and Feed Facilities

Table 42 Chemical storage and feed facilities, general

Item	Parameter	Criteria	Notes
0	Scope	This document applies to Chemical Storage and Feed Facilities.	
1	Design Approach	Select proper material for chemical compatibility.	
		Define specific safety requirements for chemical handling.	
2	Access	Identify all requirements for maintenance and operations.	

Table 43 Chemical metering pumps

Item	Parameter	Criteria	Notes
0	Scope	This document applies to Chemical Metering Pumps.	
1	Containment	All pumps shall be contained to prevent chemical spills.	Chemicals to be located in the same containment area shall not pose potential hazards.
		Pump platforms shall be at least as high as containment wall.	
		Use reinforced concrete base or applicable as provided by manufacturer.	
2	Suction	Set tank height so metering pump suction line is full when only a few inches of liquid remain in tank.	
3	Duty / Standby	For 1 to 4 duty pumps per injection point, include 1 standby pump.	
		Standby pump should utilize a common discharge header.	
4	Type	Peristaltic Pump Types (Ferric Chloride, Hypochlorite, Bisulfite, Peroxide, Caustic, Polymer, Other Acids).	
		Equipped with compression rollers that are retractable for tube loading. One roller shall be fully engaged with the tubing at all times to prevent backflow or siphoning.	

Item	Parameter	Criteria	Notes
		Use no check valves or diaphragms and shall require no dynamic seals in contact with the pumpage.	
		Dry self-priming, capable of being run dry without damaging effects to pump or tube, with a maximum suction lift of 15 feet wc.	
		Chemical metering pumps shall have Ethernet interface with control capability and support for CIP communications with Control Logix.	
	Tubing	Provide a tubing element with molded fittings, which shall be self-locating when fitted into the pump head.	
		Replaceable with no disassembly of the pump head.	
		Select material and size for the chemical being metered.	
		Supply four tube elements of the specified size per pump.	
5	Manufacturers	Watson Marlow.	
		Flex-Pro by Blue-White Ind.	
		Or equal.	
6	Accessories	Quick disconnect flush connection, Pressure Relief Valve, Pressure Indicator/Pressure Switch High, Calibration Column, Leak Detection.	
	SCADA Indicators	SCADA Guidelines (see Appendices), Leak Detection.	
		Provide per OSHA requirements.	

Table 44 Chemical storage facilities

Item	Parameter	Criteria	Notes
0	Scope	This document applies to Chemical Storage Facilities.	
1	Days of Storage	7 days minimum.	15 days max preferred.
		Consider degradation characteristics for chemicals such as Hypochlorite in establishing solution strength and storage requirements.	
2	Accessories	Ultrasonic or radar level sensor.	
3	SCADA Indicators	SCADA Guidelines (see Appendices).	
4	SCADA Alarms	High Level--90 percent. Low Level--15 percent. Low-Low Level--10 percent.	
5	Awning	Provide awning for chemical storage and feed facilities.	
		Consider future solar panels in awning design.	
6	Access	Allow proper truck or forklift entry and exit.	
7	Loading Area	Utilize common loading facilities with secondary containment.	
8	Screening/Shade	Consider screening and shade to maintain chemical integrity. This is significant for Hypochlorite solution.	
9	Coating/Painting	Consider chemical compatibility with specified coating and paint.	
		Consider staining property of the chemical when specifying coating and paint	
10	Ladder with Gage	Tanks exceeding 10 feet in height shall be provided with an exterior ladder equipped with a safety cage meeting current OSHA requirements. The ladder shall be Fabricated of fiberglass reinforced plastic shapes.	
		A clear width of at least 18 inches, with rungs at least ¾ inch diameter and spaced not more than 12 inch	

Item	Parameter	Criteria	Notes
		apart, and a clearance of at least 7 inches between the back of the ladder and the tank wall.	
11	Safety Handrails and Kickplates	Safety Handrails and Kickplates meeting current OSHA requirements shall be provided around the top of each tank.	
		The handrail shall be attached to the ladder side rails and anchored to the tank head. A self-closing safety gate shall be provided at the ladder access opening.	
12	Safety Shower/ Eye Wash	Provide per OSHA requirements.	

6.1.4 Primary Clarifier

Table 45 Primary clarifier, general

Item	Parameter	Criteria	Notes
0	Primary Clarifier	This document applies to Primary Clarifiers.	
1	Primary Sludge Grinders	Inline sludge shredders and grinders	
2	Primary Sludge Pumps	Progressive Cavity	
3	Primary Scum Pumps	Recessed Impeller or Open Vane	
4	Primary Center Drive	Shaft Drive or Cage Drive	

6.1.5 Secondary Treatment System

Table 46 Secondary treatment system, general

Item	Parameter	Criteria	Notes
0	Secondary Treatment	This document applies to Secondary Treatment Systems.	
1	Fine Screens with Washer-Compactor	2000 Micron Opening, Center-feed	
2	Mixing Channel	To Ensure Proper Blending of PE and RAS Prior to Splitting to Aeration Basins	
3	Mixing Chimney	One per Aeration Basin to Ensure Proper Blending of pre-blended PE & RAS with MLR	
4	Mixing System (Anoxic and Swing Zones)	Large Bubble Mixing System Powered by Compressors	
5	Aeration Blowers	Turbo or Hybrid Blower System with 50% Turndown	
6	Butterfly Control Valves and Actuators	One per Aerated and Swing Zone with <0.25% Actuator Resolution	
7	Diffusers (Aerobic zones)	Discs or Tubes; to Match Entire Range of Blower Airflow	
8	Mixed Liquor Pumps	Centrifugal/Mixed Flow Pump	
9	MLR Pumps (Inside Each AB)	Axial/Mixed Flow Pump	
10	Membrane Cassettes(1)	Hollow Fiber/Flat Sheet	
11	Permeate/Backpulse Pumps(1)	Reversible Positive Displacement/Lobe Pump	

Item	Parameter	Criteria	Notes
12	Scour Blowers(1)	Turbo or Hybrid Blower	
13	WAS Pumps	Centrifugal Pump	

(1) Provided as part of MBR vendor scope of supply.

6.1.6 Chlorine Contact Tank

Table 47 Chlorine contact tank, general

Item	Parameter	Criteria	Notes
0	Chlorine Contact Tank (CCT)	This document applies to Chlorine Contact Tanks.	
1	Chlorine Dissolution System	Connect to Existing System	
2	Chlorine Solution Pumps	Dosing	
3	CCT Effluent Pumps	Centrifugal	

6.1.7 Solids Handling

Table 48 Solids handling, general

Item	Parameter	Criteria	Notes
0	Solids Handling	This document applies to Solids Handling Facilities.	
1	Rotary Drum/Screw Thickeners	Compact and entirely enclosed. Thickened sludge 4-8%	
2	Digester Recycle Pumps	Progressive Cavity	
3	Heat Exchangers	Spiral	

6.1.8 Reverse-Osmosis Facilities

Table 49 Reverse-osmosis facilities, general

Item	Parameter	Criteria	Notes
0	Reverse Osmosis (RO) Facilities	This document applies to Reverse Osmosis Facilities.	
1	RO Units	>93% Recovery	

6.2 Civil

6.2.1 Civil Narrative

The site is located at 2242 Charles Street in an unimproved portion of the parcel. The area of improvement is relatively flat and will require grading and drainage improvements to accommodate the new structures. According to the Riverside County flood map effective 08/28/2008, the site is characterized as an area of minimal flood hazard and does not lie within a floodplain characterized by a 100-year flood. Although flooding is not anticipated, proper grading and drainage of the site are required to minimize foundation settlement and overall building performance.

The proposed structures will be surrounded by hardscape and/or native landscape and shall be designed per the California Building Code. Therefore, site improvements shall be sloped away at a minimum of 2% for impervious areas or a minimum of 5% for pervious areas away from building foundations for a minimum of 10 feet in both scenarios. In addition to the grading considerations, these improvements are expected to exceed the 5,000 square feet impervious improvements threshold and will initiate a Water Quality Management Plan. On-site permanent Best

Management Practices (BMPs) are required to capture and treat the anticipated runoff calculated using the rational method. Geotechnical investigations will identify if infiltration is feasible.

All utility services required for the proposed improvements are expected to be provided through underground services. It is anticipated that existing potable water, wastewater, power, and gas services will be extended to the proposed structures, and additional permitting or approvals will not be required.

6.2.2 General Civil Requirements

The following table contains the Engineering Design Guidelines for civil criteria. The DBE is responsible to review and finalize these requirements for complete functioning facilities.

Table 50 General civil requirements

Item	Parameter	Criteria	Notes
0	Scope	This document applies to Civil Design at the treatment plants and collection/distribution systems.	
1	Site Layout	Allow for future logical expansion, safety, maintenance, and process flow.	
2	Preliminary Site Plan	Survey to be referenced to the Plant Coordinate System and to other separate surveys for pipelines, plant sites, and related facilities. Use survey for grading and drainage designs.	
		Perform geotechnical investigations to determine soil design parameters and existing conditions, corrosivity, boulders, cobbles, etc.	
		Provide corrosion control design testing and recommendations in a report.	
		Provide landscape buffer space along public roads for noise abatement and screening of facilities from public view.	
		Incorporate site specific requirements for special conditions.	
		Accommodate visitor, personnel, and truck traffic.	
		Provide access to the perimeter of all facilities.	
		Provide ample space for those facilities requiring secondary containment.	
		Include all transformers, substations and water supply facilities.	
		Provide space for emergency generators where required.	
		Identify work area, storage area and allowable site access.	
3	Facility Arrangement	Maintain separation of operations and administration buildings from process areas.	
		Arrange process components to minimize unusual equipment arrangements.	
		Provide adequate space for piping required between process units for future expansion.	
		Provide space for cranes and maintenance vehicles without impairing normal operation.	
		Valves should be in such a way as to maximize ease of operation	

Item	Parameter	Criteria	Notes
		Keep the number of confined spaces to a minimum.	
4	Access Roads	Use minimum width of 24 feet for Two-way traffic.	Include Striping.
		Provide ample space and route for chemical deliveries.	
		Design buildings to be accessible to Fire Department apparatus by roads with a minimum unobstructed width of 20 feet, and vertical clearance of 15 feet. Extend roads to within 150 feet of all building walls and entrances.	
		Discuss road design criteria and layout with local Fire Department.	
		Provide directional and traffic signs and markings for all one-way roads and direct traffic to key buildings.	
		All building accesses to comply with ADA requirements.	
5	Parking Area Design	Parking for employees and visitors to be located near operations and administration buildings.	
		Early during design, confirm the need for truck parking and types of trucks.	
6	Horizontal and Vertical Control	Establish basis before surveying.	
7	Coordinates	Locate structures with a minimum of two coordinates on the outside face of the wall or on column lines. Show on structural foundation plan.	
		Locate circular structures by a coordinate for the center point and by the radius.	
		Locate centerline of roads with coordinates on points of intersection and with adequate curve information.	
		Provide profiles for roads where control of grade is critical and/or vertical curves are required. Show stations, existing grade, vertical curves, horizontal curves and final grade.	
		Provide coordinates and/or dimensions for grading control points, top or bottom of slope to provide sufficient staking to control contractor's tolerances for grading.	
		Provide coordinates or distances from existing structures for appurtenances to fix their location. Locate coordinates on appurtenance's centerline.	
		Provide coordinates or distances from existing structures for yard fixtures.	
8	Grading	Comply with latest edition of the California Building Code, Appendix J. Any conflict with geotechnical report shall be signed and provided in a written report.	
		Entire site to allow future construction to meet minimum design slopes. Flowlines in landscape areas = 1%; Paved areas = 1%; Concrete gutters = 0.5%.	

Item	Parameter	Criteria	Notes
		Minimize use of cross gutters or ribbon gutters.	
		Maximum road grades for heavy truck traffic on a routine basis = 7%; short reaches of 10% to 12% allowed under special circumstances.	
		Where grass is mowed, maximum slope = 5:1 horizontal to vertical.	
		Provide access ramps per ADA requirements.	
		Finished grade around structures, slabs and buildings shall be at least 6-inches below floor or slab elevation.	
		Comply with all state and federal safety codes.	
		Show contours with control points established to provide for intersecting planes on the Plans.	
9	Drainage Systems	Drainage piping shall be at least 6-inch nominal size.	
		Incorporate drainage design during initial design phases.	
		Direct sheet flow and flowlines away from walkways, buildings, cut and fill slopes, and yard activities. Provide culverts where collected drainage must cross walkways.	
		Design inlet structures where it will not hinder facility operation.	
		Provide a design to eliminate soil or debris from entering storm drain system for large areas.	
		Storm drains and catch basin laterals are a minimum of 18-inch diameter. Inlet openings are a minimum 2 feet in length.	
		Daylight storm drains to ditches or connect to an off-site drain system. Avoid on-site detention basins where soils are poor. Do not retain storm water more than a few days.	
		Design to be maintenance free, if possible.	
		Calculate drainage runoff using a minimum of a 100-year storm. For storm calculations, use 24-hour duration. For conveyance, use 6-hour intensity. Where intense rainfall could result in runoff leaving property, use 2-hour intensity.	
		Use rainfall intensity/frequency graphs from the County of Riverside.	
10	Yard Piping	Design sanitary sewer, interceptors, mains, and interplant mains of a material that is resistant to hydrogen sulfide corrosion. Apply PVC liner or appropriate coating plate linings to structures.	Use CPVC, if exposed to sunlight.
		Design steel pipe in accordance with American Water Works Association Manual M11.	
		Design ductile iron pipe in accordance with Chapter 7, Sewers, Siphons and Force Mains.	

Item	Parameter	Criteria	Notes
		For pressure distribution pipes, use restrained joints. For non-restrained joints, use harness assemblies across joints. Must withstand the maximum pressure anticipated for the system.	
		Design to have access for maintenance and inspection and have manholes to grade. Provide flanged or restrained/screwed end plug cleanouts for all building drains and sewers and all force mains.	
		Try not to bury valves. Locate all valves in tunnels or buildings or construct vaults around necessary yard valves.	
		Gravity pipelines to be a minimum 6-inch in diameter and have manhole to grade. Locate manholes at all changes in direction. Maximum distance = 300 feet between manholes.	
		Design smaller pressure lines with pressure cleanouts at grade.	
		Provide air and vacuum relief valves at high points on pressure pipes. Provide drains or blowoffs at low points.	
		Lay piping in corridors and provide space for future piping as well as access for pipe repairs.	
		Provide pipe capacity calculations in conjunction with the plant hydraulic profile.	
		Design all pipe for positive embankment conditions. 95% max dry density compaction of pipe zone bedding and backfill.	
		Combine the drain system for return to the treatment system.	
		Minimize abandoned unused piping, removing as much existing piping as possible. If left in place, fill abandoned pipe with grout plug and seal ends.	
11	Piping at Structures	Encase piping in concrete whenever under a structure and to a distance structure determined by a 45° angle from the outside of the footing to the pipe.	
		Outside structure or encasement, provide flexible joints on pipes. Where pressure lines are involved, include flexible joints with a mechanical restraint. Where gravity lines are involved, flexible joints may be normal push-on joints. Use the first flexible joint 2 feet from the structure. Use two (2) two-foot long joints at a junction with a structure.	
12	Water Piping	Design as a loop. Provide three (3) isolation valves at all tee fittings (one on each tee outlet).	

Item	Parameter	Criteria	Notes
		Minimum horizontal separation requirements for the parallel construction of potable water pipelines: • 10-feet: Sewer, Secondary Treated Recycled Water and hazardous fluids • 4-feet: Disinfected Tertiary Recycled Water and Storm Drainage.	Maintain 1-foot vertical separation also.
		Crossings shall be constructed no less than 45-degrees and no joints are allowed within 8-feet horizontal distance.	
		Whenever a pipeline crossing must occur where required clearances cannot be met, special construction that minimizes the potential for contamination will be required as specified by CDPH.	
		Provide an air-gap for potable water supply to the site. Where potable water is used for landscape irrigation or process usage, provide a reduced pressure principle backflow assembly system, complete with test cock and isolation valves.	
		Develop galvanic protection plan for pipelines placed directly in soil. Plan shall explain system used, detailing type, required maintenance, and construction requirements.	
		Contractor shall CCTV RW lines following completion of construction	
13	Fire Protection	Comply with National Fire Protection Association and local fire codes.	
		Provided by a potable water supply.	
		Form a piping loop around the plant perimeter.	
		Submit fire hydrant spacing for review by local fire departments.	
		Place fire hydrants near cross streets and roads with fire truck access and where they are readily visible.	
		Provide break-off check valves for fire hydrants that are vulnerable to vehicular damage.	
14	Security	Security fencing to be 8-foot-high chain link fence, with 3 strands of barbed wire slanting outward around property line.	
		Construct posts per APWA-AGC Standard Plan 600-0. Design fabric and posts to PVC-coated galvanized fabric and Class 1A steel per standard specification for public works construction 206-6 and Districts Master Specification.	
		Identify all security requirements for the proposed project including fencing, access, lighting, CCTV, and alarms.	
		Utilize the non-jump type to prevent vandalism.	
15	Paving	Use latest Green Book requirements. Comply with California Department of Transportation Highway Design Manual Chapter 600.	

Item	Parameter	Criteria	Notes
		Determine R value for subgrade soils under pavement using a State of California Registered Geo-technical Engineer.	
		Design access roads with a maximum traffic index of 7.0. For parking areas use AR-8000 asphalt.	
		Concrete pavement may be used in lieu of asphalt pavement. Use concrete paving where truck parking is anticipated and where asphalt paving is incompatible with the materials handling requirements for the area.	
		Construct pedestrian walkways between structures and buildings of concrete with a minimum width of 4 feet and minimum thickness of 4 inches.	
16	Spill Prevention, Control and Countermeasure Plan	Identify all manholes on main lines and drains on laterals that may overflow.	
		Identify all storm drains that may be vulnerable to an overflow.	
		Identify all potential emergency diversions that may be made to prevent an overflow.	
		Identify storm drains that may be suitable for containment of an overflow, where the storm drain may be plugged in time to prevent discharge to surface waters.	
		Specify which storm drains should be covered with mat and sandbags and which should be used for containment if necessary.	
		Specify all equipment at hand during all bypass operations.	
		Specify when emergency bypass equipment shall be ready.	
		Specify training of contractor staff in District procedures and IEUA specified procedures.	
		Include in Contract Documents the spill response plan and required configurations. Indicate on drawings the installed locations of storm sewer mats, sandbags and pipe plugs for containment.	
17	Manhole Covers in Streets	Use Traffic Rated (H-20) manhole covers.	
	Hatches/Manholes covers	Always try to use a circular section. If rectangular is the only configuration, use double hatch (Belco)	
	Guard Posts	Always add around equipment if there is any chance of traffic exposure.	

6.3 Structural

6.3.1 Structural Narrative

The structural scope for the expansion of the City's WWTP involves the addition of new components and the expansion/alteration of existing components within the existing WWTP. The identified new components include:

Pre-Engineered Metal Building (PEMB) may house various equipment, such as MBRs, RO systems, pumps, blower, tanks, office building, and their corresponding concrete pads/pedestals and building foundations.

- Cast in-place concrete for all required equipment.
- Concrete pads for all required equipment.

Additionally, alterations to existing components are proposed, including:

- Conversion of the existing secondary digester into a primary digester.

6.3.2 Design Loads

Load combinations for analysis and design will be in accordance with ASCE 7-16, Chapter 2, as referenced in CBC 2022.

The loads for analysis and design will be in accordance with CBC 2022, Chapter 35.

As outlined in the CBC 2022, the environmental loads will be determined per ASCE 7. The wind loads will be calculated per Chapter 27 using the Directional Procedure, and the Seismic loads per Chapter 12 using the Equivalent Lateral Force Procedure.

The design loads for the Project are as follows:

- Risk Category: IV
- Wind Design Data
    - Basic Wind Speed, V: 96 mph
    - Exposure Category: C
- Earthquake Design Data
    - Site Soil Class: D-Default
    - Seismic Design Category: E
    - SDS: 1.57 g & SD1: 0.932 g
    - SS: 1.962 g & S1: 0.822 g
    - Seismic Importance factor, I_e: 1.5

6.3.3 General Structural Requirements

The following table contains the Engineering Design Guidelines for structural criteria. The DBE is responsible to review and finalize these requirements for complete functioning facilities.

Table 51 General structural requirements

Item	Parameter	Criteria	Notes
0	Scope	This document applies to Structural Design.	
1	General Code Requirements	Comply with the latest editions of the CBC, ACI, AISC, ASCE, AWS, AWWA, AASHTO and CMAA. Detailed code requirements shall be per the latest edition of the following codes: • General Design: per CBC Chapter 16 and ASCE 7 • Concrete: per CBC Chapter 19, ACI 318, ACI 350, and ACI 350.3 • Masonry: per CBC Chapter 21, and ACI 530/ASCE 5/TMS 402 • Steel: per CBC Chapter 22 and AISC 360, AISC 341, AISC 358	

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Item	Parameter	Criteria	Notes
		• Wood: per CBC Chapter 23 and NDS-2015	
2	Geotechnical Investigations	Required prior to structural design.	
		Establish location of water table and identify types of soil layers.	
		For structures located below grade and foundations supported by piles, soil-structure interaction analysis under seismic loading may need to be performed, unless it can be demonstrated by other methods that the structure is not subject to damage that renders the essential facilities inoperable after an earthquake.	
		Geotechnical Baseline Report (GBR) may be warranted for some critical structures.	
3	Dead Loads	An allowance for routed mechanical, piping, heating, ventilating and air conditioning (HVAC) and electrical equipment of 20 pounds per square foot will be included.	
4	Live Loads	Design floor area for the loads from specific equipment used or the 125 psf uniform load and 2,000 concentrated load minimums whichever is greater.	
		Design process equipment and pump rooms for minimum live load of 200 psf or maximum fork lift wheel loads, whichever is higher.	
		Electrical and control rooms shall be designed minimum live load of 300 psf.	
		Do not use CBC live load reduction.	
		Use AASHTO HS 20-44 loading where access is provided for trucks.	
5	Wind Loads	Basic Wind Speed (3 second Gust) = 110 mph (with consideration for special wind regions).	
		Exposure Category = "D"	
		Risk Category shall be per CBC Table 1604.5.	
6	Seismic Loads	All structures shall be designed according to the ASCE and CBC.	
		Analysis and modeling criteria for seismic design of buildings shall be in accordance with ASCE 7-10 Section 12.6.	
7	Lateral Earth and Liquid Loads	Consider all operating conditions within design criteria.	
8	Earth Pressure Loads - Below Grade Structures	Design for active soil pressure for all yielding walls.	
		Design for at-rest soil pressure for all non-yielding walls.	
		Surcharge soil pressure including AASHTO vehicle wheel loads if applicable (minimum surcharge equal to an additional 2 feet of soil).	
		Design for passive soil pressure.	
		Design for soil dynamic loads due to earthquake.	
9	Crane & Monorail Loads	Select design loads based on the heaviest item to be removed, with a safety factor. Use safety factor of at least one third, and higher if weights are not all available.	
		Design of crane girder, monorail beam and beam hangers and supports in accordance with CMAA.	

Item	Parameter	Criteria	Notes
		Allow for future addition of cranes in areas of heavy equipment in structural design.	
		Impact and lateral loads shall be in accordance with CBC. Vertical deflection shall not exceed L/800 and horizontal deflection shall not exceed L/400.	
10	Crane Girders	Use adjustable bolted connections for fastening crane rail to girder. Welded connections are not permitted.	
		Continuous crane girders are not permitted. Simply supported crane girders shall have end connections capable of rotation under vertical loads.	
11	Thermal Loads	Consider in the design. Such forces will include, but not limited to those caused by piping expansion or contraction.	
12	Erection Loads	Consider in the design.	
13	Load Combinations, Drift and Deflection Limitations	In accordance with ASCE and CBC.	
14	Uplift Loads	Design structures for a minimum factor of safety against uplift and sliding of 1.25 when the structure is empty and there are maximum ground water levels.	
		Uplift forces with empty structure and maximum ground water levels shall be one of the load cases evaluated for designing the structure's base slab.	
15	Seismic Upgrade to Existing Structure	Eliminate missing links in lateral force resisting systems, correct gross deficiencies in seismic systems and strengthen non-ductile "weak links" in such systems.	
		Consistently upgrade entire structure for code prescribed requirements.	
		Weigh the exact performance required and the cost of various levels of retrofit for specific structures on a case-by-case basis.	
		When criteria for strengthening existing essential and other structures and elements for which such relaxation is proposed is to be presented together with a description of the justification.	
16	Materials - Steel and Miscellaneous	Structural Steel: ASTM A36.	
		Structural Shapes (W Shapes): ASTM A992.	
		Structural Steel Pipe: A53, Type E or S, Grade B.	
		Structural Tubing: ASTM A500, Grade B.	
		Carbon Steel Bolts (for minor structural connections not exposed to corrosive environment): ASTM A307.	
		Connection Bolts (subject to vibration, cyclic, or fatigue loading): ASTM A325 SC, galvanized per ASTM B695.	
		Connection Bolts (not subject to vibration, cyclic, or fatigue loading): ASTM A325 N, galvanized per ASTM B695.	
		Anchor Bolts, studs, inserts, and fasteners (exposed to water, groundwater, sewage, sewer gas, or areas above sewage) sleeved and unsleeved: Type 316 stainless steel.	

Item	Parameter	Criteria	Notes
		Anchor Bolts, studs, inserts, and fasteners (not exposed to water, groundwater, sewage, sewer gas, or areas above sewage) sleeved and unsleeved: ASTM F1554, galvanized per ASTM B695.	
		Concrete anchors and adhesive capsule anchors: Type 316 stainless steel.	
		Anchor bolts and concrete anchors (in contact with aluminum): Type 304 or 316 stainless steel.	
		Welding Electrodes: E70XX Low hydrogen type or as approved.	
		Perform all welding to approved and certified AWS procedures.	
17	Materials - Concrete	Cement: ASTM C150 Type II or Type V.	
		Reinforcement: ASTM A615 Grade 60.	
		Cast in place concrete: 4000-psi minimum, 28 day compressive strength.	
		Lean concrete for mud mats: 2500-psi minimum, 28 day compressive strength.	
		Concrete for duct banks: 2500-psi minimum, 28 day compressive strength.	
		Design the expansion, contraction, and construction joints to adequately tolerate differential movements due to settlement, temperature, and shrinkage effects.	
		Provide all types of joints in structures with waterstop and UV resistant system where water tightness is required.	
18	Materials - Aluminum	All aluminum: 6061-T6 and ASTM B221 and ASTM B308.	
		Bolts and components (connecting aluminum): Type 304 or 316 stainless steel.	
		Aluminum guardrails and handrails (rails, posts, and fitting-assembly spacers): 6063 or T6 extruded aluminum pipe of 1-1/2-inch outer diameter and 0.145 inch wall thickness.	
		Aluminum guardrails and handrails (other parts not listed above): 6063 extruded aluminum or 214-F aluminum casting.	
		Aluminum ladders: 6063-T6 or 6061-T6.	
		Design the finished diameter of holes for unfinished bolts to be not more than 1/16 inch larger than the nominal bolt diameter.	
		Perform all welding to approved and certified AWS procedures.	
19	Materials - Masonry	Concrete block; concrete masonry unit: Standard medium weight, (unless specified to use lightweight: maximum 105 pcf), ASTM C90, Grade NI.	
		Brick: ASTM C62, Grade MW.	
		Mortar minimum compressive strength: 1,800 psi ASTM C270 Type S.	
		Cement: ASTM C150, Type II.	
		Grout minimum compressive strength: 2,000 psi ASTM C476	
		Reinforcement Yield Strength: 60,000 psi ASTM A615.	

Item	Parameter	Criteria	Notes
		CMU is not acceptable for below grade facilities and structures.	
20	Facilities	Essential facilities are those which are required to maintain the flow of wastewater through the plants.	
21	Water Holding Structures	Do not back fill until the basin passes a leak test. During leak testing, the liquid level in the tank shall be at maximum operating levels.	
	Protection of Concrete in Corrosive Areas	Use imbedded HDPE liner for protection of new cast in place concrete in corrosive areas such as preliminary treatment, headworks, primary clarifiers, digesters, etc. The HDPE liner shall be by AGRU Sure-Grip as manufactured by Agru America, or equal.	
	Concrete Structure Finish	Concrete structure finish requirements shall include “sack and patch” on of all exposed and submerged structures.	
22	Crack Control	In accordance with ACI 350, shall apply to all water holding structures.	
		Buildings with high humidity.	
		All structures exposed to repeated wash down or chemical or process spills.	
		All structures below groundwater.	
		All structures built in or placed in the water.	
		Structures below grade and above groundwater where dry interior is critical, including: basements pump stations, electrical vaults and valve houses.	
		Z factor shall be less than 95 kps per inch for service load cases for all structures exposed to raw wastewater, primary or secondary flows and sludge. In all other cases Z shall not exceed 115 kips per inch.	
23	Concrete Repair and Replacement	Inspection/assessment procedures and repair and/or replacement recommendations shall be in accordance with American Concrete Institute Standards.	
24	Foundations	Where conflict exists between Geotechnical reports and information, the most stringent requirement shall govern.	
		Explore alternatives to traditional pile driving for foundation designs.	
		Evaluate designs based on the nature of the soils and geological substrate and the proximity to sensitive noise receptors including human activities and sensitive wildlife species.	
		Alternatives include avoiding the need for piles, use of cast-in-place piling constructed in bored holes and low noise type pile drivers and extractors.	
		If pile driving is recommended, an acoustic engineer shall evaluate mitigation measures.	
25	Vibrating Equipment	The ratio of the natural frequency of the structure to the exciting frequency of the equipment shall be greater than 1.5.	
26	Equipment Anchorage	Anchor all equipment, tanks, piping, etc. in accordance with CBC requirements to resist wind or seismic loads.	
		Anchorage of equipment, piping etc. that is submerged in water or wastewater shall be	

Item	Parameter	Criteria	Notes
		designed for seismic induced water sloshed loads in addition to the other loadings.	
27	Floor Drainage	Ensure the drainage plan does not prevent proper pipe or conduit routing and does not result in impractical footing requirements.	
		Where practical, the floors of electrical rooms shall be sloped 1/4-inch per foot or more to flush door sills.	
		Other rooms that have smoothly coated floors and are not subject to washdown shall be sloped at least 1/4-inch per foot to floor drains.	
		Except for floors in office spaces, all other room floors shall be sloped at 3/8-inch per foot or more to floor drains.	
		The provision of a side slope to a drainage trench along the side of a room can allow more aggressive slopes and is sometimes preferred. Drainage trenches may be sloped with at least 1/4-inch per foot slope. Trenches should be 12 inches wide.	
28	Potential Loads from Solar Panels and other power generation equipment	Include loads from potential future solar panels for relevant structures as well as loads from any other power generation equipment.	

6.4 Architectural

The following table contains the Engineering Design Guidelines for architectural criteria. The DBE is responsible to review and finalize these requirements for complete functioning facilities.

Table 52 General architectural requirements

Item	Parameter	Criteria	Notes
0	Scope	This document applies to Architectural Design.	
1	Building Insulation	Comply with fire-resistance and flammability ratings.	
		Comply with code interpretations by governing authorities.	
2	Sound Attenuation Mineral Fiber Blanket Insulation	Provide insulations formed from inorganic mineral fibers complying with ASTM C 665 and ASTM C 764.	
3	Sound Attenuation Fire Blanket Insulation	Provide insulation containing non-asbestos, non-combustible compounds of spun mineral fiber felt formed into flexible and resilient blankets: 1) Thermal Conductivity (k), ASTM C 518: 0.27 Btu/in./hr/sf/degrees F. 2) Density, Manufacturer's Certified Test: 2.5 pcf. 3) Flame Spread, ASTM E 84: 25 maximum. 4) Smoke Developed, ASTM E 84: 50 maximum. 5) Fuel Contributed, ASTM E 84: 50 maximum.	
		Thickness: 3-inches.	
		Width: 16-inches.	
		Thermafiber SAFB by USG Interiors, or equal.	

Item	Parameter	Criteria	Notes
4	Fire Safing Insulation	Semi-rigid non-asbestos compounds of spun mineral fiber felt, meeting FS HH-I-521F, Type I, Class A and FS HH-I-558B, Form A, Classes 1 and 2. Nominal density of 4 pounds per cubic foot and a thermal conductivity (k) of 0.24: a. Flame Spread Rating, ASTM E 84: 15 maximum. b. Fuel Contributed, ASTM E 84: 1 maximum. c. Smoke Development, ASTM E 84: 0 maximum. d. Fire Resistance Rating, ASTM E 119: 3 hours minimum.	
		Thermafiber Fire-Safing Insulation by USG Interiors, or equal.	
5	Rigid Interior Wall Insulation	Provide insulations formed from extruded polystyrene foam, tight closed cell structure with no voids between the cells, high compressive strength, resistance to water penetration, and formed into rigid sheet complying with ASTM D 2842, ASTM C 518, ASTM C 177, and ASTM C 578, Type X: 1) Thermal Resistance Aged R-Valve per inch at 75 degrees F mean temp, ASTM C 518: 5.0. 2) Compressive Strength (lb/in) min., ASTM D 1621: 15. 3) Flexural Strength (lb/in) min., ASTM C 203: 40. 4) Water Absorption (% by volume) max., ASTM C 272: 0.1. 5) Water Vapor Permeance (perm), ASTM E 96: 1.1. 6) Flame Spread, ASTM E 84: 5. 7) Smoke Developed, ASTM E 84: 165.	
		Thickness: 1-1/2 inches.	
		Width: 23-7/8 inches.	
		Styrofoam Z-mate Interior Rigid Wall Insulation by Dow Chemical, or equal.	
6	Roof Insulation	Rigid foam insulation, ANSI/ASTM C-1289 Type II, polyiscocyanurate board with fiberous glass facer: a. Compressive Strength: 20 psi, nominal b. Board Density: 2.0 lbs. Per cubic foot, nominal c. Thickness and R-value: 2-inch, R 12.0 d. Provide minimum slope to drain of 1/4-inch per foot. e. Provide Pre-cut factory-formed corners, crickets, tapered edge strips, hipsand valleys.	
		ISO Insulation System by: GAF EverGuard Roofing Systems, or equal.	
7	Adhesive For Bonding Insulation	The type recommended by the insulation manufacturer and complying with fire-resistance requirements.	
8	Mechanical Anchors	Type and size shown or, if not shown, as recommended by the insulation manufacturer for the type of application shown and condition of substrate.	

Item	Parameter	Criteria	Notes
9	Impaling Clips	Provide galvanized steel impaling clips complying with requirements of governing code authorities and as recommended by the insulation manufacturer for full system responsibility.	
10	Adhesive Tapes	Complete selection of insulation manufacturer's recommended taping materials.	
11	Fire-Stop Sealants And Other Fire-Stop System Components	Complete selection of fire stop manufacturer's recommended vinyl-type non-asbestos fire stop systems. Provide complete systems complying with UL 1479 and ASTM E814 with a two- or three-hour fire rating. Provide equal fire protection as provided by fire-rating of construction penetrated. Fire stop systems shall also be gas and watertight. Fire Stop Systems by Dow Corning Corporation, or equal.	
12	Single-Ply Roofing	Comply with the Factory Mutual Publication 1-29 Technical Advisory Bulletin for wind resistance. Provide uniform ballast weight distribution over entire roof surface. Comply with FM wind uplift criteria at corners and perimeters. Provide combined ballast and single ply roofing manufacturer's recommended screw and plate fasteners located in accordance with FM 1-29 TAB 1. Comply with applicable insurance rating bureau requirements as required by the California Building Code, latest edition and International Building Code, latest edition, unless more restrictive requirements are specified or required. a. Out-of-Plane: 1/8-inch maximum in 10 foot-0 inches and 1/16-inch maximum in any 12-inches measured along the plane. b. Maximum Offset in Plane Alignment: 1/16-inch. c. Variation From Slope: 1/8-inch maximum in 10 foot - 0 inches. A smooth type, polyester scrim reinforced thermoplastic polyolefin based membrane for use as a single ply roofing membrane and flashing material	
		Membrane by GAF Materials Corporation, Or equal.	
13	Single-Ply Roofing Ballast	Smooth, rounded, river washed stone from 3/4-inch to 1-1/2-inch in diameter applied at a rate of 1,000 pounds per square, spread evenly over the surface without adhesive.	
		Provide granite or other stone capable of withstanding exposure without deterioration.	
14	Polyvinyl Chloride (PVC) Roofing	Comply with Factory Mutual Publication Class 1-90 (Wind Uplift Attachment Criteria). Class A fire rated assembly in accordance with UL-790 or ASTM E 108. Roof system shall comply with all applicable building codes and California Building Code Title 24, Section 118. 1. PVC roofing: Fabric reinforced PVC sheet, ASTM D4434 for Type II PVC membranes. Fiberglass reinforcing material, 80 mils minimum polymer thickness, 40 mils thickness above	

Item	Parameter	Criteria	Notes
		scrim, 110 lbf/in minimum breaking strength, white color 2. Membrane Manufacturer's membrane shall be of consistent base formulation for a minimum of 50 years. Manufacturer and membrane shall be listed in Cool Roof Rating Council product listing and roofing membranes shall be tested by CRRC-1. 3. Warranty: Manufacturer's 30-year system warranty (20 year material and labor with 10 year extension on material), Contractor's two (2) year warranty. Early Bird warranties are not acceptable. 4. Components including roofing insulation, fasteners, and walkways for roofing system from same manufacturer as membrane roofing. 5. Sika Sarnafil (Membrane: Sarnafil S327 EnergySmart 60-mil), Carlisle Syntec (Membrane: 60-Mil Sure-Flex PVC KEE), Johns Manville (60-Mil PVC KEE by Cooley Group), or equal. 6. Pre-Installation meeting between IEUA, Design Engineer, Applicator/Contractor, Roofing Manufacturer's Representative, and related Subcontractors shall be held at least two(2) weeks prior to installation.	
15	PVC Roofing Auxiliary Materials	1. Sheet Flashing: standard reinforced PVC sheet flashing of same thickness and color as PVC sheet. 2. Flashing Membrane Adhesive: solvent-based reactivating-type adhesive used to attach PVC flashing membrane to vertical (flashing) substrate. 3. Membrane Attachment Bar: one(1) inch wide, pre-punched aluminum bar used to attach PVC field membrane at all perimeter and base-angle transitions. 4. Membrane bonding adhesive: Manufacturer's standard, water based, Low VOC bonding adhesive 5. Metal Termination Bars: Manufacturer's standard predrilled stainless steel or aluminum, with anchors 6. Fasteners: factory-coated steel fasteners and metal plates complying with corrosion-resistance provisions in FM Global 4470 and acceptable to roof manufacturer. 7. Cover Board: by Georgia-Pacific DensDeck, or approved equal. ASTM C 1177, glass-mat faced, water resistant gypsum. Smoke developed and flame spread (ASTM E-84): 0, Mold resistance (ASTM D3273): 10, Compressive strength (ASTM C 473): 900psi, Board size: ½"x4'x8'. 8. Cover Board Adhesive: urethane based, low-rise foam adhesive shall be used to attach cover board to top layer of insulation. 9. Roof Insulation: Polyisocyanurate board insulation, ASTM C 1289-11, Type II, Class 2,	

Item	Parameter	Criteria	Notes
		Grade 2 (20 psi). Zero Ozone Depletion Potential from blowing agent (HCFC-free), Long-Term Thermal Resistance R-Value based on ASTM 1303-11 and/or C AN/ULC S770-09.Facer type: coated glass face, board size: 2.6”x4’X8’ (R-15.0), Total Thermal Resistance Value: R-30.0 min. 10: Tapered Insulation: provide factory tapered insulation boards 11: Insulation and Cover Board Fasteners: corrosion-resistant, minimum #15 fastener with attachment plate to attach insulation to structural metal deck. 12: Flexible Walkways: factory-formed, non-porous, heavy0-duty, slip-resisting, surface-textured walkways pads or rolls	
16	Membrane Protection Concrete Pavers	Interlocking Ballast Pavers by Westile, an Oldcastle Company, Or equal.	
17	Vapor Barrier	Rufco 4000B by Raven Industries, Incorporated, Or equal.	
18	TPO Preformed Vent Boots	0.075" thick molded TPO membrane, heat welded directly to roofing membrane, supplied with stainless steel clamping rings, (1" to 6" diameter pipes)diameter pipes).	
		GAF EverGuard TPO Preformed Vent Boots by GAF Materials Corporation.	
19	TPO Preformed Corners	Universal style accommodates both inside and outside corners of base and curb flashing, 0.065" thick molded TPO membrane, heat welded directly to roofing membrane, 4" X 4" with 4" flange.	
		GAF EverGuard TPO Preformed Corners by GAF Materials Corporation.	
20	TPO Drain Inserts	Rigid molded TPO membrane flashing complete with clamping ring and strainer basket, membrane heat welds directly to drain insert flange, sealant ring at base of insert tube.	
		GAF EverGuard TPO Preformed Corners by GAF Materials Corporation.	
21	TPO Coated Metal	25 gauge steel with 0.020" thick TPO based film required for fabricated metal gravel stops and drip edge profiles, metal base and curb flashings and sealant pans.	
		GAF EverGuard TPO Coated Metal by GAF Materials Corporation.	
22	Lip Termination Bar	Extruded aluminum termination bar with angled lip caulk receiver and lower leg bulb stiffener. Pre-punched slotted holes at 6" on center, 3/4" x 10’ with 0.090" cross section.	
		GAF EverGuard Liptermination Bar by GAF Materials Corporation, Or equal.	
23	Miscellaneous Materials	1. Bonding Adhesive: As recommended by the roofing manufacturer. 2. Splicing Cement: As recommended by the roofing manufacturer. 3. Lap Sealant: As recommended by the roofing manufacturer.	

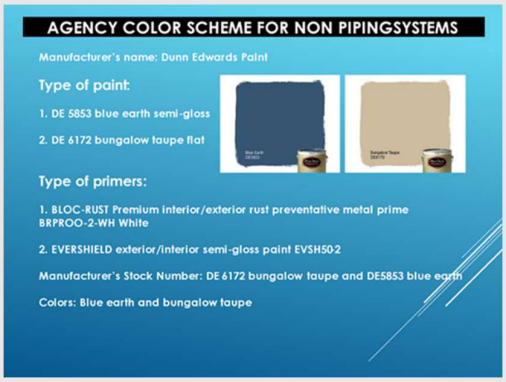
Item	Parameter	Criteria	Notes
		4. Deck Primer: As recommended by roofing manufacturer. 5. Caulking and Sealants: As recommended by the roofing manufacturer. 6. Protection Board: As recommended by the roofing manufacturer for use beneath membrane protection pavers. 7. Mechanical Fasteners and Plates: Stainless steel and plates as recommended by the roofing manufacturer.	
24	Single-Ply Roofing Manufacturer	1. Fully adhered single-ply TPO TSR roofing system, by GAF EverGuard by GAF Materials Corporation. (Uses: concrete decks). 2. Mechanically attached single-ply TPO TSR roofing system by GAF EverGuard.	
		by GAF Materials Corporation. (Uses: metal decks), Or equal.	
25	Flashing And Trim	Flashing and trim shall be permanently watertight, and not deteriorate in excess of manufacturer's published limitations.	
		Flashing and trim to be fabricated and installed to meet the requirements of FM 1-90 and applicable requirements of the California Building Code, latest edition and the International Building Code, latest edition.	
		Comply with fabrication details recommended by SMACNA.	
26	Stainless Steel Flashing and Trim	Provide sheet stainless steel, Type 304 complying with ASTM A 176, with No. 2D dead soft, fully annealed finish, unless otherwise specified.	
27	Cast-In-Place Roofing Reglets and Counterflashing	Provide stainless steel, Type 304, (.020-inch) built-in-place reglets with wind lock clips.	
		Type CO Reglet for cast-in-place application by Fry Reglet Corporation, Or equal.	
28	Fiberglass Reinforced Plastic (FRP) Doors and Frames	General: a. Fiberglass Mat: Minimum 1.5 ounces per square foot. b. Resins: Manufacturer’s formulation for fabricating units to meet specified requirements.	
		Manufactured Units:	
		1. Fiberglass Reinforced Plastic (FRP) Doors: a. Thickness: 1-3/4 inches. b. Thermal Insulating Value: ‘R’ Factor 11. c. Construction: 1) Core: End-grain balsa wood, resin-impregnated. 2) Door Plates: Molded in one continuous piece, resin reinforced with hand-laid glass fiber mat, nominal 1/8-inch thick, minimum 15 mil gelcoated surface. 3) Door Edges: Minimum three (3) layers resin-reinforced glass fiber mat, nominal 3/8-inch thick, machine tooled. d. Finish: Smooth gloss surface, minimum Value 88 in accordance with ASTM D 523.	

Item	Parameter	Criteria	Notes
		2. Fire-rated Fiberglass Reinforced Plastic (FRP) Doors: UL approved, and as follows: a. Thickness: 1-3/4 inches. b. Thermal Insulating Value: 'R' Factor 11. c. Construction: 1) Core: Fire-resistant mineral core. 2) Door Plates: Molded in one continuous piece resin, reinforced with hand-laid glass fiber mat nominal 1/8-inch thick, minimum 25 mil gelcoated surface. 3) Door Edges: Minimum two (2) layers resin-reinforced glass fiber mat, nominal 1/4-inch thick, machine tooled. d. Finish: Smooth gloss surface, minimum Value 88 in accordance with ASTM D 523.	
		3. Fiberglass Reinforced Plastic (FRP) Frames: a. Construction: One-piece pultruded fiberglass reinforced plastic, minimum 1/4-inch wall thickness, jamb-to-head joints mitered and reinforced with (FRP) clips and stainless steel fasteners conforming to SDI requirements for performance equivalent to 16 gage steel frames. b. Frame Profile: 5-3/4 inches deep, 2 inches wide face; double rabbeted with 5/8-inch high stop. c. Finish: Satin finish, with true and consistent color throughout frame thickness.	
		4. Fire-rated Frames: UL approved, and as follows: a. Construction: Type 304 stainless steel, or steel gel-coated to match doors.	
		5. Lites and Louvers: a. Lites: 1) Stops: Pultruded fiberglass reinforced plastic construction. 2) Fasteners: Stainless steel screws as recommended by manufacturer. 3) Fire-rated: Stainless steel, Type 304 UL rated frames. b. Louvers: 1) Construction: Molded solid vanes; pultruded fiberglass reinforced construction. 2) Finish: Satin finish, with true and consistent color throughout frame thickness.	
		6. Fiberglass Reinforced Plastic (FRP) Removable Transoms: a. Construction: Transoms shall match door frame construction and color.	
		Fiberglass doors and frames by FIB-R-DOR Division of Advance Fiberglass, Inc., Or equal.	
29	Non-Rated Wall Access Doors	Stainless Steel KRP-DSC-214M by Karp Associates, Or equal.	
30	Overhead Rolling Doors (High Speed Roll-Up Door)	Speed-Master Series-Model 1500 by Hörmann Flexon LLC. Phone: 1-800-365-3667, website: www. HORMANN-FLEXON.com, Or equal.B.	
31	Painting	A. Shop clean and prime all ferrous metal and galvanized surfaces, exposed and	

Item	Parameter	Criteria	Notes
		unexposed, except lubricated surfaces, with door manufacturer's standard rust inhibitive primer drying to a flat sheen.	
32	Aluminum Storefront Windows and Framing	Trifab VG 451T (Thermal) Storefront System by Kawneer Company, Incorporated, Or equal.	
33	Exposed Aluminum Polyvinylidene Fluoride Based Coating	Duranar Metallic XL Specialty Color 4-Coat System by PPG Industries Coatings and Resins Division, or equal.	
34	Skylights	Model DDCAP1 3636, by Wasco Products Incorporated, Or equal.	
35	Fall Protection Safety Screens	Provide 1-inch square mesh consisting of 12 gage galvanized steel wire. Fasten mesh to the extruded aluminum retainer assembly.	
36	Aluminum Finishes	A. General: Comply with NAAMM “Metal Finishes Manual” recommendations for application and designations of finishes. B. Finish designations prefixed by AA conform to the system for designations of aluminum finishes established by the Aluminum Association. C. Class I or Class II, Clear-Anodized Finish: AA-C22A41 (Chemical Finish: etched, medium matte; Anodic Coating: Class I Architectural, clear film thicker than 0.7 mil complying with AAMA 607.1. Class II Architectural 0.7 mil.	
37	Finish Hardware - Hinges	Provide all doors with mortise hinges, unless specifically scheduled otherwise.	
		FBB 199 and FBB 191 by Stanley Commercial Hardware, Or approved equal.	
38	Finish Hardware- Mortise Locks Sets	Extra Heavy Duty Mortise Lockset L9000 Series with Lever Handles by Schlage Part of Worldwide Ingersoll-Rand Corporation, Or equal.	
39	Finish Hardware- Panic Exit Devices	Von Duprin Part of Worldwide, Or equal.	
40	Finish Hardware- Cylinders And Keying System	Cylinders and Keying by Schlage Part of Worldwide Ingersoll-Rand Corporation. No equals allowed.	
41	Finish Hardware- Fire Department Key Lock Box	Knox Company, Model 3200R Knox-Box, Or equal.	
42	Finish Hardware- Door Closers	4040 XP Heavy Duty Closer by LCN Part of Worldwide Ingersoll-Rand Corporation, Or approved equal.	
43	Finish Hardware- Floor Stops	FB13/14R, FB17 by Glynn-Johnson Part of Worldwide Ingersoll-Rand Corporation, Or approved equal.	
44	Finish Hardware- Stripping And Seals	No. 4301CRL by Pemko Manufacturing Company, Or equal.	
45	Finish Hardware- Thresholds	172A, 176A by Pemko Manufacturing Company, Or equal.	
46	Finish Hardware- Astragals	No. 357SS by Pemko Manufacturing Company, Or equal.	
47	Finish Hardware- Sealants	Provide butyl rubber sealant complying with FS TT-S-001657 for use with thresholds.	
48	Finish Hardware- Flush Bolts	GJ FB6 Extension Flush Bolts by Glynn-Johnson Part of Worldwide Ingersoll-Rand, Or equal.	

Item	Parameter	Criteria	Notes
49	Finish Hardware-Coordinators	COR 1, 2 and 3 Series with FB Series by Glynn-Johnson Part of Worldwide Ingersoll-Rand, Or equal.	
50	Glass And Glazing-Clear Wire Glass (Interior Door/Transom Lites	Polished Plate Wire Glass by PPG Industries, Incorporated, Or equal.	
51	Glass And Glazing-Insulating Glass	Caribia Tinted Tempered Commercial Insulating Glass Units by PPG Industries, Inc., Or equal.	
52	Glass And Glazing-Clear Tempered Insulating Glass	Clear Tempered Commercial Insulating Glass Units by PPG Industries, Inc., Or equal.	
53	Glass And Glazing-Clear Tempered Monolithic Glass (Interior Door/Transom Lites	Clear Tempered Monolithic Commercial Glass Units by PPG Industries, Inc., Or equal.	
54	Glass And Glazing-Tinted Tempered Monolithic Glass (Exterior Door/Transom Lites	Caribia Tinted Tempered Monolithic Commercial Glass Units by PPG Industries, Inc., Or equal.	
55	Glazing Sealants And Tapes- Structural Silicone Sealant	Dow Corning 995 Silicone Structural Adhesive by Dow Corning Corporation, Or equal.	
56	Glazing Sealants And Tapes- Exterior One-Part Silicone Rubber Sealant	Spectrum I by Tremco, Incorporated. Or equal.	
57	Glazing Sealants And Tapes- Preformed Butyl Rubber Glazing Sealant	Polyshim II Glazing Tape by Tremco, Incorporated. Or equal.	
58	Glazing Sealants And Tapes- Dense Compression Wedge Gaskets	Dense Silicone Wedge Gaskets SCR-900 by Tremco, Incorporated. Or equal.	
59	Miscellaneous Glazing Materials	A. Setting Blocks: Neoprene, 70-90 durometer hardness, with proven compatibility with sealants used as recommended by the glass manufacturer. B. Spacers: Neoprene, 40-50 durometer hardness, with proven compatibility with sealants used as recommended by the glass manufacturer. C. Compressible Filler Rod: Closed-cell or waterproof-jacketed rod stock of synthetic rubber or plastic foam, proven to be compatible with sealants used, flexible and resilient, with 5-10 pounds per square inch compression strength for 25 percent deflection.	
60	Translucent Fiberglass Sandwich Panels	Translucent fiberglass sandwich panels by Kalwall Corporation, www.kalwall.com. Or equal,	
61	Gypsum Wallboard	United States Gypsum Company, Dietrich Metal Framing, Or equal.	

Item	Parameter	Criteria	Notes
62	Gypsum Wallboard - Wall/Partition Support Materials	400 USTE 20 DW EQ UltraSTEEL framing with complementary accessories by Dietrich Metal Framing. Or equal.	
63	Gypsum Wallboard - Furring Members	Z-furring (ZF-Series) by Dietrich Metal Framing	
64	Acoustical Ceilings- Acoustical Panels	Sanserra 573 Tegular by Armstrong. Or equal.	
65	Ceiling Suspension Materials- Exposed Suspension System	Prelude XL 15/16” Exposed Tee Systems by Armstrong. Or equal.	
66	Acoustical Panels- Perforated Metal Acoustical Panels	Eckoustic Functional Panels by Eckel Industries, Incorporated. Or equal.	
67	Resilient Tile- Rubber Tile	Noraplan Stone al by Nora Flooring Incorporated.	
68	Painting	Tnemec Company, Incorporated, Devoe High Performance Coatings, Or equal.	
69	Louvers And Vents	A. Aluminum Sheet: ASTM B 209, 5005 with temper as required for forming, or as otherwise recommended by the metal producer to provide the required finish. B. Aluminum Extrusions: ASTM B 221, Alloy 6063-T52. C. Anchors and Inserts: Use Type 316 stainless steel expansion bolt devices or drill and epoxy Type 316 stainless steel anchors. D. Bituminous Paint: SSPC-Paint 12 (cold-applied asphalt mastic). E. Blank-Off Panels: Provide 16 gage aluminum sheet with A42 Dark Bronze anodized finish. Provide Type 316 stainless steel fasteners, 12 inches on centers.	
70	Fixed Louvers	No. A6155 by Construction Specialties, Incorporated. Or equal.	
71	Finishes- Exposed Aluminum Polyvinylidene Fluoride Based Coating	Kynar 500 TRI-X by DeSoto Incorporated. Duranar XL by PPG Industries, Incorporated. Or equal.	
72	Louver Screens	A. Provide removable screens for all louvers. B. Fabricate screen frames of the same metal and finish as the louver units to which secured. Provide frames consisting of extra heavy duty extruded 0.090-inch aluminum for permanently securing screen mesh. Frames shall be rewirable. C. Use insect screen of 18 by 14 mesh, 0.0123-inch diameter stainless steel intercrimp wire. D. Locate screens on inside face of louvers. Secure screens to louver frames with machine screws, spaced at each corner and at 12 inches on centers. E. Provide minimum No. 8 stainless steel metal screws unless larger screws are required by screen size. F. Provide cross bar screen reinforcement of same material and finish as louver which	

Item	Parameter	Criteria	Notes
		subdivides screens into maximum area of 50 square feet.	
73	Sill Extension	Gage and Finish: Same as louver.	
74	Self-Luminous Exit Signs	Everglo Signs by Self Powered Lighting Incorporated. Isolite Model 2040-01 Signs by Safety Light Corporation. Or equal.	
75	Fire Extinguisher Location Signs, Interior Room Identification Signs, And Chemical Area Safety Signs	A. Material: Subsurface silkscreened graphics on a transparent acrylic sheet, 0.08-inches thick with Helvetica Medium alphabet and matching arrows type face. Provide 2-inch high upper case letters and 1-inch high lower case letters. B. Fire Extinguisher Identification Sign: Provide 15-inch by 15-inch with square corners, unframed. Provide one for each surface mounted fire extinguisher. Background color red with white lettering. Sign shall incorporate a directional arrow	
76	Room Identification Signs	Provide 15-inch by 15-inch with square corners, unframed. Colored background with white lettering. Provide one sign for each of the followings rooms in the Centrifuge Building: Locate on wall adjacent to entry door into room. 1. Unisex Restroom. 2. Control Room. 3. Electrical Room (two signs). 4. Truck Loading Observation Room (at stairway #3).	
77	Chemical And Process Area Safety Signs	Safety signs shall be formed from rigid polystyrene or polyethylene plastic. Letters shall be 2-inch high upper case letters and 1-inch high lower case letters.	
78	Architectural Finishes	Architectural finishes of concrete prior to painting shall be uniform profile by blasting and or other methods. Consider the use of Wunderfixx (or equal), a concrete smoothing compound for exterior concrete walls.	
79	Paint Color of Architectural Features	Paint color of architectural features (facias, doors, exterior features systems, roof drains, awnings) shall conform to IEUA color standard2 	

Item	Parameter	Criteria	Notes
		Contractor is responsible to color matching and/or field coating to match, other manufacturers' standards are not acceptable.	

6.5 HVAC

The following tables contain the Engineering Design Guidelines for HVAC criteria. The DBE is responsible to review and finalize these requirements for complete functioning facilities.

Table 53 HVAC general

Item	Parameter	Criteria	Notes
0	Scope	This document applies to all heating, ventilation, and air conditioning equipment and design.	
1	System Configuration Options	-Unitary equipment -Centralized heating and cooling system -Composite (combined) system	
		AC systems shall be consolidated where possible.	
		Redundancy is required in electrical rooms, server rooms, control rooms, and in other critical locations.	
2	Unitary Equipment Application	Use for small and remote buildings or system that require stand-alone or redundant cooling equipment.	
		Do not use where maintenance is difficult or access is limited.	
		Outdoor equipment, such as air-cooled condenser coils, corrode quickly if exposed to vapor/condensate of a sewage treatment process.	
		Not suitable for 100% outside air systems.	
3	Central System Application	Use for localized heating and cooling of groups of buildings.	
		Use hot water heating boilers and steam boilers.	
4	Composite System Application	Use if a central system can handle a group of buildings, but unitary system(s) are needed for remote or distant buildings.	
5	Weather Conditions	Summer conditions: select 0.5% design dry-bulb and coincident wet-bulb temperatures.	
		Winter conditions: select 0.6% design temperatures.	
		Use latest ASHRAE climatic data for the region.	
6	Equipment Access	Minimum 30-inches around all equipment.	
		When located on roof, proper accessibility and maintenance clearances are required. This includes stairs/ladders, platform, catwalk, handrails, etc.	
7	Equipment Location	Where possible, minimize long duct runs.	
		Unless necessary, do not mount equipment on roofs (adds expense of access ladders/catwalks and cranes are required to install/remove equipment).	

Item	Parameter	Criteria	Notes
8	Intake/Exhaust Locations	Locate intakes considering prevailing wind direction and potential sources of odorous, toxic, or corrosive gases, and environmental conditions.	
		Do not route exhausts where they can feed air intakes.	
		Do not route exhausts toward the entry points of confined spaces.	
9	Ventilation	Ventilation is required for all buildings, equipment rooms, galleries, and storage areas.	
10	Odorous, Hazardous, and Special Environments	FRP fans, housings, and assemblies are required in corrosive environments (i.e., hydrogen sulfide).	
		Minimize potential for fire and explosion.	
		Maintain concentrations of hazardous gases to levels below those considered dangerous to personnel.	
		Computer / Control Rooms: -Do not use more than 10% outside air for cooling.-Provide special equipment with dehumidification capabilities and three-stage air filtration system.-Maintain positive pressure.	
		Locate exhaust points as close as possible to potential sources of odors or hazardous gases.	
		In chemical gas areas, locate supply points near the ceiling and exhaust points near the floor.	
		Provide dust removal systems for areas that produce dust (e.g., air filter, electrostatic precipitators).	
		Provide oxygen sensors where pure oxygen is used for aeration.	
11	Insulation	Insulate ductwork for mechanically cooled spaces to prevent condensation.	
		Use piping and equipment insulation where the following items are needed: -Heat loss/energy conservation. -Personnel protection. -Condensation control. -Jacketed insulation on exterior refrigerant lines.	
12	Vibration / Noise Control	Provide vibration control on all floor-mounted or large ceiling-hung air moving equipment.	
		Incorporate seismic bracing and restraints into large HVAC vibration isolation equipment and all suspended equipment.	
		Use duct silencers in conjunction with exhaust fans at areas containing equipment which generates substantial noise.	
		Control noise to meet local codes and regulations.	
		In administration areas, insulate the interior of fans, air-handling units, and critical ducts.	
13	Fans and Air Handling Units	Use centrifugal, wall-mounted fans to exhaust the air.	
		The unit housing and coils shall be constructed on non-corrosive materials.	

Item	Parameter	Criteria	Notes
14	Materials	Components: -non-ferrous -bronze anodized aluminum -FRP -stainless steel -galvanized steel (only in locations not exposed to water, ground water, or sewer gas)	
		FRP shall have a flame spread of < 25 and smoke propagation < 400.	
		Consider fire-resistant FFRP ductwork in all hazardous and highly corrosive areas.	
15	Energy Efficiency	Design on steady-state heat transfer conditions with buildings and processes us use 24 hours per day.	
		Do not count thermal storage in the building mass to reduce the design loads.	
		Base calculation on ASHRAE Fundamentals.	
16	Boilers	Types: hot water heating and steam.	
		Fuels: natural gas, sludge digester gas, or both.	
		Do not use electric heating coils, unless at remote site without gas supply or small heating demands.	
		Follow applicable codes and SCAQMD regulations.	
		Include provisions for thermal expansion.	
		Provide heat for these central systems by natural gas fired high efficiency low temperature hot water boilers operating at over 90 percent low heating value (LHV) fuel to hot water efficiency.	
		Provide modulating control on 100 percent outside air systems.	
17	Ductwork	Insulation: -Double wall for outside. -Single wall for inside.	
		Material: -Typical: galvanized steel -Buried: HDPE -Aeration areas: 316 SS -Foul air: FRP	
18	Refrigerant	Shall not be on EPA Phase-out List 2 years after announcement.	
19	Coils	Type: Copper Tubing with Aluminum Fins.	
		Coating: Use coated coil, unless otherwise noted.	
		Cleaning: Provide utility water tap with quick disconnect and hose.	
20	Manufacturers	See Section 3.2 (AC Units)	
21	Dampers	Use dampers on every header.	
		Use motorized dampers for 1+1 unit arrangement.	
		Use backdraft dampers if two units are feeding into same line	
22	Condensate Line Material	Copper.	

Item	Parameter	Criteria	Notes
23	Alarms/Controls	Provide SCADA alarms for critical HVAC items. Provide room temperature monitoring at SCADA for critical areas.	
24	Slope and Drain	Provide slope with drain capture. 1% slope with flow and 2 % slope against flow.	
25	Floor Drain for Equipment	Use Josam E2 Series or equal for significant drain flows.	
27	EMS Controls	JCI, Carrier IVU or Tridium.	
28	Minimum SEER	2 more than California minimum.	
29	Thermostat	Debonair if available.	
30	Access to AC Control Panel	Use hinged door rather than screws.	
31	Controls	Critical HVAC systems (e.g., in electrical rooms, SCADA rooms, server rooms, etc.) require remote monitoring and/or alarming	

Table 54 Air conditioning units

Item	Parameter	Criteria	Notes
0	Scope	This document applies to air conditioning units.	
1	Warranty	All AC Units require 1-year manufacturer's warranty.	
2	Acceptable Manufacturers	-Carrier. -Trane. -Liebert. -Mitsubishi (split systems)	
3	Cabinet and Frame	Materials: -Base frame: phosphatized, zinc coated 18 gage steel. -Doors and Access panels: 18 gage steel. -Cabinet Insulation: Fireproof material or foil faced glass fiber. -Exterior finish: Textured vinyl enamel to match computer equipment. -Roof mounted: 12 gage zinc coated steel with weatherproof seal.	
		Thermally and acoustically line cabinet interior equal to one inch thick of 1.5 lb./cf. density duct liner material, meeting requirements of NFPA 90A.	
		Panels shall be gasketed, with quick release hinged with latches and handles.	
4	Condensate Pan	Provide an insulated condensate pan under the evaporator coil. Provide copper condensate drainpipe complete with union, trap and open tee at discharge of trap, connect drain to condensate sump pump as specified hereinafter.	
5	Compressors	Type: -Hermetic. -Semi-hermetic.	
		Provide crankcase heaters, discharge muffler, and related components for proper operation.	
		Use dual compressors for units larger than 5 tons.	Check availability.
		Compressor shall be serviceable without dismantling other components.	

Item	Parameter	Criteria	Notes
6	Condensers	Provide air cooled units with matched air cooled condenser consisting of corrosion resistant cabinet, incorporating copper tube aluminum fin condenser coils arranged for minimum of two circuits and multiple direct drive condenser fans with inherently protected motors. Operating controls shall permit fan cycling for head pressure control.	
7	Filters	Provide removable, disposable pleated cartridge type filters with efficiency of 60 percent by NBS atmospheric dust spot method. Mount filters in top of cabinet in a track or holding device designed to preclude air bypass.	
8	Evaporator Coils	Type: Horizontally split face coils.	
		Material: Seamless copper tubes expanded into aluminum fins.	
9	Evaporator Fans and Motors	Fans shall be arranged to draw air through the cooling coils.	
		Type: multi-blade up flow propeller.	
		Fans shall be provided with vibration isolation from the unit casing.	
		Each fan shall be independently driven by heavy duty drip proof permanently or grease lubricated ball bearing motor with built-in current and overload protection.	
		Motors shall be installed on an adjustable base.	
10	Controls	All temperature sensors shall be mounted within the unit in the return air stream.	
		Temperature control shall be set to maintain 75 degrees F DB.	
		High pressure fan control or economizer to be installed for low ambient temperature conditions.	
		The control and readout panel shall indicate the following: cooling operating stages, loss of air flow, dirty filters, high and low.	
11	Condenser and Evaporator Coils	3/8-inch OD seamless copper tube mechanically bonded to aluminum fins.	
12	Air Filters	Indoor: Continuous filament, pleated, 2-inch thick, viscosine coated removable media with filter cell.	
		Outside: Camfil Farr, with rainguard and PVC coated bird screen.	
		Flow rate: 200 cubic feet per minute with less than 0.25 water column drop.	
		Locate in dry areas.	
13	MCC Rooms	AC Package unit pad mounted with supply and return ductwork.	
14	Cabinet AC	Ice Qube or Mclean stainless steel for outdoor use.	

Table 55 Heat pumps

Item	Parameter	Criteria	Notes
0	Scope	This document applies to heat pump units.	

1	Approved Manufacturers	Carrier.	
2	Ambient Conditions	Capable of operating at rated capacities at 120 degrees F.	
3	Materials	-Casing: 18 gage zinc coated steel. -Exterior surface: phosphatized, painted with epoxy primer, and finished with baked enamel. -Motor / Fan mounts: heavy zinc coating. -Coil frame: Minimum 12 gage zone coated steel.	
4	Condenser Fan and Drive	Type: axial flow propeller fan.	
		Material: Zinc plated or aluminum.	
5	Refrigerant Compressor	Type: hermetic reciprocating or scroll compressor.	
6	Condensing Coil	Seamless copper tubing and heavy-duty aluminum fins.	
7	Application	Office Space only.	

Table 56 Exhaust fans

Item	Parameter	Criteria	Notes
0	Scope	This document applies to exhaust fans.	
1	Materials	-Fans: Fiberglass reinforced plastic, fire retardant. -Housing: Fiberglass reinforced vinyl-ester. -Metal components: coated with corrosion proof UV inhibited gel. -Fan shaft seal: Teflon seal between shaft and housing.	
2	Manufacturers	-Hartzell Fan, Inc. -Swarthout, Inc. -Greenheck.	
3	Type	Extruded flanged mounted louver with an integral draft damper.	
4	Housing	Provide corrosion resistant solid fiberglass reinforced plastic design with construction classification suitable for pressure range.	
5	Shaft bearings	Heavy-duty, grease lubricated, sealed, self-aligning, frictionless ball bearings, L-10 minimum life ratings of 50,000 hours.	
6	Hood and Bird Screen	FRP hood complete with guard securely anchored to hood inlets.	

Table 57 Ductwork and accessories

Item	Parameter	Criteria	Notes
0	Scope	This document applies to HVAC ductwork and accessories.	
1	Materials	Select corrosive resistant material compatible with environment.	
2	Hanging Ductwork	Do not use straps for hanging ductwork, instead use angled rods constructed from the same material as the duct.	
		Hanger rods: Duct half perimeter up to 72 inch: 3/8 inch at 8 feet spacing. Duct half perimeter greater than 72 inch: 1/2 inch at 6 feet spacing.	

Item	Parameter	Criteria	Notes
3	Sleeves	20 gage galvanized steel sleeve, caulked airtight with fire resistant sealant required when duct passes through masonry wall, partitions, or floors.	
4	Weatherproof Duct	16 gage galvanized steel.	
5	Air Volume Extractors	Manufacturers: -Hart and Cooley. -Titus.	
		Material: Aluminum.	
		Blades: Gang-operated curved adjustable blades controlled through a manual adjusting lever.	
6	Splitter Dampers	Manufacturers: -Hart and Cooley. -Titus.	
		Material: Aluminum.	
		Adjustment: Manual adjusting lever with locking device.	
7	Volume Dampers	Manufacturers: -Honeywell. -Arrow United Industries, Inc.	
		Material: Match Duct.	
		Blades: opposed blades, key operated with vinyl edge seals.	
		Provide outside handle, quadrant, approved position indicator, locking device and linkage for manual operation or motorized operation.	
		Performance:-Damper Leakage: Not more than 16 cfm per square foot at 4-inch W.G.-Certification: Manufacturer shall provide certified test data.	
8	Belt Guards	Expanded hinged steel or hinged sheet steel for weather protection where required.	
		Fabricate guards to receive 2-inch larger pulleys without alteration to the guard.	
9	Flexible Connections: (For air handling units)	Material: -3/16-inch thick, 6-inch wide fabric reinforced neoprene. -0.080 gauge, 3-inch wide aluminum strip.	
10	Turning Vanes	Same material as ducts. Vanes shall be 2-inch blades for ducts up to 18 inches in either dimension and shall be 4-1/2 inch blades for larger ducts.	
		Vanes: Double thickness for supply and exhaust/return ductwork. Finished with an air-dried phenolic corrosion resistant coating prior to installation.	
11	Screens	1/2-inch mesh, stainless steel metal screen with stainless steel frame.	
12	Registers, Grilles, and Diffusers	Manufacturers: -Carnes -Hart and Cooley -Titus	
13	Supply Registers	Type: Individually adjustable	
		Frame and Blades: Aluminum in aluminum and galvanized steel ducts. SS in SS or FRP ducts.	

Item	Parameter	Criteria	Notes
14	Smoke Dampers	Comply with fire and mechanical Codes.	
15	Supply Diffusers	Type: Square, step-down outlet with round neck.	
		Frame and Core: Aluminum in aluminum and galvanized steel ducts.	
		Provide combination volume control and equalizing deflector construction of same material as frame above.	

Table 58 Ventilation schedule

Area	Ventilation Requirements	Room Condition Heat-Cool, °F	Duct Materials
Administration/ Operation Building			
-Offices	15 to 20 cfm/person (4)	70/78	Aluminum, G.S.
-Meeting & Conference Rooms	15 to 20 cfm/person (4)	70/78	Aluminum, G.S.
-Toilet/Locker Rooms	100% exhaust	70/78	Aluminum
-Control/Computer Rooms	10% Outside air	72/72	Aluminum, G.S.
-Stairwells (enclosed)	100% Outside air (5)	50/85	Aluminum, G.S.
-Laboratories	100% exhaust (5)	70/75	FRP/SS
Maintenance Building			
-General		40/90	Aluminum, G.S.
-Shops and Offices		68/75	G.S.
Control Rooms/Centers			
-Attended	6 Air changes/hr.	68/75	Aluminum, G.S.
	10% Outside air.		
-Unattended or combined-with MCC	6 Air changes/hr.	55/85 (max.)	Aluminum, G.S.
	10% Outside air.		
Motor Control Center Rooms/ Buildings	6 Air changes/hr.	55/90	Aluminum, G.S.
	10% Outside air.		
HVAC Equipment Rooms	6 Air changes/hr.	No requirement	G.S.
Storage Rooms		No requirement	G.S.
Thickening Control Building	12 continuous air changes/ hour 100% outside air.	55/85	FRP
Digester Area			
-Gas Compressor Room (explosive, toxic)	12 continuous air changes/ hour 100% outside air, 30 changes/hour intermittent (1)	55/85	Anodized Aluminum, Type 316 SS, or RFP
Dewatering Building	12 continuous air changes/ hour 100% outside air	55/90	FRP

Area	Ventilation Requirements	Room Condition Heat-Cool, °F	Duct Materials
Dewatered Biosolids Storage Building	12 continuous air changes/ hour 100% outside air	No requirement	Anodized Aluminum, Type 316 SS, or FRP
Chemical Areas			
-Chlorine (toxic, corrosive)	10-20 air changes/hour 100% outside air (3) (1)	60/90	FRP(3)
-Chemical Storage Rooms	10-20 air changes/hour 100% outside air (1)	60/90	
Peroxide Storage & Handling Areas	10-20 air changes/hour 100% outside air (1)	60/90	FRP
Chemical Handling	6 air changes/ hour 100% outside air (1)	55/85	FRP
Tunnels/Underground Gallery	Table 8.3, see NAPA 820	No requirement	G.S.
-w/o gas piping	6 air changes/ hour 100% outside air (1)		Aluminum, G.S., FRP
-w/gas piping (potentially explosive)	12 continuous air changes/ hour 100% outside air		Aluminum, G.S., FRP
Stairwells to Tunnels or Basement/Underground Structures			
Preliminary Treatment/ Headwork's Building	20-30 air changes/hour 100% outside air. Chemical scrubber	40-90	Aluminum, G.S., FRP
-Wet wells (explosive, toxic, corrosive, high humidity)	30 continuous ventilation air changes/hour 100% outside air	No requirement	Aluminum, G.S., FRP
-Screening (explosive, toxic, corrosive, high humidity)	20(8)-30(1) continuous ventilation air changes/hour 100% outside air	50/90	Aluminum, G.S., FRP
-Grit removal (high humidity, corrosive) room (above tank covers)	20(8)-30(1) continuous ventilation air changes/hour 100% outside air	50/90	Type 316 SS, or FRP
Process Equipment Rooms	6(8)-12(1) Ventilation air changes/hour 100% outside air	50/85	FRP
Cogeneration Building	12 continuous air changes/ hour 100% outside air	40/90	Aluminum, G.S.
-General (explosive)	Ventilation air changes 100% outside air	50/95	FRP for process areas
-Offices (physically separated)	15 to 20 cfm/person (4)	70/78	Aluminum, G.S.
-General (explosive and flammable) (20-foot minimum envelope around equipment)	12 continuous air changes/ hour 100% outside air	N/A	FRP for process areas
Process Area Offices	15 to 20 cfm/person (4)	70/78	Aluminum, G.S.

(1) Higher ventilation rate when people are present
(2) Review NFPA 820 for specific process.
(3) Special ventilation requirements for chemical spills (refer to applicable NFPA standards).
(4) Review Title 24 and ASHRAE Standard 62-1989 for requirements
(5) Follow Title 24, BOCA, ASHRAE, and local codes for requirements.
(6) Refer to Title 24 for ventilation rate if refrigeration machines are housed indoors
(7) More restrictive than WEF MOP No. 8, Table 7-6

(8) Intermittent when people are not present

6.6 Electrical

6.6.1 Existing Electrical Installation

The existing electrical installation comprises an onsite utility transformer, a main Service Switchboard rated at 3000amp, and a main circuit breaker rated at 3000AF/2400AT.

The switchboard was installed in the year 2000 with three spaces for future feeders, as shown in Figure 5.

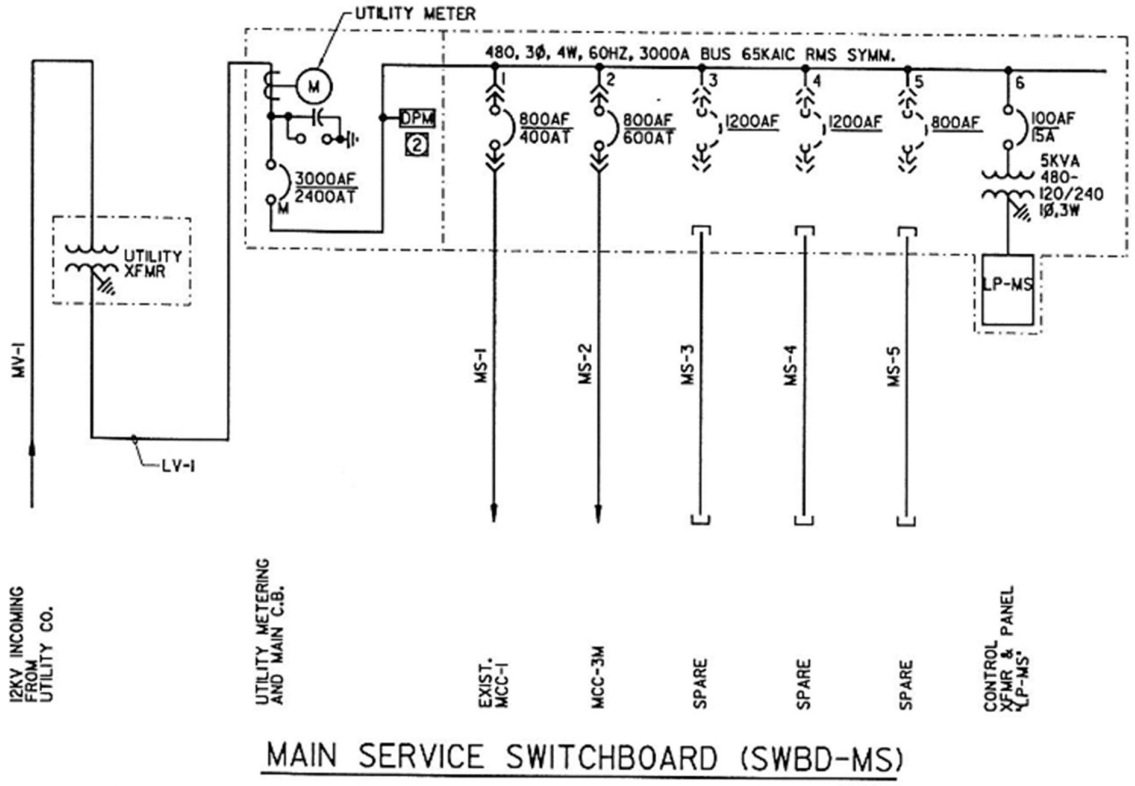


Figure 5 Existing switchboard

6.6.2 Electrical Scope of Work

The electrical scope of work for this Project is to provide electrical design for providing power to all the electrical equipment related to the expansion of Banning's Wastewater Treatment Plant, as shown on the Conceptual PFD (Attachment A).

- Installing new feeders at the existing service switchboard
- Installing new MCCs
- Installing new duct banks
- Providing site lighting and building lighting
- Providing power for new HVAC and ancillary loads

6.6.3 Preliminary of Electrical Installation Plan

The existing location of electrical equipment, the preliminary location of new electrical equipment, and the power plant are shown in Figure 6. All conceptual drawings are subject to change by the DBE.

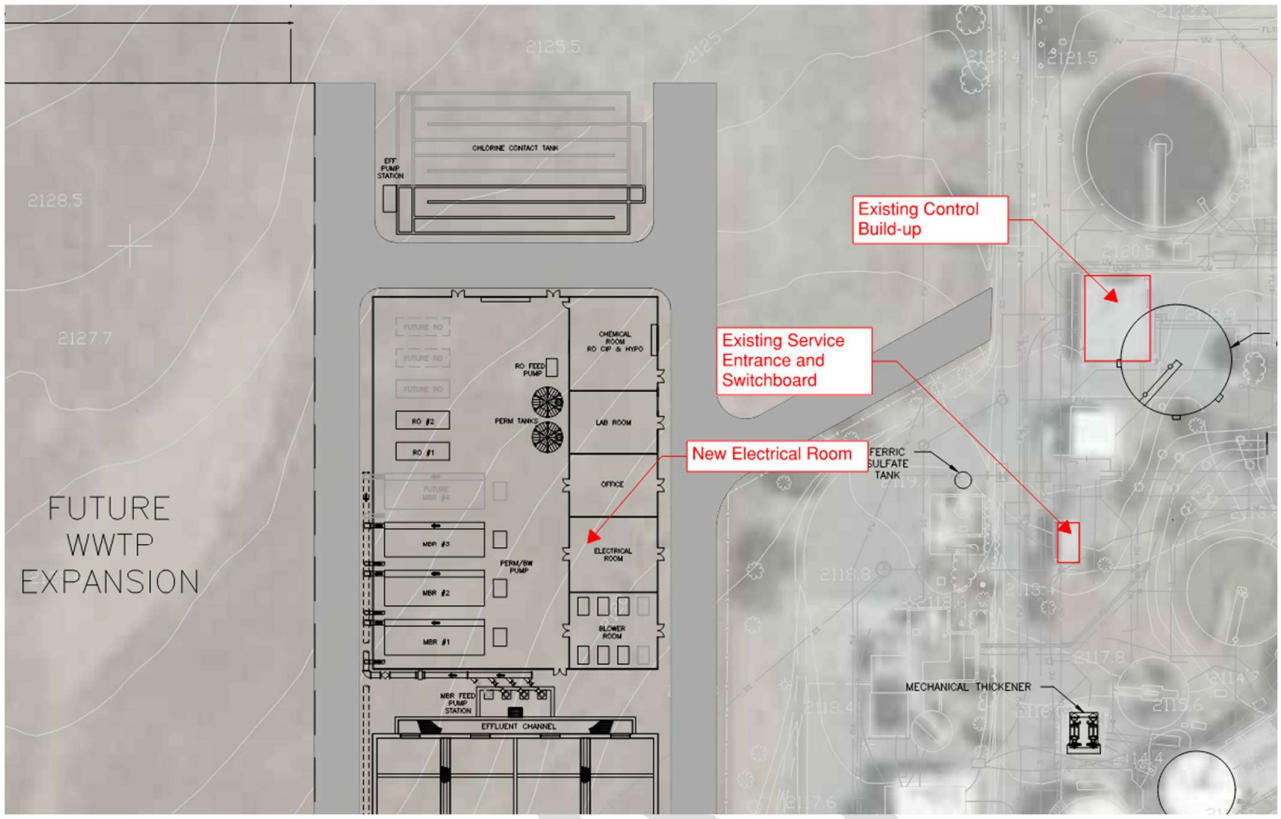


Figure 6 Layout of new electrical equipment

6.6.4 Estimated Load Calculation

Existing Load:

The existing connected load at the site is about 970 Amp, as shown in Figure 7.

	SOURCE	LOAD	VOLTAGE	KW	HP	A	DESCRIPTION
1	SWBD-MS	MS-1	480			503	
2	SWBD-MS	MS-2	480			467	
					TOTAL	**970**	

Figure 7 Existing connected load

However, if the demand load is less than this number, the meter reading or facility electrical bill should be checked.

New Load:

The estimated new loads list and calculated power demand are shown in Figure 8. This load is subject to change pending on the DBE's design.

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Power Usage	Version	Date			Project Number			
	Number of Equipment				Installation			
Description	Duty	Standby	Voltage	VFD/ Softstarter	Duty Unit Power (HP)	Standby Unit Power (HP)	Total Duty Power Usage (HP)	Total Power Usage (HP)
Primary Clarifier Equipment								
Primary Clarifier Mechanism	1		480		1.5		1.5	1.5
Sludge Grinder	1		480		3.0		3.0	3.0
Primary Sludge Pumps	1		480		3.0		3.0	3.0
Primary Scum pumps	1		480		3.0		3.0	3.0
Equalization Basin								
Pump	2	1	480	VFD	100.0	100.0	200.0	300.0
Aeration Basin								
Fine Screen	2	1	480		2.5	2.5	5.0	7.5
Washer Compactor	2	1	480		2.5	5.0	5.0	10.0
MLR Pump	4		480	VFD	1.0		4.0	4.0
Mixed Liquor Pump	3	1	480	VFD	75.0	75.0	225.0	300.0
Anoxic Tank Large Bubble Mixing System	1	1	480	VFD	5.0	5.0	5.0	10.0
Aeration Blowers	3	1	480	VFD	100.0	100.0	300.0	400.0
Overall Gates	10		480	VFD	2.0		20.0	20.0
Membrane Tanks								
Scour Blowers	3	1	480	VFD	40.0	40.0	120.0	160.0
Motorized Valves - Aeration Blowers Pipes	20		480		1.5		30.0	30.0
Permeate/Backpulse Pump	4		480	VFD	25.0		100.0	100.0
WAS Pump	1	1	480	VFD	3.0	3.0	3.0	6.0
Chemical Pumps	4		480		3.0		12.0	12.0
Bridge Crane membrane	1		480		20.0		20.0	20.0
Effluent System								
RO Feed Pump, 1st stage	1	1	480	VFD	125.0	125.0	125.0	250.0
RO Feed Pump, 2nd stage	1	1	480	VFD	40.0	40.0	40.0	80.0
Evaporator	5		480		27.0		135.0	135.0
CCT Effluent Pump	2	1	480		10.0	10.0	20.0	30.0
Sludge Facility						0.0		
RDTs	1	1	480	VFD	3.0	3.0	3.0	6.0
Sludge Mixing Pump	1	1	480	VFD	15.0	15.0	15.0	30.0
Totals							**1,397.50**	**1,921.00**

Figure 8 Estimated new Load list and calculated power

The additional demand load is about 1397 HP, which is about 1650 Amp. The new loading of the Main Switchboard is shown in Figure 9.

	SOURCE	LOAD	VOLTAGE	KW	HP	A	DESCRIPTION
1	SWBD-MS	MS-1	480			503	Existing
2	SWBD-MS	MS-2	480			467	Existing
3	SWBD-MS	MS-3	480			1640	New
4							
					TOTAL	**2610**	

Figure 9 New loading of the main switchboard

This is over the capacity of the existing main circuit breaker setting (2400A). However, the circuit breaker setting could be adjusted, and as mentioned above, it is expected that the running current of the existing load (Demand load) would be much less than what is shown in Figure 7, the existing connected load.

6.6.5 General Electrical Requirements

The following tables contain the Engineering Design Guidelines for Electrical criteria. The DBE is responsible to review and finalize these requirements for complete functioning facilities.

6.6.5.1 Electrical Supply and Distribution

Table 59 Power Supply to Site

Item	Parameter	Criteria	Notes
1	Load Estimate	Determine anticipated loads.	

Item	Parameter	Criteria	Notes
2	Supply Voltage	480 Volt, 3 phase, 4 wire	
3	Scope	Evaluate the total running load of the WWTP. Verify if the existing transformer and switchboard have enough capacity to run the new and existing loads. If required, provide additional transformer and switchboard capacity to run the new and existing loads. Coordinate with SCE for replacing existing Transformer if required.	Provide 20% spare transformer nameplate rated capacity, if additional transformer is needed.

Table 60 Arc Flash

Item	Parameter	Criteria	Notes
1	Arc Flash Study	Evaluate if Arc Flash Study is required by code. If required by code, coordinate Short Circuit, Arc Flash, and Harmonic Studies to be performed using ETAP Software.	
2	Arc Flash Labels	If Arc Flash Study is required by code, provide Arc Flash Labels for all affected equipment based on Arc Flash Study results.	

6.6.5.2 Technical Requirements

Table 61 Lightning Protection & Grounding

Item	Parameter	Criteria	Notes
1	Lightning Protection	DBE shall perform risk assessment in accordance with NFPA 780 to determine requirements.	
2	Grounding	Ground grid shall consist of embedded concrete rebar in the new building and pump station slabs, connected to grounding rods.	

Table 62 Switchgear

Item	Parameter	Criteria	Notes
1	Material/Enclosure	Heavy gauge steel with NEMA 1 or NEMA 3R ratings as required.	
2	Preferred Manufacturers	Allen Bradley.	No equal.
3	Communications	Main circuit breakers will include relays which can communicate via Ethernet to SCADA.	
4	Remote Operation	Remote racking and un-racking of main incoming breakers to avoid arc flash incidents.	
5	Circuit Breakers	Separately mounted construction; insulated case circuit breakers.	
		Units shall include solid state trip units with ground fault protection for all breakers larger than 400 Amperes.	
6	Bus Bars	Tin- or silver-plated copper bus bars.	
7	Access	Front and rear access to each cubicle as required.	
8	Power Monitoring	Power monitoring of voltage (over/under), phase imbalance, ground, kilowatts, and kilowatt/hours.	
		Power monitor connected via communications network.	
		Instantaneous Power shall be available for trending in SCADA.	
		Total kilowatt/hours shall be available in SCADA.	
9	Bus Bracing	Bus bracing will be a minimum of 65kAIC or as	

Item	Parameter	Criteria	Notes
		determined by power study.	

Table 63 Motor Control Centers (MCCs)

Item	Parameter	Criteria	Notes
1	Materials/Enclosure	Heavy gauge steel with NEMA 1 or NEMA 3R ratings as required.	
2	Preferred Manufacturers	Preference shall be for equipment that is consistent with the PLC vendor such that communications between the intelligent motor starters and the PLC can be seamlessly integrated.	Refer to SCADA Design Deliverables
3	Ratings	NEMA (not IEC) rated relays and starters.	
4	Intelligent MCC	Provide intelligent MCC consisting of intelligent motor starters and networked components for simplified installation and improved diagnostics.	
		Intelligent motor starters include integrated current or power monitoring, overload relays and programmable protection functions and diagnostics (trip history, trip status, time since last trip, etc.), which are all accessible via an integrated communications interface.	
5	Wiring	Communications and power wiring shall be separated from one another.	Include conduit for future plant expansion (i.e., future Trident Units and Influent/ Effluent Pumps)
		Provide non-metallic duct where communication cables are exposed to other wiring systems (i.e., Innerduct, Smurf tube, Schedule 40 PVC)	
6	Communication	Starters shall include the ability to communicate with the SCADA system via Ethernet, or field bus nominated for instrument networking.	Consider Fiber Optic Cable where appropriate.
7	Reduced Voltage Starters	Reduced voltage starters shall be solid-state type.	
8	Power Monitoring	Power monitoring of each MCC voltage (over/under), phase imbalance, ground, kilowatts, and kilowatt/hours.	
		Power monitor connected via communications network.	
		Instantaneous Power shall be available for trending in SCADA.	
		Total kilowatt/hours shall be available in SCADA.	
9	Bus Bars	Tin- or silver-plated copper bus bars.	
10	Bus Bracing	Bus bracing will be a minimum of 65KAIC or as determined by the power study.	

Table 64 Variable Frequency Drives (VFDs)

Item	Parameter	Criteria	Notes
1	Location	Install in MCC lineup (not standalone)	Except GAC pumps.
2	Preferred Manufacturers	Toshiba P9	Preference shall be for equipment that is consistent with the PLC vendor such that communications between the equipment can be seamlessly integrated.
3	Type	Pulse-Width-Modulated (PWM).	

Item	Parameter	Criteria	Notes
		6-pulse VFDs for low voltage (600V) motors less than 100 HP.	
		18-pulse VFDs for low voltage (600V) motors 100 HP or higher.	
4	Bus Bracing	Minimum of 65kA for low voltage (LV) VFDs.	
5	Control Power	120V internal or external control power transformers.	
6	Communications	Integral communication to central SCADA system via Ethernet/IP.	
7	Protection Functions	Temperature and vibration module for motor protection.	
8	Cable	Cable between VFD and the motor shall be VFD cable which is specifically designed to reduce noise and cross-talk in VFD applications.	
9	Filters	Input filter requirements shall be specified as necessary to reduce harmonics on the system to the limits nominated in IEEE 519.	
		Output filter requirements shall be specified as necessary to address noise, crosstalk, motor dV/dt and insulation requirements (NEMA MG 1-31-40.4.2), etc.	
		Additional output filters may need to be considered for long motor cable lengths.	

Table 65 Motors

Item	Parameter	Criteria	Notes
1	Cooling	Totally enclosed fan cooled (TEFC).	
2	Preferred Manufacturers	US Motors	
3	Service Factor	1.15	
4	Efficiency	Super or premium efficiency ratings.	
5	Thermal Protection (Motors > 500 HP)	PT100 RTDs, two per phase, separately brought out.	
6	Thermal Protection (Conventional Motors ≤ 500 HP, > 15 HP)	Embedded PTC 1000 Thermistors	
7	Thermal Protection (Submersible > 30 HP or any VFD motors)	Embedded PTC 1000 Thermistors	
8	Vibration monitoring	Vibration monitoring required on air blower motors or other motors determined to be critical/high-cost assets.	
9	Inverter Duty	VFD driven motors shall be designed to operate within the speed range required without overheating and shall have insulation suitable for inverter duty.	
10	Jam Protection	For motors driving loads prone to jamming provide electronic shear pin protection.	
11	Starting	Soft starter or VFD rated duty for all motors 60HP and larger.	

Table 66 Transformers

Item	Parameter	Criteria	Notes
1	Non-Linear Loads	"K" rated units for anticipated low voltage non-linear loads (e.g., solid state ballasts, Uninterruptible Power Supplies [UPS], etc.).	

Table 67 Uninterruptible Power Supply (UPS)

Item	Parameter	Criteria	Notes
1	General	Provide UPS at all PLC locations and network switch locations	
2	Communication	Ethernet I/P.	
		It shall be able to communicate to SCADA the condition and the condition of the system power input.	
3	Maintenance Bypass	UPSs shall be provided with maintenance bypass switches for service during operation.	
4	Power Conditioning	The UPS shall also provide power conditioning for sensitive control equipment and instruments.	
5	Backup Time	2 hours (min)	

Table 68 Interior Lighting

Item	Parameter	Criteria	Notes
1	Type	LED	
2	Compliance/ Controls	Comply with California Title 24 energy conservation regulations, including occupancy sensing and daylight controls.	
		Applicable ADA requirements for emergency exit lighting	
		Additional security requirements outlined below.	
3	Corrosive Areas	Sealed fixtures in process areas where corrosion may be a problem	
4	Emergency Lighting	Incorporate emergency battery backup lighting fixtures for life safety and ingress/egress during power outages.	
5	Lighting	Provide adequate lighting for routine O&M activities.	

Table 69 Exterior Lighting

Item	Parameter	Criteria	Notes
1	Type	LED	
2	Controls/ Compliance	Comply with California Title 24 energy conservation regulations.	
		Comply with International Dark Sky Association requirements.	
		Generally, control shall be via photocell and time clock with manual override.	
		Applicable ADA requirements for access and egress lighting	
		Additional security requirements outlined below.	
3	Requirement	Switch-on lights shall be provided under each canopy to work on the major process equipment.	
		Exterior fixtures to provide a lighting level suitable for process area maintenance, safety and security.	

Table 70 Conduit

Item	Parameter	Criteria	Notes
1	General Use	Galvanized rigid steel (GRS)	
2	Duct Bank	Non-metallic PVC.	
		Concrete encased with reinforcing steel.	
		Incorporate 20 percent spare conduits dedicated for use with this phase of installation.	
		Allow conduit for future expansion	
3	Future Expansion	Provide all required underground conduit for future expansion (e.g., Trident Units, Influent/Effluent Pumps)	

Table 71 Conductors

Item	Parameter	Criteria	Notes
1	Material	Copper.	
		Aluminium conductors not acceptable.	
2	Conductor Type (Power)	Low voltage (600 Volt), type THHN or XHHW	
3	Signal Wiring	Twisted Shielded Pairs.	
		300 V will be acceptable except where 600 V is required per NEC.	
4	Network Cabling	Cat 5E	

Table 72 Harmonic Filter

Item	Parameter	Criteria	Notes
1	Requirement	Mitigate electrical harmonics generated from solid state/non-linear devices such as UPS, computer power supplies, solid state lighting ballasts, and VFDs.	
2	Harmonic Limits	Institute of Electrical and Electronics Engineers (IEEE) Standard 519 for general systems.	

Table 73 Receptacles and Ancillary Equipment

Item	Parameter	Criteria	Notes
1	Location	Dual 120V receptacles shall be installed with suitable spacing to provide access to power within 100 ft of any location of any new above ground facility, and at any major equipment locations or control panels.	
		3 phase, 480 V welding outlets shall be installed at major equipment locations.	
		Location and type of receptacles within the Office/SCADA/Lab shall be per the California Building Code, Title 24, and NEC requirements.	
2	Type	Receptacles in main plant area (exposed to wash-down etc.) or outdoors shall be UL listed weatherproof, industrial type.	
3	Disconnect for Chemical Dosing, Metering and Sump Pumps	A control and power quick-disconnect plug and receptacle shall be provided for chemical dosing and metering pumps and sump pumps.	Allows for ease of replacement and relocation without the need for an electrician.
		The receptacle and plug must have an IP68 rating with the attachment plug cap inserted or removed.	

Table 74 Backup Generator

Item	Parameter	Criteria	Notes
1	Manufacturers	Caterpillar	No equal
		Generator shall be on the SCAQMD list of approved generators	
2	Protection	Engine shutdown on high water temperature, low oil pressure, overspeed, and engine overcrank.	
		Limits as selected by manufacturer.	
3	Controls	Local control panel with MANUAL-OFF-REMOTE selector switch on engine- generator control panel.	
4	Accessories	Fuel pressure gage, water temperature gage, lube oil pressure gage on engine/generator control panel.	
5	Enclosure	NEMA MG1, Open, Drip Proof.	
6	Fuel Storage	Mount on skid base with integral fuel storage.	
		Double wall fuel tank.	
		48 hours storage for full load operation.	
7	Alternator	Line to Neutral Voltage THD ≤ 5 %	
		Line to Natural Individual Harmonic THvD: ≤ 3%	
		3rd Harmonics: practically zero	
		Subtransient Reactance: ≤ 12%	
8	Voltage Regulator	Volts/Hertz exciter-regulator: to match engine and generator characteristics.	
		Voltage regulation: plus or minus 1% from no load to full load.	
		Manual controls: ability to adjust voltage droop, voltage level (plus or minus 5%) and voltage gain via control panel.	
9	Governor	Electronic governor to maintain engine speed within 0.5%, steady state, and 5%, no load to full load, with recovery to steady state within 2 seconds following sudden load changes. Equip governor with means for manual operation and adjustment.	
10	Load Bank	Required for standby generator sets where the full load is not available for regular maintenance testing or start-up services.	If load banks are to be hired for testing instead of permanently installed, design shall include suitable facility for connecting temporary load bank
11	Communications	Ethernet	
		Acceptable Protocols: Industrial IP, Modbus TCP	
12	Signals	Hard-wired signals (form c, dry contacts): Fault, Running, Available (Remote & not faulted), Battery Low.	All signals shall go back to SCADA – fail/run/error, etc. Signal for the fuel indicator at the generator

Item	Parameter	Criteria	Notes
13	Local Alarm and Status Monitoring	Low oil pressure (alarm & shutdown) Oil pressure sender failure (alarm) Low coolant temperature (alarm) High coolant temperature (alarm & shutdown). Engine temperature sender failure (alarm). Low coolant level (alarm or shutdown selectable) Fail to crank (shutdown). Fail to start/overcrank (shutdown) Overspeed (shutdown) Low/high DC voltage (alarms) Weak battery (alarm). Low fuel day tank (alarm) Low/high AC voltage (shutdowns) Under frequency (shutdown). Over current (alarm & shutdown) Short circuit (shutdown). Ground fault (alarm) Overload (alarm). Emergency stop (shutdown) Engine oil pressure (psi or kPA) Engine coolant temperature (degrees F or C) Engine oil temperature (degrees F or C) Engine speed (rpm) Number of hours of operation (hours) Number of start attempts Battery voltage (DC volts)	

Table 75 Automatic Transfer Switch (ATS)

Item	Parameter	Criteria	Notes
1	Manufacturers	Eaton	No equal.
2	Description	NEMA ICS 10.	Provide two options: • Close-Transition • Open-Transition For client selection
		Suitable for use in standby systems in NFPA 70.	
		Conform to NFPA 110.	
		Manual operation conforms to UL 1008 Safe operation under full load conditions.	
3	Configuration	Electrically operated.	
		Mechanically held in both operating positions.	
4	Rating	Continuous duty.	
		Three (3) poles with solid neutral.	
5	Interrupting Capacity	100% continuous rating.	
6	Withstand Current Rating	14,000 RMS symmetrical amperes when used with molded case circuit breaker.	
		Non-welding contact when used upstream feeder overcurrent device available fault current specified.	
7	Service Conditions	NEMA ICS10	
		Temperature: -40 to +50 degrees C Relative	
		Humidity: up to 95%	
8	Enclosure	Open switch in electrical equipment cabinet.	
		Visible main transfer switch.	
		Indicating lights: Normal Source, alternate Source, connected to normal and connected to emergency are accepted.	
9	Enclosure Auxiliary Contacts	Rated no ≤ 10 amps at 120 volts, 60 Hz Loss of Utility Power.	
		Preferred Source Active.	

Item	Parameter	Criteria	Notes
		Alternate Source Active.	
10	Preferred Source Monitor	Monitor normal source voltage and frequency.	
		Initiate transfer when voltage drops below 85% or frequency varies more than 3% from rated nominal value.	
11	Alternate Source Monitor	Monitor alternate source voltage and frequency.	
		Inhibit transfer when voltage is below 85% or frequency varies more than 3% from rated nominal value.	
12	In-Phase Monitor	Inhibit transfer until source.	
		Load is within 10 electrical degrees.	
13	Sequence of Operation	Initiate Time Delay to Start Alternate Source Engine Generator: Upon initiation by normal source monitor. Time Delay to Start Alternate Source Engine Generator: 0 to 30 seconds, adjustable and factory set at 30 seconds. Initiate Transfer Load to Alternate Source: Upon initiation by normal source monitor and permission by alternate source monitor. Time Delay before Transfer to Alternate Power Source: 0 to 300 seconds, adjustable, and factory set at 3 seconds.	
		Initiate Retransfer Load to Normal Source: Upon permission by normal source monitor. Time Delay before Transfer to Normal Power: 0 to 30 minutes, adjustable; and factory set at 5 minutes. Time delay shall be automatically defeated in the event of alternate source failure, provide normal source is available. Time Delay before Engine Shutdown: 0 to 30 minutes, adjustable, of unloaded operation factory set at 10 minutes.	
14	Engine Exerciser	Generator exerciser timer User programmable run times selectable between load transfer and engine run only fail-safe feature that will retransfer the switch to preferred source during exercise period.	
		Bypass exerciser control when normal source fails during exercising.	
15	Alternate System Exerciser	Transfer load to alternate source during engine exercising period.	
16	Startup and Testing	ATS and Generator testing shall be performed to demonstrate functionality and operation of new and existing equipment in an emergency.	If Startup and Testing is performed prior to installation of all equipment, then Startup and Testing shall be repeated after all equipment have been installed. Performance of backup generator shall be demonstrated continuously for 48 hours.
		Local and Remote testing shall be performed at full load.	

6.7 Instrumentation and Controls

6.7.1 Process Control Narrative

Process controls will be set up according to industry standards and be connected to the new SCADA system. Controls should allow automatic operation to the industry standard and the extent possible. The following section summarizes a conceptual process control narrative for DBE consideration.

Aeration control will allow dissolved oxygen (DO) concentration control in each aerated zone and swing zone. DO setpoints will be operator adjustable and operators will be able to schedule DO concentrations in 30-minute intervals for a diurnal or weekly schedule. The control system will be able to maintain DO setpoints at concentrations as low as 0.2 mg/L and as high as 2.5 mg/L. The DO control system would use cascade control with airflow control for the primary loop and DO control for the secondary loop. Blower control will be based on pressure control, including the option of operating in most-open-valve mode. Minimum airflows to each zone will be operator adjustable and initially set to an airflow equivalent to 0.1 scfm/sf or the minimum airflow required to meet the minimum diffuser airflow as recommended by the diffuser supplier, whichever is higher. Blower controls will include protections against blower damage due to low airflow and overpressure.

If needed, blower controls can also be based on flow or ammonia control in addition to DO and pressure control.

MLR pumps will include VFDs which will be set up to operate at an operator adjustable ratio to the primary effluent equalization pumps divided by the number of Aeration Basins in service, i.e. the feed flow to the aeration basins, per basin. The ratio will be adjustable between 2.0 and 5.0.

Solids retention time (SRT) is the most important parameter to be controlled at any activated sludge plant, including MBR plants. Ideally, SRT control should be set up to achieve a steady waste activated sludge (WAS) flow rate that is only adjusted when either the SRT setpoint changes (which may be done seasonally) or when a train or a basin is taken out of service. t is possible to achieve this condition when the return activated sludge (RAS) ratio (RAS flow/Influent flow, where influent flow to the MBR system is the flow provided by the equalization pumps) is maintained at a constant value. At the WWTP, the RAS ratio will be controlled by the ratio between the flow provided by the mixed liquor transfer pumps, transferring mixed liquor from the aeration basins to the membrane tanks. The target for this flow ratio will be 5.0, meaning the RAS ratio will be 4.0. The required WAS mass flow is equal to the biomass inventory divided by the target SRT. In the MBR system, the MLSS concentration in the aeration basin can be calculated as a fraction of the MLSS concentration in the membrane tank, where the fraction is 80% (= R/[R + 1]) when the typical RAS ratio of 4.0 is used. The solids inventory is the sum of the solids inventory in the aeration basins and the membrane tanks. If the WAS is taken from the RAS stream, which has a slightly higher MLSS concentration, the WAS flow is:

$Q_{WAS} = (0.8.V_{AB} + V_{MT})/SRT$

Where Q_{WAS} = WAS flow rate, gpd
V_{AB} = Volume of the aeration basin in service, gal
V_{MT} = Volume of the membrane tank in service, gal
SRT = Target SRT, days

If the ML pumps cannot maintain the target RAS ratio of 4.0 for any reason, the 0.8 factor in the equation can be adjusted as required.

Using a stable WAS flow would help the MBR system to produce a consistent effluent quality and maintain the biomass at a stable point for optimal performance.

To minimize the accumulation of scum in the system, the WAS should be drawn from the surface of the RAS channel once scum would have had a chance to float, so that scum is wasted preferentially and the so-called scum SRT is less than the system SRT. This approach is also described as a classifying selector by some consultants.

6.7.2 Level of Automation

The Project shall include a high level of automation. The plant operators will manually initiate the wastewater treatment plant's start-up from the Project's control system. After operator initiation, the control system will manage the plant startup sequences, normal operation, and shutdown sequence fully automatically.

Every skid will have its own PLC control system and Human Machine Interface (HMI) and shall be Supervisory Control and Data Acquisition system (SCADA) transparent, i.e., seamlessly integrated into the site SCADA system.

Plant operations will be monitored and controlled via a local operator station using an owner- and engineer-approved SCADA Platform. A development workstation will have the PLC programming software installed, as well as the SCADA platform Integrated Development Environment (IDE) to develop and maintain the project Human Machine Interfaces (HMIs).

Plant monitoring and control will be predominantly carried out from the Central Control Room on Operator Workstations located in the plant administration building. Further control will be available through HMIs located at critical areas of the plant, locations to be confirmed during project design.

The design will enable remote off-site access for operator monitoring, technician diagnostics, and control modifications under agreed security measures. If requested, allowance will be made for the transfer of historical data from the local historian to a central monitoring location.

The capability will be provided to connect laptop HMI units through a local secure, encrypted wireless network throughout the site to facilitate commissioning and maintenance activities over the life of the plant.

6.7.3 Plant Control Architecture

The following section summarizes a conceptual plant control architectural plan for DBE consideration.

The Plant LAN will be a secure Control Center Network within a single control area. The upper-level supervisory control network connects Control Center servers, application servers, and HMIs over Ethernet. The control servers and application object servers are installed in a server rack, and each is configured in redundant pairs with secondary network interfaces. The servers host the Wonderware System Platform. The owner and engineer shall approve the number of HMI workstations to be provided for operators and supervisors and at the security gate for monitoring and control.

Supplied Architecture shall:

- Be scalable, as shown in Figure 10.
- Be flexible from a connectivity standpoint, as shown in Figure 11.
- Employ virtualization, as shown in Figure 11.
- Provide redundancy at the control and supervisory levels, as shown in Figure 13.

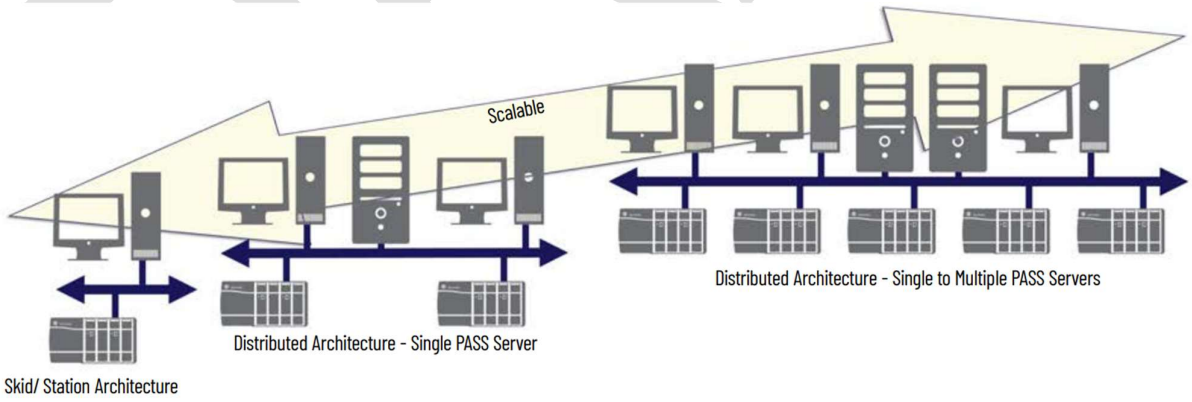

Figure 10 An example of a scalable plant architecture

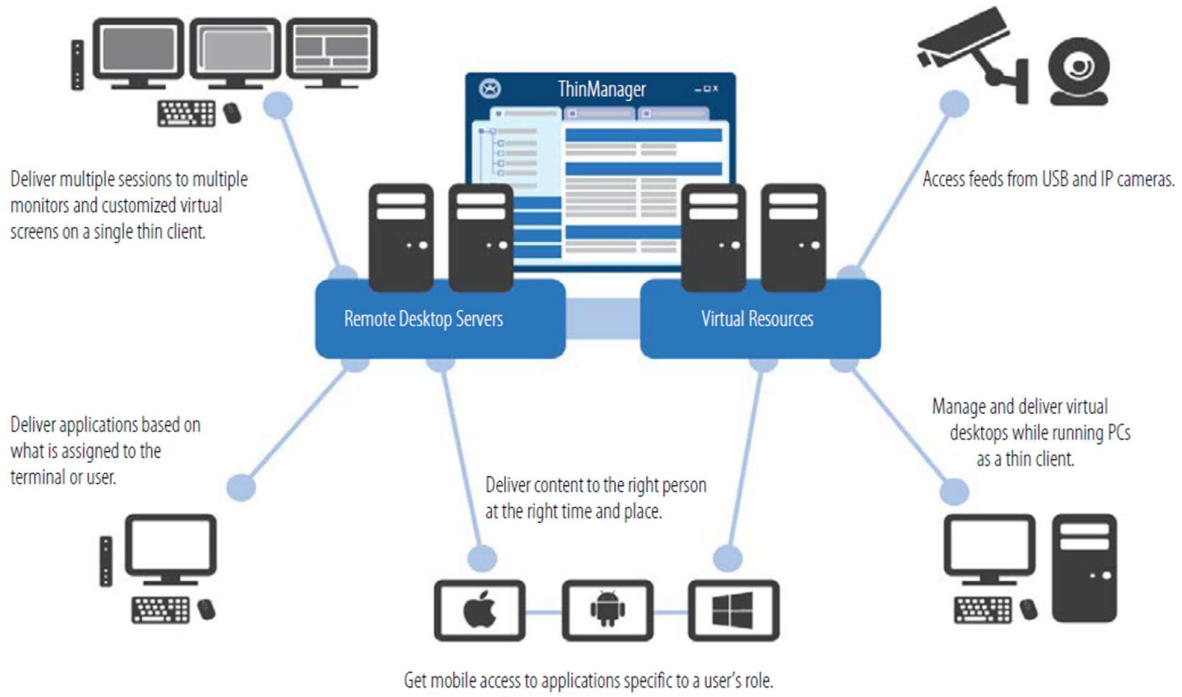

Figure 11 The solution shall have the flexibility of connectivity and manageability using thin clients.

Table 76 SCADA system elements descriptions

System Element	Description
Process Automation System Server (PASS)	The PASS is a required system element that can host displays, alarms, and data connections to controllers. Multiple PASS servers can be used to provide additional system capacity or to create logical segregation of application content that is based on the process. For smaller systems, the PASS - C (consolidated PASS server) supports functions that otherwise would be hosted on application servers.
Operator workstation (OWS) and Application server (AppServ-OWS)	The OWS and AppServ-OWS provides an interactive graphical interface to monitor and control the process. The AppServ-OWS uses Microsoft® Remote Desktop Services (RDS) technology to serve multiple instances of the OWS as thin clients from one server. The technology provides for FactoryTalk® View SE thin clients that run applications and process data on a remote computer.
Engineering workstation (EWS) and Application server (AppServ-EWS)	The EWS and AppServ-EWS provide a central location for configuring the system and monitoring/maintaining system operation. The AppServ-EWS uses Microsoft Remote Desktop Services (RDS) technology to serve multiple instances of the EWS as thin clients from one server. The technology provides for SCADA HMI thin clients that run applications and process data on a remote computer.
AppServ-Asset management	The asset management server is a centralized tool for managing automation-related asset information (Rockwell Automation and third-party assets). The asset management application server includes capabilities for asset inventory, source control, audits, change notifications, reporting, and security.
AppServ-Info	Data management storage can include a Historian or Microsoft SQL server.
Controllers/PLCs	The Programmable Logic Controllers (PLCs) support continuous process and batch applications. These controllers also support discrete and motion applications.

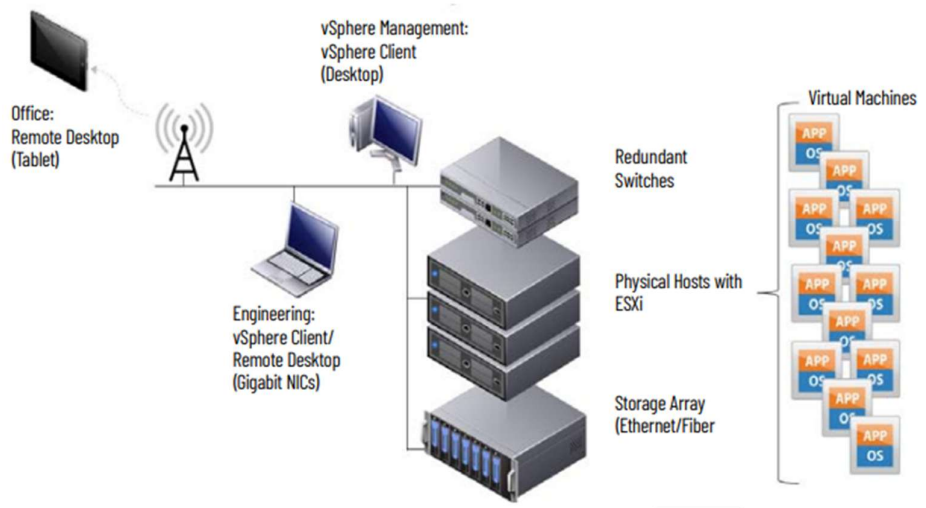

Figure 12 Architecture elements virtualization

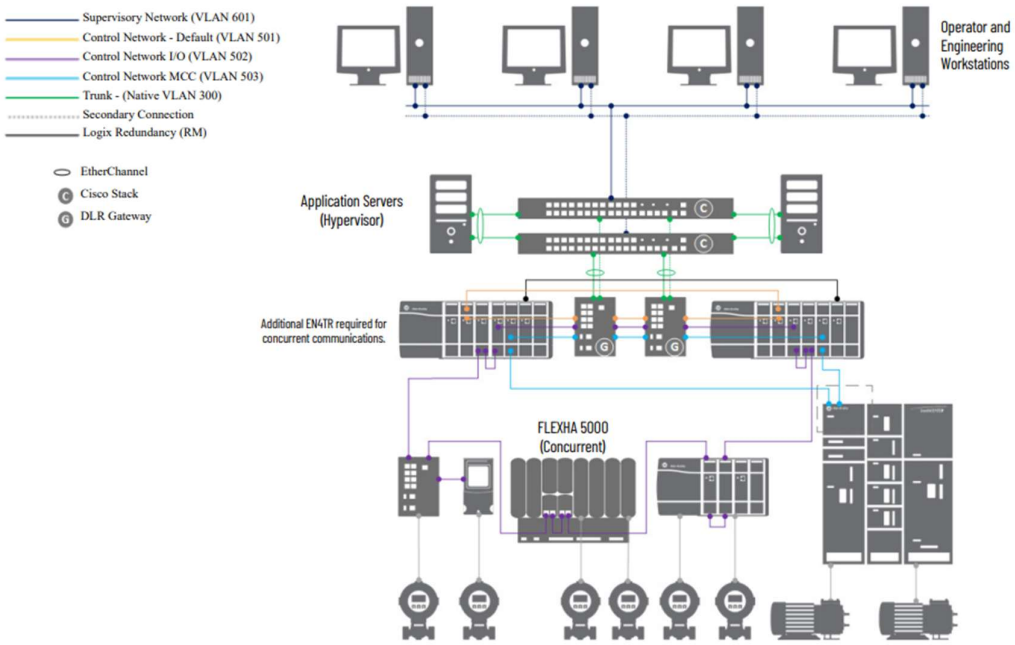

Figure 13 Typical resilient DLR topology

The lower-level process control network connects the servers to the PLCs over Ethernet. The PLCs communicate via approved Ethernet protocols with compatible actuators, motors, instruments, analyzers, and other control elements at the field level. Approved Ethernet-based protocols are Ethernet/IP, Modbus/TCP, or other Engineer-approved protocols.

Secure wireless access points will connect operators' mobile tablets to access HMI and SCADA systems.

6.7.4 Motor Control Centers (MCCs)

Smart MCCs shall be used throughout the project. All MCCs will be connected to PLCs; all motors are controlled in Local (hand)/Remote (Auto) modes with proper signaling and indication for all normal and alarm conditions locally and remotely. Local PLCs control the operation of motors and provide data for the SCADA system. PLCs and VFDs will be securely connected to the network.

6.7.5 Instrumentation and Field Devices

The following equipment shall be standardized to reduce the inventory of spares and minimize the time for replacement:

- Instruments
- Installation Materials
- Tube and Tube Fittings
- Manifolds

6.7.5.1 Instrument Specific Requirements

Local Control Panels-Local control switches and indicators shall be used where required to address specific safety or maintenance concerns. Otherwise, all manual control will be available via SCADA only (locally via wireless tablets).

6.7.5.2 Instrument Mounting and Access

- All process instruments in wet areas will be housed in IP68, NEMA 4 enclosures (NEMA4x in chemical areas), or vendor requirements, whichever is more stringent.
- Access will be considered in the selection of instrumentation.
- Instruments will be mounted at a working level between three and five feet above the operating floor.
- Process indicators and indicating transmitters will be mounted in a position that is readable by an operator without requiring the use of a ladder or the building of platforms.
- Temperature sensors will be installed and clamped in tube racks. The excess capillary tube will be coiled and clamped to the mounting stand below the instrument.
- Instruments located near each other will be grouped to the maximum extent possible on a common mounting stand, wall bracket, or instrument rack.
- Instrument impulse lines will incorporate a blowdown leg or contamination accumulation leg for the removal of dirt and moisture.
- Instrumentation taps to process lines will be isolated by a root valve at the connection.
- Isolation valves for taps to process lines will be ¼-turn ball valves of materials compatible with the process fluid.
- Isolation valves for chemical service will match isolation valves used in other portions of that chemical piping.
- Analyzers for primary process lines will be installed in bypass assemblies external to the main process headers to allow routine maintenance.
- Analyzer assemblies will include an isolation valve at each process connection tap, pressure regulator, and manual sample valve, rotameter flow element with integral flow metering valve, check valve, miscellaneous piping, and fittings.
- Analyzers will be generally panel mounted and located in close proximity to the relevant sample point in a designated analyzer room (where possible) for improved access to common operational and maintenance activities on these units.
- The analyzer waste streams will be discharged into and drained to a common collection point for either pumped return to a specified point along the process or drained to waste.
- All analyzers will have “no flow" detection and pressure and flow control valves on the inlet to ensure a constant rate of feed through the analyzer.

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- Manual sample points will be provided for sampling water at various points throughout the main process, typically with each change in process unit and upstream and downstream of chemical dosage points for manual checks of water quality and chemistry.
- Assemblies for analyzer sensors that must remain wetted at all times (e.g., pH sensors) will incorporate a vacuum breaker in the drain piping.
- Sample drain will be routed to a hub drain.

6.7.6 Controllers and Input/Output (I/O) Modules

- Programmable Logic Controllers (PLCs) to be Allen-Bradley, Siemens, or Modicon PLCs in that order of preference.
- Current Versions - Each PLC CPU, I/O module, specialty module, and communication module will be the latest version, supported by the manufacturer for the life of the system.
- Programming Software, PLC, and SCADA IDEs shall use object-oriented programming based on function blocks for all typical equipment and functions in accordance with IEC- 61131-3.
- All CPUs will be equipped with non-volatile memory cards to preserve programs.
- Installed I/O capacity will include 25% spare I/O points. PLC rack power supplies will have the capacity to support at least 25% I/O expansion. The above requirements should also apply to vendor-supplied PLCs.
- I/O Modules Discrete input modules will be 24VDC only. Discrete output modules will be used to trigger interposing relays (unless an isolated output module is used.)
- Analog modules will be 4-20 mA 24VDC isolated input and output channel design. Analog input isolators will be used. All analog inputs will be scaled to specified engineering units at the PLC programming level. High and low alarm trip points will be provided at 90% and 10% of the span for all analog points unless otherwise specified in P&ID and on IO lists. All analog signals exiting the buildings to or from devices or instruments will have transient voltage surge suppression (TVSS).
- RTD modules will be used for RTD inputs.

6.7.6.1 Spare Hardware

20% spares for I/O modules, CPUs, backplanes, and power supplies in addition to any other OEM recommended hardware.

6.7.6.2 Backups

A flexible backup system shall be implemented into the proposed system. Backup copies will be collected at minimum every six months of the transitional operation period.

6.7.7 General Instrumentation and Controls Requirements

The following tables contain the Engineering Design Guidelines for I&C criteria. The DBE is responsible to review and finalize these requirements for complete functioning facilities.

6.7.7.1 Instrumentation and Field Devices

Table 77 General

Item	Parameter	Criteria	Notes
1	Standardization	Standardize on the following equipment throughout the Project to reduce spare supply inventories and minimize rework time for replacement: • Instruments • Installation materials	

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Item	Parameter	Criteria	Notes
		• Tube and tube fittings • Manifolds Variations from this requirement shall only be allowed by specific approval of City of Banning. Manufacturer or DBE preference shall not be justification for failure to comply with this requirement. Only sound, engineering supported justifications will be considered.	
2	Communications	Field bus to be nominated by the DBE to suit PLC.	
3	Grounding and Bonding	In accordance with manufacturer's requirements and as specified elsewhere.	
4	Control System Integrator	Control System Integrators Association (CSIA) Certified Integrator; OR Ignition Certified System Integrator; OR demonstrate similar recent experience using the same PLC hardware, SCADA software and networked instruments and MCCs	
5	Duplicate Instruments for Different Purposes	As a general rule, measuring points and measuring equipment for interlocking and protection purposes shall be separate and not combined with measuring equipment for monitoring or automatic control equipment.	
		For flow measurement one common primary element can be used. Signals to be processed in several systems shall be suitably repeated and mutually decoupled to avoid interaction.	
6	Location	All instrument materials and construction shall be suitable for the location in which they are installed. Consider wet, corrosive, and hazardous areas in the selection of instrumentation.	

6.7.7.2 Instrument Specific Requirements

Table 78 General

Item	Parameter	Criteria	Application
1	Level - Radar	Manufacturer: Endress & Hauser, or equal. Measurement Range: 0 % through 100 % level. Measurement Resolution: 0.1 inch or less. Measurement Accuracy: +/- 0.25 % of measured distance for distances greater than 3.3 feet.	Consider where foaming may be an issue (in cases where ultrasonic LT may not be suitable).
2	Level - Ultrasonic	Manufacturer: Endress & Hauser, or equal Measurement Range: 0 % through 100 % level. Measurement Resolution: 0.1 inch or less. Measurement Accuracy: +/- 0.25 % of measured distance for distances greater than 3.3 feet.	Non-contact level monitoring.
3	Level - Pressure	Manufacturers: Endress & Hauser, or equal. Measurement Accuracy: +/- 0.1 % of range.	Where non-contact level monitoring is not required and ease of access to the transmitter is desired (e.g. water tanks).
4	Level - Submersible Hydrostatic	Manufacturers: Endress & Hauser, or equal. Measurement Accuracy: +/- 0.25 %	Covered basins.
5	Level - Conductivity Probe	Manufacturers: Warrick, or equal.	
6	Level - Float Switch	Manufacturers: Magnetrol, Kari, Flygt, equal.	Level alarm detection.

Item	Parameter	Criteria	Application
		Mercury shall not be acceptable in float switch devices.	Not used for primary process control applications.
7	Pressure - Absolute (Diaphragm Type)	Manufacturers: Endress & Hauser, or equal Accuracy: +/- 0.1 % of range Chemical Installation: Isolation Diaphragm Seal Calibration/Testing: 3-way valve manifold for calibration/testing and tapping point for pressure gauge.	Pipe pressure, pump discharge/suction, general process pressure.
8	Pressure - Differential	Manufacturers: Endress & Hauser, equal Accuracy: +/- 0.1 % of range Chemical Installation: Isolation Diaphragm Seal 3-way valve manifold for calibration/testing and tapping point for pressure gauge.	Pressure drop across filters, etc.
9	Pressure - Switch	Manufacturers: Ashcroft or similar approved	
10	Flow - Electromagnetic (Full pipe)	Manufacturers: Endress & Hauser, No equal Installation: Vault or above ground. Shall not be directly buried. Maintenance: Provide maintenance bypass for critical applications where a bypass or standby does not exist. Accuracy: Max 1 % of measured, for flow velocities between 10 % and 100 % of full scale. Grounding: Grounding rings or protective shield when installed in non-conductive pipe. Repeatability: Max 0.25 % of full scale.	All primary and secondary process flows. DBE shall provide engineering justification for any alternative proposed.
11	Flow - Open Channel	Manufacturers: Endress & Hauser, no equal Accuracy: Product shall be chosen for maximum accuracy based on the dimensions and flow pattern of the channel.	
12	Flow- Air	Manufacturers: FCI Insertion, or similar approved	
13	Flow - Liquid Switch	Manufacturers (thermal flow switch): Dwyer, IFM, or similar approved	Pump no flow, sample line no flow, etc.
14	Flow - Air Switch	Manufacturers: FCI, or similar approved	Ventilation/Extraction fan no flow, etc.
15	Limit - Switch	Manufacturer: Square D, Class 9007 Type C, or similar approved	
16	Temperature - Transmitter	Manufacturer: Endress & Hauser, or equal	Process temperature
17	Temperature - Switch	Manufacturer: Ashcroft, Allen Bradley, or similar approved.	
18	Vibration - Transmitter	Manufacturer: Bently Nevada, or similar approved.	Vibration monitoring for large pumps, motors, blowers, etc.
19	Residual Chlorine Analyzer	Manufacturer: Hach CLF10sc, with sc200 controller no equal Type: Free chlorine type. Accuracy: Max + 0.5% of reading Repeatability: Max 0.2% of reading.	
20	Turbidity Analyzer	Manufacturer: Hach, no equal Accuracy: Max 2% of NTU reading Repeatability: Max 1% of NTU reading.	
21	TOC Analyzer	Manufacturer: Suez Sievers M5310C, no equal Accuracy/reliability: Max + 3% of reading or 0.3 mgC/l. Compensation: Automatic compensation for atmospheric pressure changes Other Requirements: In addition to the above	Regulatory monitoring for plant product water.

Item	Parameter	Criteria	Application
		requirements, DBE specification shall include requirements for self-testing and self- cleaning requirements, sample system and pumps, service frequency, cycle time, etc.	
22	pH Analyzer	Manufacturer: Hach, no equal Accuracy: Max + 0.5% of reading Repeatability: Max 0.2% of reading.	
23	Conductivity Analyzer	Manufacturer: Hach, no equal Accuracy: Max 3% of reading Repeatability: Max 0.2% of reading	
24	TDS	Manufacturer: Hach, UT5300, no equal Accuracy: - ±2% or 0.01 NTU from 0 - 40 NTU - ±10% of reading from 40 - 1000 NTU based on Formazin primary standard	

Table 79 Junction Boxes

Item	Parameter	Criteria	Preferred Equipment
1	Mounting	Mounted accessible from floor or platforms.	
2	Doors	Doors will be able to open without interference.	

Table 80 Local Control Panels

Item	Parameter	Criteria	Preferred Equipment
1	Location	Located close to the equipment. Local control switches and indicators only where required to address specific safety or maintenance concerns, otherwise all manual control shall be available via SCADA only (accessible locally via wireless tablet computers)	
2	Local-Off-Remote Switch and Control Devices, indicator lights and Pushbuttons	Where required, LOR switch shall allow an operator to take manual control of a device or piece of equipment and operate it from that panel manually.	
		LCPs should be protected from the weather and/or be appropriate for the environment that they are operated in. Local Control Panels (LCP) exposed to direct sunlight shall include sunshade protection for any exposed electronic displays or instrument displays.	
		SCADA network side shall be all hard connections. Wireless and Bluetooth shall be turned off.	

Table 81 Instrument Mounting and Access

Item	Parameter	Criteria	Preferred Equipment
1	Housing	All process instruments in wet areas shall be housed in IP68, NEMA 4 enclosures (NEMA 4X in chemical areas), or vendor requirements, whichever is more stringent.	
2	Access	Access shall be considered in the selection of instrumentation. For example, tanks shall be measured using pressure at the base of the tank	

Item	Parameter	Criteria	Preferred Equipment
		wherever practical, to remove the need for maintenance access to the top of tanks.	
3	Instrument Height	Instruments mounted at a working level between 3 and 5 feet above the operating floor.	
4	Indicator Height	Process indicators and indicating transmitters mounted in a position that is readable by an operator without requiring the use of a ladder or the building of platforms.	
5	Capillary Tube Installation	Temperature and pressure instruments capillary sensors will be installed and clamped in tube racks. Excess capillary tube will be coiled and clamped to the mounting stand below the instrument.	
6	Grouping	Instruments located near each other will be grouped to the maximum extent possible on a common mounting stand, wall bracket or instrument rack.	
7	Dirt/ Moisture Removal	Instrument impulse lines will incorporate a blowdown leg or contamination accumulation leg for the removal of dirt and moisture.	
8	Isolation Valves	Instrumentation taps to process lines will be isolated by a root valve at the connection.	
		Isolation valves for taps to process lines will be 1/4-turn ball valves of materials compatible with the process fluid.	
		Isolation valves for chemical service will match isolation valves used in other portions of that chemical piping.	
9	Analyzers	Analyzers for primary process lines will be installed in bypass assemblies external to the main process headers to allow routine maintenance.	
		Analyzer assemblies will include an isolation valve at each process connection tap, pressure regulator, manual sample valve, rotameter flow element with integral flow metering valve, check valve, miscellaneous piping and fittings.	
		Generally, panel mounted and located in close proximity to the relevant sample point in a designated analyzer room (where possible) for improved access for common operational and maintenance activities on these units.	
		The analyzer waste streams will be discharged into a tundish and drained to a common collection point for either pumped return to a specified point along the process or drained to waste.	
		All analyzers will have no flow detection and pressure and flow control valves on the inlet to ensure a constant rate of feed through the analyzer. Manual sample points will be provided for sampling water at various points through the main process, typically with each change in process unit and upstream and downstream of chemical dose points for manual checks of water quality and chemistry.	
		Assemblies for analyzer sensors which must remain wetted at all times (e.g., pH sensors) will incorporate a vacuum breaker in the drain piping.	
		Sample drain will be routed to a hub drain.	

6.8 Supervisory Control and Data Acquisition System (SCADA)

6.8.1 Approved SCADA platforms

- SCADA systems shall include all components needed to:
    - connect to the PLCs, field devices, and databases,
    - include Historians, reporting platforms, and flexibility to generate reports as needed by the Owner and Operators,
    - provide secure ways to connect and utilize the system with the latest and greatest security mechanisms,
    - provide multi-level HMIs compatible with tablets and smartphones, and
    - provide structured alarming and annunciation, and alarms servers for multi-media alarming (emails, text messages …) compatible with tablets and smart phones.
- Approved SCADA system platforms are as follows:
    - A control system integrated SCADA platform (e.g. if the control system is Rockwell Automation (PlantPAx or similar) FactoryTalk View SE system to be used; however if the control system is Siemens, the TIA should be used.
    - Wonderware System Platform (latest version).
    - An Owner and Engineer-approved platform.
- Perpetual licenses will be used unless otherwise approved by the Owner and the Engineer.
- The selected system integrator will incorporate all the vendor screens in the final SCADA screens and will develop screens for all other equipment, for integration at the control room.
- New screens will be developed following the Owner and the Engineer's SCADA standards.
- All analog and discrete inputs to the PLC will be displayed on the SCADA screens.
- Real-time and historical trending for all analog inputs to the PLC will be available from the local servers.
- Screen displays will be arranged using a hierarchy:
- Show only information that needs to be immediately available for operations (system overview)
- Poke points for more details on a particular process or piece of equipment.
- Further poke points for control stations for devices such as pumps and valves.
- A hierarchy of alarms shall be specified, which will be adjustable by the operators.
- Each alarm shall be classified with a corresponding value representing criticality. The system will present the alarms in different ways based on the criticality, per the District's SCADA standards.
- All alarm functions shall be carried out at the PLC level.
- All alarms shall display on a common alarm screen.
- All alarms must be acknowledged by the plant operating staff before they can be cleared.
- Some alarms may be cleared from the SCADA. Others will need a local reset. The philosophy will be based on safety and equipment protection.
- No alarm will clear automatically until it has been properly acknowledged.

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- Equipment safety interlocks specified to shutdown equipment "independent of control mode" or other similar descriptions will be active regardless of PLC (MANUAL/AUTO) or field control station (ON, LOCAL/REMOTE) operating status.
- Other software generated alarms will remain active independent of operating mode, but only affect specified control actions in AUTO (PLC) and REMOTE (field) operating modes.
- For all equipment controlled by the PLC, the equipment will receive and display applicable statuses and alarm signals, such as operating mode (LOCAL, REMOTE, etc.), operating status (ON, OPEN, CLOSED, etc.), and alarm status (FAIL, LOCKED-OUT, etc.).
- For multistate devices where actual digital input is not provided, provide PLC logic-based on the status of the other inputs to develop the remaining status. For example, for LOR switches use the status of the LOCAL and REMOTE inputs to develop and display the status of the OFF position.
- For all equipment controlled by the PLC, our DBE team will provide separate displays and poke points for the selection of AUTO/MANUAL operating modes. In AUTO mode, the device will be controlled by the PLC. In MANUAL mode, the device will be operated by START/STOP and OPEN/CLOSE poke points, as appropriate. The workstation will display the current operating status of each device and an alarm if the equipment fails to respond to a command signal after an operator-adjustable time period.
- PID control functions will be performed at the PLC with controller faceplate displays at the workstation.
- Standard PID control operator interface will be provided, including AUTO/MANUAL mode selection:
    - In AUTO, the controller output will be based on the PID control function at the PLC.
    - In MANUAL, the output of the controller will be based on an operator set value.
    - Transfer between MANUAL and AUTO will be bumpless.
    - At the workstation, DBE will provide AUTO/MANUAL selection poke points for PID-controlled equipment, with graphic loading displays for manual control.
- PID loop tuning parameters shall be available via SCADA but will require engineering login to make adjustments.

6.8.2 Typical Monitoring and Control

The following are some of the typical I/O signals that shall be monitored and used to control equipment by SCADA:

- All Analog Transmitters - Transmitter Fail Alarm
- Constant Speed Drive - Drive start/stop command, Drive running indication, Drive in auto or remote indication, Drive faulted, PLC calculated drive run time, Fail to Start/Stop, and Diagnostics (confirm specific parameters)
- Variable Speed Drive - Drive start/stop command, Drive running indication, Drive in auto indication, Drive faulted, VFD speed set point, VFD speed feedback, PLC calculated drive run time, and Diagnostics (confirm specific parameters)
- Chemical Dosing Feed System - Chemical volume quantity used calculated values.

6.8.3 Control Philosophy

- The control system will be fully automated so that, as far as practical, all day-to-day operational adjustments and reporting can be conducted from the SCADA screens. The level of automation will be consistent with the staffing requirements for the plant.
- Skid vendor screens will be incorporated on the SCADA HMI, such that all parameters can be monitored and controlled except where safety concerns dictate local control only or where controls are related to maintenance tasks that can only be carried out locally anyway.

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- Alarms for control network failures will be incorporated including Ethernet switches, PLCs, or any network communication where available.
- Local manual override will be accomplished with a hard-wired switch except where personnel, equipment, or the process are protected by equipment software interlocks that need to be maintained at all times.
- The system will not be able to create a safety issue for the local operator. For example, remote operation should not be allowed if a local manual override is selected.
- Shutdown of the plant units will be fully automated.
- Recovery after a power outage or shutdown will be mostly automatic but will require operator intervention for the process to begin and may require additional operator intervention through the startup sequence as determined during the plant design in order to ensure safely and compliance requirements are met.
- Automatic and manual operation of the system will be done from the Operator Workstations (OWS) and from wireless tablet devices. Additional remote-control access may be incorporated during the transitional operation period using RDP and VPN access built into the SCADA Virtual Servers and Virtual Machines systems.

6.8.4 System Integration & Testing

The selected system integrator shall incorporate all the vendor screens in the final SCADA screens and shall develop screens for all other equipment, for integration at the control room.

Factory acceptance testing and site acceptance testing (FAT and SAT) shall be performed and witnessed at minimum by The Engineer's representative.

6.8.5 General SCADA Requirements

The following tables contain the Engineering Design Guidelines for SCADA criteria. The DBE is responsible to review and finalize these requirements for complete functioning facilities.

The table below describes the proposed plant network, from the Servers and Workstations to the PLC network. Any hardware or software requirements specified here may be modified with approval from City of Banning.

Table 82 System Specifications

Item	Parameter	Criteria	Notes
SERVERS			
1	Server Rack	One (1) server rack to be installed in the new server room. Server rack slots will need to be accessible from the front (for slot racks) and the rear (for cable management).	
2	Servers	Minimum three (3) converged rack servers each with the following specifications: • Two (2) CPUs • Eighteen (18) CPU cores • Eight (8) Network Interface Cards (NIC's) Hypervisor Servers are recommended to utilize virtual machines to handle the server processes. Servers will be redundant. If one server needs to be taken offline for maintenance, two redundant servers will still be active.	Ensure redundant power supplies for this hardware.
3	Network Switches	Minimum two (2) port-managed Layer 3 ethernet switches. One ethernet switch will be configured for the devices on the PLC/SCADA network.	Ensure redundant power supplies (UPS) for this hardware.

Item	Parameter	Criteria	Notes
		The other ethernet switch will be configured for the devices on the City of Banning LAN.	
4	Server Peripherals	Other server rack hardware should include local KVM switch with keyboard and monitor for access to the server and Network Time Server appliance with four (4) isolated Network Interface Cards (NIC's) and GPS receiver	
5	Server Capabilities	Server software capabilities, at a minimum, should include: • Microsoft Windows Server 2019 OS, with Hyper-V • SQL Server 2019 Standard version • System Event Monitoring • Host Intrusion Detection and Antivirus agents for each installed operating system with central management and reporting • Host Intrusion and Detection Management platform • System Data Log Management • Virtual Machines • Wonderware (Aveva) Server for configuring graphics and HMI communication drivers • SCADA Active Directory • Servers must have capacity for redundant storage of historical data (including old data transferred from existing Historian).	
6	Historical Data	DBE will need to design server storage space to account for, at a minimum, the following Historical data: • All analog I/O points at the WWTP, logged every 30 seconds • All motor run statuses at the WWTP plant, logged on every change in status • All existing historical data, currently stored on the existing servers at the City of Banning Wastewater Treatment Plant Administrative Building	
7	Software Licensing and Versions	All licensing required for the server software, workstation software, Wonderware software, and Rockwell Automation Studio5000 software shall be furnished by the DBE.	Support level for the software licensing should be specified and agreed upon by both the DBE and City of Banning.
		Furnish four (4) years extended Rockwell support for the installed software.	
		Furnish five (5) years extended support for installed Host Intrusion Detection and antivirus software.	
		The DBE shall cover the update costs for the local equipment as new versions of the software are released, prior to Final Acceptance.	
		The DBE shall be responsible for costs associated with any upgrade required to the software licenses arising from incorrect specification, or changes initiated by the DBE during the Performance Acceptance period.	
		At the end of the Performance Acceptance period all software shall be fully updated to the latest versions provided by the manufacturer.	

Item	Parameter	Criteria	Notes
OPERATOR WORKSTATIONS			
1	SCADA Room Workstations	Minimum two (2) workstations (WS) in the SCADA Room with video card capable of supporting a minimum of twelve (12) independent high-resolution monitors.	
		One workstation is for SCADA software only and running on the PLC network. Minimum two (2) LED monitors, 28" to 32" diameter. One must be wall mount and one desk mount. Must have the Wonderware (Aveva) Runtime application and the Rockwell Automation Studio5000 application fully licensed. No internet access.	
		Other workstation is for the CCTV system and running on the City of Banning corporate LAN. Minimum two (2) wall-mounted LED monitors. One monitor for the CCTV system, 36" to 40" screen diameter. Other monitor will be for operator administrative tasks, 24" to 28" diameter. This workstation will have internet access to allow operators to check emails and attend VoIP calls.	
		Any additional workstations	
2	Office Workstations	Refer to Final Drawing for location and number of workstations to be furnished.	
3	Workstation Specifications	Workstations must have minimum 16GB of RAM, 1TB Solid-State Hard Drive, and come with keyboard, mouse, and speakers.	
		The workstations are required to have the Windows 10 Professional OS, Adobe Acrobat standard standalone version and perpetual license, and Microsoft 365 standalone applications installed (Outlook, Word, Excel, etc.) with perpetual license.	
4	Panel HMI's	Each HMI shall be panel-mounted and have a runtime version to allow operators to monitor and control the WWTP process. Panel-mounted HMI's will be connected to the PLC network. HMI specifications shall satisfy the minimum software requirements. HMI shall be PanelView, Ignition Edge, or engineer-approved equal.	HMI specifications to be agreed upon between DBE and City of Banning.
PLC PANEL HARDWARE			
1	Existing PLC Replacement	Existing PLCs will be replaced with Allen-Bradley CompactLogix 5370, CompactLogix 5380, or engineer-approved equal PLCs. Replacement PLCs shall have at minimum 2MB of spare memory available after commissioning.	
2	New PLCs	New PLC Panels will be Allen-Bradley CompactLogix 5370, CompactLogix 5380, or engineer-approved equal PLCs. New PLCs shall have at minimum 2MB of spare memory available after commissioning.	
3	Panel I/O	For all existing PLC panels, the panel enclosure will remain. DBE will design a complete upgrade/ replacement of the panel hardware while utilizing the space inside of existing panel enclosures. PLC Total I/O count will need to account for 25% spare I/O at each panel (new and existing). Where integrating Modbus TCP IO, provide PLC	

Item	Parameter	Criteria	Notes
		rack-mouinted Modbus TCP cards that are compatible with the furnished PLC.	
4	Panel-to-Panel Communications	All PLC panels and network hardware will communicate via ethernet. Any existing network protocols that are not ethernet will need to be converted. All new panel ethernet switches will have a minimum of 8 ports and be listed as Managed and Layer 2 by the manufacturer.	
5	Fiber Testing	The DBE will coordinate testing of all existing fiber runs for connectivity. Any fiber runs that are not operational will need to be repaired/replaced.	
NETWORK COMMUNICATIONS			
1	Ethernet Protocol	Any network devices in the SCADA network that are not communicating through Ethernet will need to be converted to Ethernet protocol. This includes any vendor package controllers that need to communicate with the SCADA system. Develop and implement a network segmentation plan that uses firewalls and VLAN segmentation to segregate network traffic.	
2	Existing Fiber Communications	The DBE will coordinate testing of all existing fiber runs for connectivity. Any fiber runs that are not operational will need to be repaired/replaced.	
3	Wireless	All Wi-Fi connections shall be disabled, unless absolutely required. If so, specific Wi-Fi connections must be secured, monitored, and logged.	
CYBERSECURITY CONSIDERATIONS			
1	Accessibility	The Wonderware (Aveva) Server and Historian log files should be accessible from the SCADA Workstation. The SCADA system shall be accessible remotely by SCADA operations staff.	Control capabilities for remote access shall be agreed upon between DBE and City of Banning.
2	SCADA Login and Passwords	Require user specific operator login credentials for access at all computerized host access points with a minimum of seven (7) operator groups. Prescribed automatic logout functionality (i.e. logout upon 300 seconds of inactivity). Login credentials to be managed in a similar way to the City of Banning's existing IT system login credential. Remote logins will be required to include two-factor authentication to allow access.	
3	Default Passwords	Delete all default login credentials, and store passwords in a secure location once commissioning is completed.	
4	Corporate LAN	There shall be no direct interface between the Plant SCADA network and the Corporate LAN. Secure transfer of data between the SCADA system and Corporate LAN shall be managed by City of Banning and shall not be compromised when the DBE is integrating asset register data or SCADA screens at the SCADA system. A segmented Demilitarized Zone (DMZ) shall be provided that blocks and restricts traffic from/to SCADA LAN and Corporate LAN.	
5	Cybersecurity	Utilize industry best practice and design in	

Item	Parameter	Criteria	Notes
	Design	accordance with ISA/IEC- 62443 Industrial Network and System Security standards. Implement a defense in-depth approach to cybersecurity. Implement a zero-trust design. Provide system operator notification indicating system and device status, with controls that permit manual and automatic blocking of network access points and ethernet switch ports.	
6	Cybersecurity Workshops	The full extent of the cybersecurity requirements will need to be discussed during workshops that include the City of Banning, its representatives, and the DBE. There will be a minimum of six (6) workshops with a minimum allotted time of (20) hours. This time can be allotted in any manner agreeable to both City of Banning and the DBE. Design decisions shall include input and final direction given by City of Banning and its representatives.	These workshops are for discussing cybersecurity implementation options and for deciding on the final security design requirements for the WWTP.
7	SCADA Workshops	Four (4) training sessions (4-hours each). Two (2) workshops for each group of City of Banning. Training on controls, alarm settings, modifying settings, etc.	In addition to functional testing and I/O verifications
SCADA MIGRATION			
1	SCADA Migration	DBE shall prepare a SCADA Migration Plan that outlines the steps that will be taken to install new hardware and software as well as complete upgrades to existing equipment and software while maintaining operations at the WWTP. SCADA Migration Plan shall list any required shutdowns (quantity, timing, duration, systems affected, etc.). Any shutdowns shall be in accordance with overall project shutdown allowances.	
		DBE shall submit Draft SCADA Migration Plan to City of Banning for review. DBE shall hold one (1) 4-hour workshop with City of Banning and incorporate any comments into updated SCADA Migration Plan. DBE shall submit Final SCADA Migration Plan to City of Banning for review and approval.	

6.8.5.1 Design Deliverables

The I&C design deliverables will provide the framework for the system integrator to develop the PLC programs and configure the HMI system. While the PLC panels, PLC programming, and HMI configuration shall be furnished by the system integrator, the DBE shall be responsible for providing the necessary design deliverables to guide the programming and panel construction.

Details about the design deliverables and programming guidelines are described in the tables below. Any specifications below can be modified with approval from the City of Banning.

Table 83 Design Deliverables

Item	Parameter	Criteria	Notes
DESIGN DELIVERABLES			
1	I/O List	List of all hard-wired I/O at each PLC panel (including any remote I/O), including I/O channel mapping	
2	Register Map	List of all signals to be communicated between PLCs, including register address mapping	
3	Alarm List	List of every alarm and shutdown condition that will require operator attention. Include any automatic actions or required operator actions for alarm conditions.	
4	Process Control Narratives	Create document to describe WWTP process in detail, beginning with the automated process to be programmed in the PLCs and including any operator monitoring or control actions. This document should be organized to describe each PLC's individual control processes and control loops as well as the PLC's interaction with other PLCs. Normal vs. Abnormal process conditions at the plant should also be detailed.	A draft control narrative, which is included in Section 6.7.1 of this DCR, has been prepared by City of Banning to kick start this effort.
		A cybersecurity control narrative shall be developed that includes all server instances, workstation instances, and detailed network functional descriptions.	
		DBE shall conduct a preliminary workshop to validate the scope and a minimum of two (2) workshop before finalizing the Process Control Narrative, each workshop shall be 2-4 hours in duration.	
5	HMI Screens List	Develop list of HMI screens for the system integrator to build.	Verify with City of Banning Operations
6	Network List	List of all network devices, physical locations, IP addresses, VLAN configurations, and gateway information.	
7	Equipment List	List of all hardware, physical locations, manufacturer information, model numbers, etc.	

Table 84 PLC Programming Specifications

Item	Parameter	Criteria	Notes
1	Programming Upgraded PLCs	For each PLC program that is replacing an existing PLC, program scope should encompass all I/O mapping, controls, alarms, and logic from the existing PLC. This program scope should be clearly defined in the control narratives description for that PLC.	
2	PLC Programming Standards	Ensure PLC programming practices in accordance with IEC 61131-3 and comply with City of Banning SCADA standards	
3	Vendor Package Systems	Vendor PLCs shall be the same type as the rest of the site.	
		Vendor PLCs shall have processor program and vital configuration information backed up in a similar manner to the other site PLCs.	

Item	Parameter	Criteria	Notes
4	Program Modifications	A copy of the latest PLC program shall be saved to the SCADA Workstation and backed up to the Servers. Studio5000 shall be installed at the SCADA Workstation to allow program modifications as needed.	
		Latest version of Aveva (WonderWare) software, 1 developer license, 2 thick clients, and a pair of RDS thin clients.	

Table 85 HMI Configuration

Item	Parameter	Criteria	Notes
1	HMI Screens List	HMI Screens list will include existing Wonderware (Aveva) screens that the plant operators require for the local SCADA and any screens or process information from existing panel-mounted HMIs or other packaged systems that have not been incorporated into the existing Wonderware screens.	Review with City of banning Operations to ensure all monitoring and control data points are accessible from the SCADA Workstation and all SCADA Tablets.
2	Vendor Package Systems	The system integrator shall incorporate all the necessary vendor data in the final SCADA screens.	
3	Navigation/Alarm Pane	Include a header or footer screen that is sized and configured to always be displayed with any process screen. This screen will contain navigation links, an alarm banner, and critical process information to the operator at all times.	
4	Hard-wired Signal Monitoring	All hard-wired analog and discrete inputs to the PLC will be displayed on the SCADA screens. Real-time and historical trending for all analog inputs and run statuses to the PLC will be available from the HMI screens.	
5	Screen Display Hierarchy	Displays will be arranged using a hierarchy: • Show only information that needs to be immediately available for operations (system overview). • Poke points for more details on a particular process or piece of equipment. • Further poke points for control stations for devices such as pumps and valves, etc.	
6	Alarm Hierarchy	A hierarchy of alarms shall be specified, which will be adjustable by the operators.	
		Each alarm shall be classified with a corresponding value representing criticality. The system will present the alarms in different ways based on the criticality, per City of Banning SCADA standards.	
7	Alarms	All alarm functions will be carried out at the PLC level.	
		All alarms will display on a common alarm screen.	
		All alarms must be acknowledged by the Plant operating staff before they can be cleared.	
		Some alarms may be cleared from SCADA. Others will need local reset. Philosophy shall be based on safety and equipment protection.	
		No alarm will clear automatically until it has been	

Item	Parameter	Criteria	Notes
		properly acknowledged.	
8	Proportional, Integral, Derivative (PID) Control	PID control functions will be performed at the PLC with controller faceplate displays at the workstation. Standard PID control operator interface will be provided, including AUTO/ MANUAL mode selection: • In AUTO, the controller output will be based on the PID control function at the PLC. • In MANUAL, the output of the controller will be based on an operator set value. • Transfer between MANUAL and AUTO will be pumpless. • At the workstation, DBE will provide AUTO/MANUAL selection poke points for PID controlled equipment, with graphic loading displays for manual control. PID loop tuning parameters shall be available via SCADA but will require engineering login to make adjustments.	
9	Standards	New HMI screens shall be developed following City of Banning SCADA standards.	

The following table includes some of the typical I/O signals that shall be monitored and used to control equipment or systems by SCADA.

Table 86 Typical Monitoring and Control

Item	Parameter	Monitoring & Control Signals	Notes
1	All Analog Transmitters	Transmitter Fail Alarm	
2	Level Transmitters	Continuous level monitoring PLC calculated high/low level alarm PLC calculated high-high/low-low level alarm	
3	Level Switches	high/ low level alarms high-high/low-low level alarms	
4	Flow Transmitters	Continuous flow monitoring PLC calculated flow totals PLC calculated high/low flow alarms	
5	Flow Switches	Flow alarms where applicable	
6	Pressure Transmitters	Continuous pressure monitoring PLC calculated high/low pressure alarms	
7	Analyzers (pH/LEL/H2S/CL2/ DO etc.)	Continuous signal monitoring Dry contact high/low level alarm PLC calculated high-high/low-low level alarm	
8	Temperature Transmitters	Continuous temperature indication PLC calculated high/low temperature alarm	
9	Temperature Switches	High temperature alarm Low temperature alarm	
10	Open/Close Valve or Gate	Valve open/close command. Valve open/close position indication Valve in Auto or Remote indication Valve fault indication.	
11	Modulating Flow Control Valve	Valve position set point Valve position feedback. Valve open/close position indication if applicable. Valve fault indication.	
12	Constant Speed Drive	Drive start/stop command Drive running indication Drive in auto or remote indication Drive faulted (General Fault or Multiple Fault Indicators, etc.) PLC calculated drive run time	

Item	Parameter	Monitoring & Control Signals	Notes
		Failure to respond to command or change of status when not commanded. Diagnostics (DBE to confirm specific parameters)	
13	Variable Speed Drive	VFD start/stop command VFD running indication VFD in auto indication VFD faulted VFD speed set point VFD speed feedback PLC calculated VFD run time Diagnostics (DBE to confirm specific parameters)	
14	Chemical Dosing/ Feed System	Chemical Dosing/Feed Systems Chemical volume/quantity used calculated values	
15	SCADA Cybersecurity	Captured host intrusion and antivirus events to be centrally logged within the SQL database located in the DMZ with status displayed at the HMI and alarmed on pickup of a high-level security event.	
		Network diagnostics and device communication status shall be logged and displayed at the HMI.	
		Log network status to Historian.	
		System log files shall be logged to the SQL database located in the DMZ.	
		Configure each HMI to log Factory Talk FT Diagnostic data to SQL database located in the DMZ.	
		Configure ethernet switches to be monitored and status displayed at the HMI. Log status changes for ethernet switch and each port to Historian. On pickup of unauthorized port access or ethernet switch fault, display alarm at HMI.	

Table 87 Security

Item	Parameter	Criteria	Notes
1	Construction / Work Area	Make adequate provision for the protection of the work area against fire, theft, and vandalism, and for the protection of the public against exposure to injury.	
2	General Design Principles	Security improvements shall integrate with existing site security infrastructure.	
		Discrete security measures shall be planned into the facility without creating a fortress-like appearance.	
		Site design will address security issues related to access control; electronic protection; and the “hardening” of the site against man-made and natural disasters.	
		Security measures shall be in line with 2008 America's Water Infrastructure Act.	
3	Vulnerability Assessment	DBE will conduct a vulnerability assessment and provide all other security measures required pursuant to Applicable Law	Report deliverable
4	Locking	All electrical panels exterior to the building structures shall be lockable	
5	Dual Authentication	Key Fob	

6.9 Miscellaneous

The following table contains the Engineering Design Guidelines for miscellaneous criteria.

Table 88 General miscellaneous requirements

Clause	Parameter	Criteria
0	Scope	This document applies to General/Misc.
1	Project Schedule	Primavera Version 7.0 unless otherwise approved by the PM.
2	Design Submittals for City Reviews	All design documents in support of establishing cost estimates and/or GMPs.
3	Permits	Consider all applicable permits. Examples include California Environmental Quality Act (CEQA), South Coast Air Quality Management District (SCAQMD), and/or Regional Water Quality Control Board (RWQCB) permits.
4	Site Visit, Survey, Geophysical Investigation, and Potholing	Review alignments for visible utility conflicts, constructability, and ease of operations and maintenance of the facilities. Conduct geophysical investigation to determine presence of subsurface features. Perform potholing to determine depths of subsurface features.
5	Technical Specifications	CSI Format, "Green Book" Standard Specifications for Public Works Construction can be referenced in lieu.
6	Right-of-Way/Easements	Consider all applicable Right-of-Way/Easements requirements and limitations and how they are communicated with the Contractor.
7	Asset Register	Create Asset Register and include for each new asset, size, capacity, year of construction, cost, tolerances, measured vibration, etc.
8	Landscape	Review project landscape requirements with City staff.
9	Forklifts	Use electric units and propane.
10	Equipment's Needing Backwash	Use recycled water in lieu of potable water where possible.
11	Spare Parts	Evaluate spare parts requirements for all critical mechanical equipment being designed and discuss with City O&M Staff.
12	Equipment Utility Pads	Provide for all equipment. Use reinforced concrete. Bollards are necessary to protect utilities, where applicable.
13	Equipment Sole Sourcing	Public Contract Code § 3400(b) allows sole sourcing under four reasons: (1) to conduct a field test or experiment of the product, (2) to match existing products in use on the particular public work, (3) to obtain a product that is only available from one source, and (4) to respond to an emergency.
14	O&M/ SOPs/ UPCPs	• Prepare treatment facility Operations and Maintenance (O&M) Manuals to a standardized electronic format and level of content • Establishment of standardized formats and content for Standard Operating Procedures (SOPs) and Unit Process Control Procedures (UPCPs)
15	Identification Devices	Develop a technical specification section to require Contractor to furnish and install all identification devices as shown and specified in the Contract Documents. This would include a section for "Smart Tags" and related tag guidelines including but not limited to Piping ID, Exit Signs, Safety Signs, Right-to-know labels and tags.
16	Submittal Packaging	• Package submittals to facilitate quick reviews. • Consider a list of unique submittal packages required (e.g., material data, seismic calcs, testing plan, test results, Certificate of Proper Installation (COPI), warranty cert, O&M, etc. • Consider grouping submittals by facility, if multiple facilities.

Clause	Parameter	Criteria
		• Requirements should state that submittals should be "submitted and approved" prior to scheduling of shipping, testing, etc.
17	Prevent Damage to Metal surfaces during Unloading	Contractor shall use nylon straps for handling of all stainless steel, aluminum, and coated equipment and construction elements as to not damage the finish.
18	SDTI	WWTP shall remain in operation at all times. The CONTRACTOR shall compile a detailed list of all items of work involving tie-ins and all their work elements.

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Appendix A
Conceptual Design Drawings

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CITY OF BANNING, CALIFORNIA

CONTRACT DOCUMENTS FOR

WWTP AND RECYCLED WATER UPGRADES PROJECT

BANNING, CALIFORNIA
JULY 2024

CITY OF BANNING

ARTURO VELA, P.E. DATE
PUBLIC WORKS DEPARTMENT DIRECTOR

PREPARED BY:

N2W ENGINEERING INC.

JAMES WANG, P.E. DATE
PROJECT MANAGER

N2W ENGINEERING, INC.
3240 El Camino Real. Suite 150
Irvine, CA 92602
WWW.N2WENG.COM

REV.	DATE	DESCRIPTION	DESIGNED BY:	DRAWN BY:	CHECKED BY:	APPROVED BY:

PLOT DATE: 7/9/2024 4:19 PM

STATUS: PRELIMINARY

CLIENT: CITY OF BANNING
99 E. RAMSEY STREET
BANNING, CA 92220

PROJECT: BANNING WWTP
2242 CHARLES STREET
BANNING, CA 92220

TITLE: TITLE SHEET

PROJECT NO. 105-0002

ORIGINAL SHEET SIZE ANSI-D

SHEET: G-100

1108

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GENERAL

G–100	TITLE SHEET
G–101	DRAWING INDEX
G–102	VICINITY AND LOCATION MAP
G–103	SYMBOLS AND ABBREVIATIONS I
G–104	SYMBOLS AND ABBREVIATIONS II
G–105	DESIGN CRITERIA
G–106	PROCESS FLOW DIAGRAM
G–107	PLAN HYDRAULIC PROFILE

CIVIL

C–101	CIVIL SITE PLAN

MECHANICAL

M–101	MECHANICAL PLAN AND SECTION

PROCESS INSTRUMENTATION AND CONTROLS

I–100	LEGEND
I–101	FINE SCREENS
I–102	AERATION TANKS
I–103	MBR FEED PUMPS
I–104	AERATION BLOWERS
I–105	MEMBRANE BIOREACTORS
I–106	MBR PERMEATE PUMPS
I–107	MBR BLOWERS
I–108	MBR PERMEATE TANKS
I–109	PLANT AIR COMPRESSORS
I–110	DIGESTER
I–111	MECHANICAL THICKENER
I–112	CATIONIC POLYMER DOSING SYSTEM
I–113	CITRIC ACID DOSING SYSTEM
I–114	SODIUM HYPOCHLORITE DOSING SYSTEM
I–115	CHLORINE CONTACT TANKS

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REV.	DATE	DESCRIPTION

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

PLOT DATE: 7/9/2024 4:19 PM

STATUS: PRELIMINARY

CLIENT:
CITY OF BANNING
99 E. RAMSEY STREET
BANNING, CA 92220

PROJECT:
BANNING WWTP
2242 CHARLES STREET
BANNING, CA 92220

TITLE:
DRAWING INDEX

PROJECT NO.
105-0002

ORIGINAL SHEET SIZE
ANSI-D

SHEET:
G-101

1109

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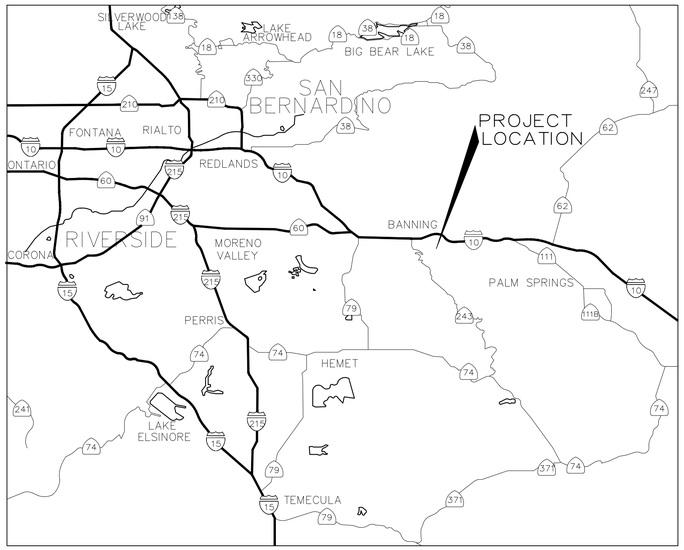
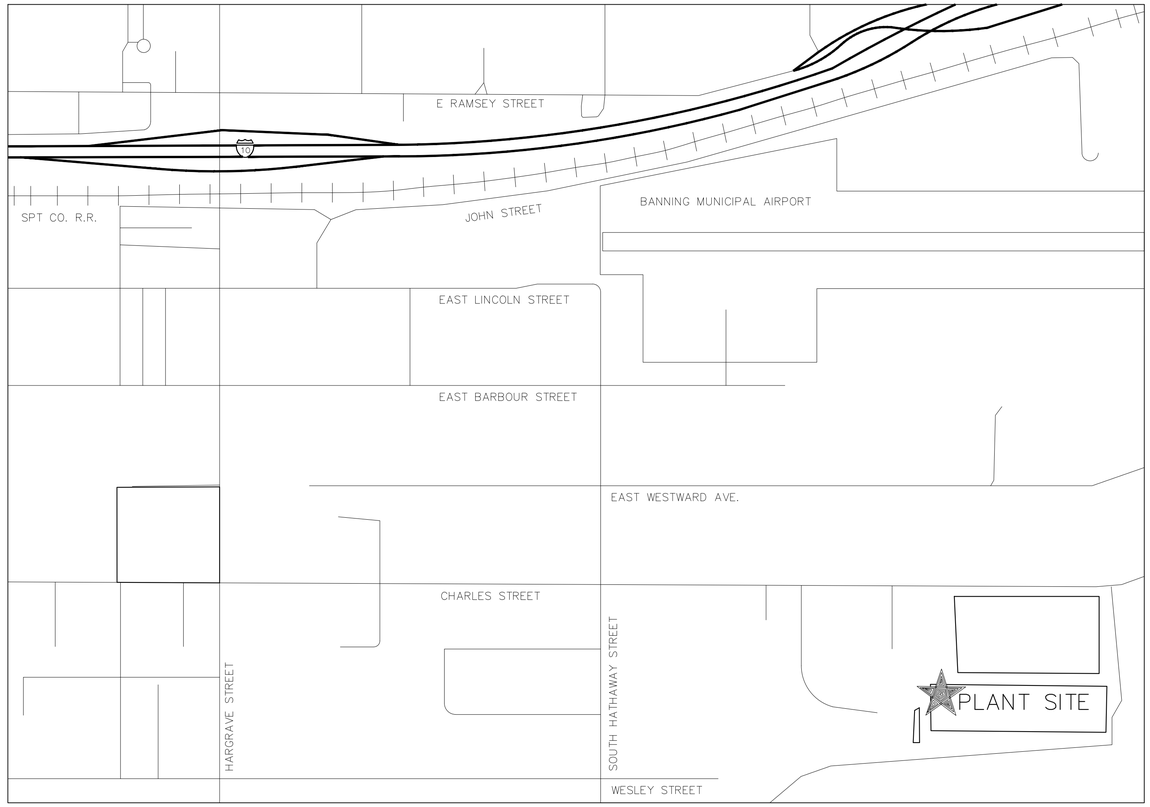


NORTH

VICINITY MAP

NOT TO SCALE



NORTH

PROJECT LOCATION MAP

NOT TO SCALE

1110

N2W ENGINEERING, INC.
3240 El Camino Real. Suite 150
Irvine, CA 92602
WWW.N2WENG.COM

REV.	DATE	DESCRIPTION

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

PLOT DATE: 7/9/2024 4:19 PM

STATUS: PRELIMINARY

CLIENT: CITY OF BANNING
99 E. RAMSEY STREET
BANNING, CA 92220

PROJECT: BANNING WWTP
2242 CHARLES STREET
BANNING, CA 92220

TITLE: VICINITY AND LOCATION MAP

PROJECT NO. 105-0002

ORIGINAL SHEET SIZE ANSI-D

SHEET: G-102

FILE: C:\USERS\IRIS JIMENEZ\N2W ENGINEERING\N2W SERVER - SERVER (J)\PROJECTS\105-CITY OF BANNING\105-0002 OWNER ADVISOR W&WWTP\6. PROJECT ENGINEERING AND DESIGN\06.01_PRELIMINARY DESIGN\DESIGN DRAWING\105-0002 G 03 19 2024_RECOVER.DWG

MATERIALS IN PLAN/SECTION

- AGGREGATE BASE
- GRAVEL
- ASPHALT CONCRETE PAVING
- NEW CONCRETE
- MASONRY OR CONCRETE BLOCK
- GRATING
- CHECKER PLATE
- STEEL
- ALUMINUM
- OPENING OR DEPRESSION IN SLAB OR WALL
- 1095 S.46 EG — SURVEYED POINT
- S — EXISTING CONTOUR
- GROUND LINE
- BUSHES OR TREE LINE
- SHRUBS OR TREE
- S — EXISTING SEWER LINE
- E OR T — EXISTING ELECTRIC OR TELEPHONE
- G — EXISTING GAS LINE
- W — EXISTING WATER LINE
- SD — STORM DRAIN
- PL — PROPERTY LINE
- x—x—x — EXISTING FENCE
- X—X—X — NEW FENCE
- TO BE DEMOLISHED
- TO BE ABANDONED
- TO BE MODIFIED

SYMBOLS

- ℄ — CENTERLINE
- ø — DIAMETER
- ∠ — ANGLE
- @ — AT
- # — NUMBER OR POUND
- C.B. — CATCH BASIN OR INLET
- SB-1 — TEST BORINGS (SB OR B) DRILL HOLE (DH)
- B.M. — PAVEMENT BENCH MARK OR SURVEY MONUMENT
- W.M. — WATER METER
- G.M. — GAS METER
- C.O. — CLEAN OUT
- VALVES (EXIST, UTILITIES)
- J.P. — TELEPHONE, POWER OR LIGHT POLE
- GUY — GUY WIRE
- FIRE HYDRANT
- GLOBE VALVE
- BUTTERFLY VALVE OR DAMPER
- 3-WAY VALVE
- 4-WAY VALVE
- ANGLE VALVE
- SLUICE OR SLIDE GATE
- SLUDE OR STOP GATE
- AIR RELEASE AND VACUUM RELIEF COMBINATION VALVE

NOTE:

SEE DWG. GI-01 FOR ADDITIONAL SYMBOLS.

GENERAL ABBREVIATIONS

@	AT
A	AIR
ABAN	ABANDONED
ABT	ANCHOR BOLT
AC	ALTERNATING CURRENT, ASPHALT CONCRETE
AF	ANTIFOAM
ALUM	ALUMINUM
AMP	AMPERE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APRX	APPROXIMATE
ARV	AIR RELEASE VALVE
AS	AIR SUPPLY
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS
ATM	ATMOSPHERE
AVG	AVERAGE
B	BLOWER
BC	BEGINNING OF CURVE
BET	BETWEEN
BFG	BLIND FLANGE
BFV	BUTTERFLY VALVE
BHP	BRAKE HORSEPOWER
BIO	BIOLOGICAL AGENT
BLDG	BUILDING
BM	BEAM
BMK	BENCHMARK
BOD	BIOLOGICAL OXYGEN DEMAND
BOS	BOTTOM OF STEEL
BOT	BOTTOM
BTU	BRITISH THERMAL UNIT
BV	BALL VALVE
BWW	BACKWASH WATER
°C	DEGREES CELSIUS
C	COMPRESSOR
C/C	CENTER TO CENTER
CAU	CAUSTIC
CB	CATCH BASIN
CF	CUBIC FEET
CFM	CUBIC FEET PER MINUTE
CH/OP	CHAIN OPERATED
CHKD	CHECKERED
CI	CAST IRON
CIP	CAST IN PLACE
CIRC	CIRCULAR
CJ	CONSTRUCTION JOINT
CL	CENTERLINE
CLR	CLEAR
CML&EC	CEMENT MORTAR LINED AND EPOXY COATED
CMLC	CEMENT MORTAR LINED AND COATED
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COD	CHEMICAL OXYGEN DEMAND
COL	COLUMN
CON	CONCENTRIC
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
COUP	COUPLING
CPVC	CHLORINATED POLYVINYL CHLORIDE
CST	CARBON STEEL
CTRC	CITRIC ACID
CTSK	COUNTERSUNK BOLT OR SCREW
CU	CUBIC
CV	CHECK VALVE
CYL	CYLINDER
D/B	DESIGN BUILD
DBD	DEFERRED BOLTING DEVICE
DBL	DOUBLE
DC	DIRECT CURRENT
DCV	DISK CHECK VALVE
DEG	DEGREE
DET	DETAIL
DH	DRILL HOLE
DI	DUCTILE IRON
DIA,ø	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DISCH	DISCHARGE
DN	DOWN
DP	DIFFERENTIAL PRESSURE
DWG	DRAWING
(E),EXIST	EXISTING
EA	EACH
EC	END OF CURVE
ECC	ECCENTRIC
EF	EACH FACE
EG	EXISTING GRADE
EJ	EXPANSION JOINT
ELB	ELBOW
ELEV	ELEVATION
EMBED	EMBEDDED
EP	EDGE OF PAVEMENT
EPC	EPOXY COATED
EPL	EPOXY LINED
EPLC	EPOXY LINED AND COATED
EQ	EQUAL
EQB	EQUALIZATION BASIN
ETM	ELAPSED TIME METER
EW	EACH WAY
°F	DEGREES FAHRENHEIT
F	FAN
FCA	FLANGED COUPLING ADAPTER
FDB	FLOW DISTRIBUTION BOX
FE	FINAL EFFLUENT
FG	FINISHED GRADE
FH	FIRE HYDRANT
FIG	FIGURE
FIN	FINISH
FL	FLOW LINE
FLEX	FLEXIBLE
FLG	FLANGE
FLR	FLOOR
FLT	FILTER
FOG	FAT, OIL, AND GREASE
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FPT	FEMALE PIPE THREAD
FRP	FIBER REINFORCED PLASTIC
FS	FINE SCREEN
FT	FEET OR FOOT
FTG	FOOTING
FU	FUEL
GA	GAUGE
GAC	GRANULAR ACTIVATED CARBON
GAL	GALLONS
GALV	GALVANIZED
GB	GRADE BREAK
GL	GROUND LINE
GO	GEAR OPERATED
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GRD	GRADE
GSP	GALVANIZED STEEL PIPE
GV	GATE VALVE
H	HEIGHT
HB	HOSE BIB
HDPE	HIGH DENSITY POLYETHYLENE
HGL	HYDRAULIC GRADE LINE
HMI	HUMAN MACHINE INTERFACE
HOA	HAND-OFF-AUTO
HORIZ	HORIZONTAL
HP	HORSEPOWER, HIGH PRESSURE
HR	HANDRAIL
HSS	HOLLOW STRUCTURE SURFACE
HWL	HIGH WATER LEVEL
HYDR	HYDRAULIC
HYDRO	HYDROPNEUMATIC
HZ	HERTZ
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IF	INSIDE FACE
IN	INCHES
INCL	INCLUDE
INSUL	INSULATION
INV	INVERT
IPG	INSTRUMENTATION PIPING
IRR	IRRIGATION
JOR	JOG-OFF-REMOTE
JT	JOINT
KGV	KNIFE GATE VALVE
LBS	POUNDS
LF	LINEAR FEET
LG	LENGTH, LONG, LIQUIFIED GAS
LL/BB	LONG LEG BACK-TO-BACK
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LOR	LOCAL-OFF-REMOTE
LOS	LOCKOUT-STOP
LP	LOW PRESSURE
LR	LONG RADIUS
LT	LIGHT
M	MOTOR
MAX	MAXIMUM
MB	MACHINE BOLT
MBR	MEMBRANE BIOREACTOR
MCC	MOTOR CONTROL CENTER
MFR	MANUFACTURER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MIL	0.001 OF AN INCH (OR 0.0254 mm)
MIN	MINIMUM
MJ	MECHANICAL JOINT
MPT	MALE PIPE THREAD
MW	MUNICIPAL WATER
(N)	NEW
N	NEUTRAL
NA	NOT APPLICABLE
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NO,#	NUMBER
NOC	NORMALLY CLOSED
NOP	NORMALLY OPEN
NPS	NOMINAL PIPE SIZE
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
NV	NEEDLE VALVE
OC	ON CENTER
OCA	OPEN-CLOSE-AUTO
OD	OUTSIDE DIAMETER
OFC	OUTSIDE FACE
OIT	OPERATOR INTERFACE TERMINAL
OPER	OPERATED, OPERATOR
OPNG	OPENING
ORT	ODOR REDUCTION TECHNOLOGY
OSC	OPEN-STOP-CLOSE
P	PUMP
PB	PULL BOX
PL	PLATE
PLBG	PLUMBING
PLC	PROGRAMMABLE LOGIC CONTROLLER
PLCS	PLACES
PNL	PANEL (ELECTRICAL)
POC	POINT OF CONNECTION
POI	POINT OF INTERSECTION
PP	POWER POLE
PPM	PARTS PER MILLION
PRESS	PRESSURE
PRV	PRESSURE REGULATING VALVE
PSF	POUNDS PER SQUARE FEET
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PST	PUMP STATION
PSV	PRESSURE RELIEF VALVE
PT	POINT OF TANGENCY
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
PVCP	POLYVINYL CHLORIDE PRESSURE PIPE
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
RCP	REINFORCED CONCRETE PIPING
REBAR	REINFORCEMENT BARS
RED	REDUCER
REF	REFERENCE
REINF	REINFORCED, REINFORCING
REQ	REQUIRED
RND	ROUND
ROA	REVERSE-OFF-AUTO
RPM	REVOLUTIONS PER MINUTE
RR	REFRIGERANT RETURN
RSP	REVOLUTIONS PER SECOND
RW	RAW WATER
S	SLOPE, SEWER
S/S	START-STOP
SA	SAMPLE AIR
SAF	SUSPENDED AIR FLOTATION
SBR	SEQUENCING BATCH REACTOR
SCFM	STANDARD CUBIC FEET PER MINUTE
SCH	SCHEDULE
SCV	SHAFTLESS CONVEYOR
SD	STORM DRAIN
SECT	SECTION
SF	SQUARE FEET
SHT	SHEET
SIM	SIMILAR
SL	SLUDGE
SL/BB	SHORT LEG BACK-TO-BACK
SLV	SHORT LEG VERTICAL
SP	STATIC PRESSURE
SPEC	SPECIFICATIONS, SPECIAL
SPT	SAMPLE PORT
SQ	SQUARE
SS	STAINLESS STEEL
STA	STATION
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
STMW	STORMWATER
STRUCT	STRUCTURE, STRUCTURAL
SUP	SUPPORT
SV	SOLENOID VALVE
SYM	SYMMETRICAL
T&G	TONGUE AND GROOVE
T/B	TOP AND BOTTOM
TEFC	TOTALLY ENCLOSED, FAN COOLED
TEL	TELEPHONE
THK,t	THICKNESS
TK	TANK
TOC	TOP OF CONCRETE
TOS	TOP OF STEEL
TSS	TOTAL SUSPENDED SOLIDS
TW	TREATED WATER
TYP	TYPICAL
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
V	VALVE, VOLT, VOLTAGE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VLT	VAULT
W/	WITH
W/O	WITHOUT
WC	WATER COLUMN
WL	WATER LEVEL
WP	WORK POINT
WS	WATER SURFACE
WT	WEIGHT
WW	WASTEWATER
WWF	WELDED WIRE FABRIC
YD	YARD

N2W ENGINEERING, INC.
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REV.	DATE	DESCRIPTION	DESIGNED BY:	DRAWN BY:	CHECKED BY:	APPROVED BY:

PLOT DATE: 7/9/2024 4:19 PM

STATUS: PRELIMINARY

CLIENT: CITY OF BANNING
99 E. RAMSEY STREET
BANNING, CA 92220

PROJECT: BANNING WWTP
2242 CHARLES STREET
BANNING, CA 92220

TITLE: SYMBOLS AND ABBREVIATIONS I

PROJECT NO. 105-0002

ORIGINAL SHEET SIZE ANSI-D

SHEET: G-103

FILE: C:\USERS\IRIS JIMENEZ\N2W ENGINEERING\N2W SERVER - SERVER (1)\PROJECTS\105-CITY OF BANNING\105-0002 OWNER ADVISOR W&WWTP\6. PROJECT ENGINEERING AND DESIGN\06.01_PRELIMINARY DESIGN\DESIGN DRAWING\105-0002 G 03 19 2024_RECOVER.DWG

PROCESS FLOW ABBREVIATION

AA	AERATION AIR
AGA	AGITATION AIR
BD	BOTTOM DRAIN
BW	BACKWASH
CA	COMPRESSOR AIR
CD	CHEMICAL DRAIN AND VENT
CLS	CIRCULATED SLUDGE
CS	CAUSTIC SODA
D/DRN	DRAIN
DG	DIGESTER GAS
DS/DSL	DIGESTED SLUDGE
DSL (AB)	DIGESTED SLUDGE (ABANDONED)
EA	EXHAUST AIR
EFF	EFFLUENT
ELEC	ELECTRICAL
EX	ENGINE EXHAUST
FA	FOUL AIR
FC	FERRIC CHLORIDE
FD	FLOOR DRAIN
FM	FORCE MAIN (SEWER)
FW	FIRE WATER
G	GAS LINES
GR	GRIT
GRE	GREASE
HPDG	HIGH PRESSURE DIGESTER GAS
HS	HEATED SLUDGE
HW	HOT WATER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
IA	INSTRUMENT AIR
INF	INFLUENT
LAT	LATERAL (SEWER)
LO	ENGINE LUBE OIL
LPG	LIQUIFIED PETROLEUM GAS
ML	MIXED LIQUOR
MLR	MIXED LIQUOR RETURN
MLSS	MIXED LIQUOR SUSPENDED SOLIDS
OF	OVERFLOW
PD	PUMPED DRAIN, PLANT DRAIN
PE	PRIMARY EFFLUENT, PLANT EFFLUENT
PG	PROPANE GAS
PI	PRIMARY INFLUENT, PLANT INFLUENT
PMT	PERMEATE
POL	POLYMER
PPW	PLANT PROCESS WATER
PS	PRIMARY SLUDGE
PSC	PRIMARY SCUM
PW	POTABLE WATER
RAS	RETURN ACTIVATED SLUDGE
RSL	RAW SLUDGE
SBD	SLUDGE BED DECANT
SBN	SUBNATANT
SC	SCUM
SCN	SCREENINGS
SE	SECONDARY EFFLUENT
SH	SODIUM HYPOCHLORITE
SLC	SLUDGE CAKE
SN	SUPERNATANT
SPD	SUMP PUMP DISCHARGE
SSC	SECONDARY SCUM
SW	SEAL WATER
TD	TANK DRAIN
TFE	TRICKLING FILTER EFFLUENT
TO	THICKENER OVERFLOW
TSL	THICKENED SLUDGE
TWAS	THICKENED WASTE ACTIVATED SLUDGE
UW	UTILITY WATER
VAC	VACUUM
VT	VENT
W	WATER
WAS	WASTE ACTIVATED SLUDGE
WG	WASTE GAS
WW	WASTE WATER

EQUIPMENT DESIGNATIONS

DESIGNATION	EQUIPMENT	DESIGNATION	EQUIPMENT
AAB	AERATION AIR BLOWER	MBR	MEMBRANE BIOREACTOR
AB	AGITATION AIR BLOWER	MBS	MECHANICALLY CLEANED BAR SCREEN
AMX	ANOXIC MIXER	MLRP	MIXED LIQUOR RECYCLE PUMP
BF	BIOFILTER	MX	MECHANICAL MIXER
BLR	BOILER	PAC	PRESSURIZATION AIR COMPRESSOR
BRP	BOILER RECIRCULATION PUMP	PCP	POLYMER CIRCULATION PUMP
BSC	BAR SCREEN	PF	PROCESS FAN
CCT	CHLORINE CONTACT TANK	PFP	POLYMER FEED PUMP
CP	AIR COMPRESSOR	PFT	POLYMER FEED TANK
DAFT	DISSOLVED AIR FLOATION THICKENER	PTK	PRESSURIZATION TANK
DGB	DIGESTER WASTE GAS BURNER (FLARE)	PWP	PLANT WATER PUMP
DIG	DIGESTER	RSP	RAS PUMP
DRP	DAF RECYCLE PUMP	SCC	SCREENINGS COMPACTOR
DSP	DRAINAGE SUMP PUMP	SDG	STANDBY DIESEL POWER GENERATOR
GP	GRIT PUMP	SG	SLUICE GATE
GRP	GREASE PUMP	SGR	SLUDGE GRINDER
GRT	GRIT REMOVAL TANK	SLG	SLIDE GATE
HEX	HEAT EXCHANGER	SMX	STATIC MIXER
HPT	HYDRO-PNEUMATIC TANK	SSP	SECONDARY SCUM PUMP
HWP	HOT WATER PUMP	TSP	TWAS PUMP
IGR	IN-LINE GRINDER	UCP	UNIT CONTROL PANEL
IP	INFLUENT PUMP	WSP	WAS PUMP

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BANNING WWTP
2242 CHARLES STREET
BANNING, CA 92220

TITLE:
SYMBOLS AND ABBREVIATIONS II

PROJECT NO.
105-0002

ORIGINAL SHEET SIZE
ANSI-D

SHEET:
G-104

1112

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DESIGN INFLUENT WASTEWATER FLOW

ITEM	UNIT	EXISTING	UPGRADE
AVERAGE DAILY FLOW	MGD	3.6	
MAX DAY FLOW	MGD	7.2	
INFLUENT WASTEWATER CHARACTERISTICS			
BOD	MG/L	317	
TSS	MG/L	318	
TOTAL NITROGEN	MG/L	>60	

DESIGN EFFLUENT QUALITY

ITEM			
BOD	MG/L	30	<5
TOTAL INORGANIC NITROGEN	MG/L	22	<7.5
TSS	MG/L	30	<5

PRIMARY TREATMENT

ITEM			
HEADWORKS			
MECHANICAL BAR SCREEN	NUMBER	1	
CAPACITY	MGD	5	
OPENING SIZE	IN.	0.25	
MANUAL BAR SCREEN	NUMBER	1	
OPENING SIZE	IN.	1.5	
COMPACTOR	NUMBER	1	
CAPACITY	CU. FT/HR	133	
GRIT BASIN	NUMBER	1	
DIAMETER	FT	18	
GRIT WASHER/CYCLONE	NUMBER	1	
CAPACITY, EACH	MGD	3.6	
FERRIC SULFATE FEED PUMP	NUMBER	2	
CAPACITY, EACH	GPH	28	
MOTOR, EACH	HP	0.5	
HEAD, EACH	PSI	150	
STORAGE CAPACITY	GAL	2000	
PRIMARY CLARIFIERS	NUMBER	2	1 (OPTIONAL)
WEST TANK			
DESIGN FLOW RATE	MGD	1.6	
DIAMETER	FT	45	
SIDE WATER DEPTH	FT	6.5	
EAST TANK			
DESIGN FLOW RATE	MGD	2	
DIAMETER	FT	50	
SIDE WATER DEPTH	FT	7	
NEW TANK			
DESIGN FLOW RATE	MGD		2
DIAMETER	FT		50
SIDE WATER DEPTH	FT		7
EQ BASIN STATION PUMPS (BY OTHERS)	NUMBER		3
CAPACITY, EACH	MGD		3.6
MOTOR, EACH	HP		70
EQ BASIN VOLUME	MG		2.1

NOTE:
(1) TO BE USED FOR MBR SYSTEM AND CHLORINE CONTACT TANK
(2) CONVERT EXISTING SECONDARY DIGESTER TO PRIMARY DIGESTER
(3) ALL DRAWINGS ARE CONCEPTUAL AND SUBJECT TO CHANGE BY THE DESIGN BUILD ENTITY.

SECONDARY TREATMENT

ITEM	UNIT	EXISTING	EXPANSION
MECHANICAL FINE SCREEN	NUMBER		2+1
CAPACITY, EACH	MGD		3.6
OPENING SIZE	MM		2
MEMBRANE BIOREACTOR (MBR) UNIT			
AERATION BASIN, EACH (L, W, D)	FT		120, 30, 18
NO. OF BASINS	NUMBER		4 (3+1)
MEMBRANE TANK, EACH (L, W, H)	FT		45, 13, 10
NO. OF TRAINS	NUMBER		4
DESIGN MLSS	MG/L		6,000 – 8,000
DESIGN SYSTEM SRT	DAY		20
MBR FEED PUMPS	NUMBER		3+1
CAPACITY, EACH	GPM		4,200
MOTOR, EACH	HP		40
PERMEATE/BACKPULSE PUMPS	NUMBER		3+1
CAPACITY, EACH	GPM		840
MOTOR, EACH	HP		10
WAS PUMPS	NUMBER		1+1
CAPACITY, EACH	GPM		50
MOTOR, EACH	HP		5
MBR CHEMICAL FEED SYSTEM			
CITRIC ACID PUMP	NUMBER		1+1
CAPACITY, EACH	GPH		6
MOTOR, EACH	HP		1
HEAD, EACH	PSIG		60
SODIUM HYPO PUMP (NOTE 1)	NUMBER		2+1
CAPACITY, EACH	GPH		6
MOTOR, EACH	HP		1
HEAD, EACH	PSIG		60
STORAGE CAPACITY	GAL		2500
AERATION BLOWERS	NUMBER		3+1
CAPACITY, EACH	SCFM		1,400
MOTOR, EACH	HP		100
AIR SCOUR BLOWERS	NUMBER		3+1
CAPACITY, EACH	SCFM		800
MOTOR, EACH	HP		40
AIR COMPRESSOR	NUMBER		2
CAPACITY, EACH	SCFM		26
MOTOR, EACH	HP		7.5
HEAD, EACH	PSIG		125

DISINFECTION

ITEM	UNIT	EXISTING	EXPANSION
CHLORINE CONTACK TANK	NUMBER	1	3
NUMBER OF PASSES	NUMBER	5	3
DIMENSIONS OF EACH TANK (L, W, D)	FT	60x20x12	96x20x9
CHLORINE CONTACT TANK EFFLUENT PUMP	NUMBER		1+1
CAPACITY, EACH	GPM		694
MOTOR, EACH	HP		15
HEAD, EACH	FT		50

FILTRATION

ITEM	UNIT	EXISTING	EXPANSION
REVERSE OSMOSIS (RO) UNIT (OPTIONAL)	NUMBER		4+1
PERMEATE CAPACITY, EACH	MGD		0.4
RECOVERY	%		93

BIOSOLIDS PROCESSING

ITEM	UNIT	EXISTING	EXPANSION
MECHANICAL THICKENER	NUMBER	1	1
INFLUENT SLUDGE FLOW, EACH	GPM		50
DAILY SLUDGE GENERATION	LBS/DAY		8,000
NEAT POLYMER 40% FEED PUMP	NUMBER	2	1+1
CAPACITY, EACH	GPH	0–25	1
MOTOR, EACH	HP		0.5
HEAD, EACH	PSI		60
ANAEROBIC PRIMARY DIGESTERS	NUMBER	2	1 (NOTE 2)
DIAMETER	FT	35	35
SIDE WATER DEPTH	FT	26	21
WATER SURFACE ELEVATION	FT	24	19
TOTAL VOLUME	GAL	172,718	136,735
SOLIDS RETENTION	DAYS	20	20
HEAT EXCHANGER	NUMBER		1
CAPACITY, EACH	GPM		100
MOTOR, EACH	HP		10
HEAD, EACH	FT		173
HOT WATER BOILER*	NUMBER	1	
CAPACITY, EACH	BTU/HR.	640,000	
HOT WATER CIRCULATION PUMPS	NUMBER	2	
CAPACITY, EACH	GPM	90	
HEAD, EACH	FT	90	
MOTOR, EACH	HP	–	
HEAT EXCHANGER	NUMBER	1	1
CAPACITY, EACH	BTU/HR.	300,000	415,000
SLUDGE DRYING BEDS	NUMBER	12	
DIMENSIONS OF EACH BED (L, W)	FT	135x25	

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BANNING, CA 92220

TITLE: DESIGN CRITERIA

PROJECT NO. 105-0002

ORIGINAL SHEET SIZE ANSI-D

SHEET: G-105

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NOTE:
(1) OPTION 1 IS TO INSTALL THE RO FACILITY AT THE SUN LAKES COUNTRY CLUB. BRINE WILL BE DISPOSED OF IN THE CITY OF BEAUMONT SEWER SYSTEM.
(2) OPTION 2 IS TO INSTALL THE RO FACILITY AT THE BANNING WWTP. BRINE WOULD BE DISPOSED OF IN ON-SITE EVAPORATION PONDS.
(3) ALL DRAWINGS ARE CONCEPTUAL AND SUBJECT TO CHANGE BY THE DESIGN BUILD ENTITY.

WASHER/ COMPACTOR 3
FINE SCREEN 3
WASHER/ COMPACTOR 2
FINE SCREEN 2
WASHER/ COMPACTOR 1
FINE SCREEN 1
INFLUENT CHANNEL
TANK 4 ANOXIC ZONE
TANK 4 AEROBIC ZONE
TANK 4 SWING ZONE
IR PUMP 4
TANK 3 ANOXIC ZONE
TANK 3 AEROBIC ZONE
TANK 3 SWING ZONE
IR PUMP 3
TANK 2 ANOXIC ZONE
TANK 2 AEROBIC ZONE
TANK 2 SWING ZONE
IR PUMP 2
TANK 1 ANOXIC ZONE
TANK 1 AEROBIC ZONE
TANK 1 SWING ZONE
IR PUMP 1
EFFLUENT CHANNEL
MLSS PUMP STATION
MBR 4
MBR 3
MBR 2
MBR 1
CITRIC ACID
SODIUM HYPO
BW
PERM
PERMEATE BACKWASH PUMP 4
PERMEATE BACKWASH PUMP 3
PERMEATE BACKWASH PUMP 2
PERMEATE BACKWASH PUMP 1
RAS
WAS PUMPS
AERATION BLOWERS
MBR AIR SCOUR BLOWERS
PE
WAS
PERM TANKS
RECYCLE WATER RESERVOIR (BY OTHERS)
NON-POTABLE RECYCLE WATER BOOSTER (BY OTHERS)
RO FACILITY (NOTE 1, 2)
RO BRINE
BEAUMONT WWTP (NOTE 1, NOTE 2)
SUN LAKES COUNTRY CLUB
REMAINING RECYCLED WATER CUSTOMERS
SODIUM HYPO
CHLORINE CONTACT TANKS
CHLORINE CONTACT TANK
TO PERCOLATION PONDS
TO PERCOLATION PONDS
INF
BYPASS CHANNEL
BAR SCREEN
MECHANICAL BAR SCREEN
SCREENINGS WASHER COMPACTOR
GRIT CHAMBER
GRIT PUMP 1
GRIT PUMP 2
INFLUENT FLOW SPLITTER BOX
PI
PRIMARY CLARIFIER 3 (OPTIONAL)
PRIMARY CLARIFIER 1
PRIMARY CLARIFIER 2
RSL
PRIMARY EFFLUENT PUMP STATION
TRICKLING FILTER 1
TRICKLING FILTER 2
SE
TRICKLING FILTER RECIRCULATION PUMPS
PIPE GALLERY RECIRCULATION PUMP STATION
SECONDARY CLARIFIER 1
SECONDARY CLARIFIER 2
SLUDGE THICKENER
MECHANICAL THICKENER
TSL
THICKENED SLUDGE PUMPS
TO DISPOSAL
SCREENING CONTAINER
GRIT
GRIT CONTAINER
GRIT CLASSIFIER
EQUALIZATION BASIN PUMP STATION (BY OTHERS)
OF
EQUALIZATION BASIN (BY OTHERS)
RETURN
HEAT EXCHANGER
HWR
HWS
DIGESTER 1
DIGESTER 2
DIGESTER 3
DSL
DRYING BEDS

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REV.	DATE	DESCRIPTION

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:
PLOT DATE: 7/9/2024 4:19 PM
STATUS: PRELIMINARY

CLIENT: CITY OF BANNING
99 E. RAMSEY STREET
BANNING, CA 92220

PROJECT: BANNING WWTP
2242 CHARLES STREET
BANNING, CA 92220

TITLE: PROCESS FLOW DIAGRAM

PROJECT NO. 105-0002

ORIGINAL SHEET SIZE ANSI-D

SHEET: G-106

FILE: C:\USERS\IRIS.JIMENEZ\N2W ENGINEERING\N2W SERVER - SERVER (J)\PROJECTS\105-CITY OF BANNING\105-0002 OWNER ADVISOR W&WWTP\6. PROJECT ENGINEERING AND DESIGN\06.01_PRELIMINARY DESIGN\DESIGN DRAWING\105-0002 G 03 19 2024_RECOVER.DWG



CIVIL SITE LAYOUT
SCALE: 1"=40'-0"

NOTE:
(1) ALL DRAWINGS ARE CONCEPTUAL AND SUBJECT TO CHANGE BY THE DESIGN BUILD ENTITY.

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PLOT DATE: 7/9/2024 4:20 PM

STATUS: PRELIMINARY

CLIENT: CITY OF BANNING
99 E. RAMSEY STREET
BANNING, CA 92220

PROJECT: BANNING WWTP
2242 CHARLES STREET
BANNING, CA 92220

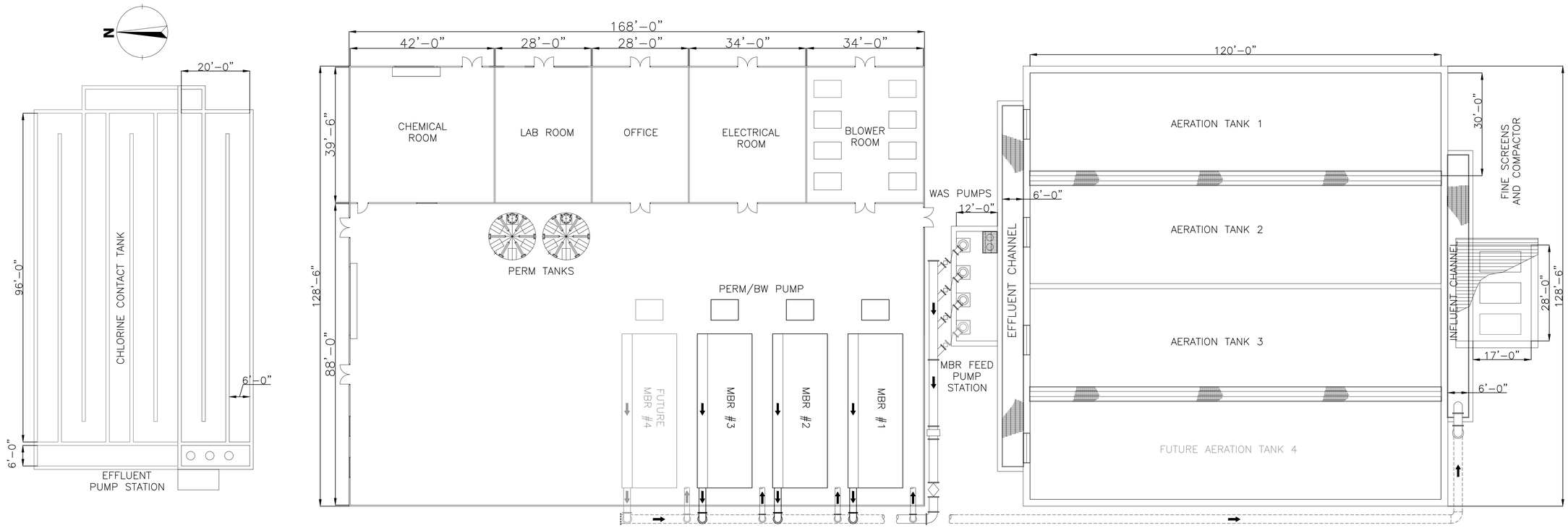
TITLE: CIVIL SITE PLAN

PROJECT NO. 105-0002

ORIGINAL SHEET SIZE ANSI-D

SHEET: C-101

FILE: C:\USERS\IRIS.JIMENEZ\N2W ENGINEERING\N2W SERVER - SERVER (1)\PROJECTS\105-CITY OF BANNING\105-0002 OWNER ADVISOR W&WWTP\6. PROJECT ENGINEERING AND DESIGN\06.01_PRELIMINARY DESIGN\DESIGN DRAWING\MBR SITE PLAN JAMES WANG 02 28 2024.DWG



MECHANICAL PLAN AND SECTION
SCALE: 1/16"=1'–0"

NOTE:
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	CHECKED BY:	APPROVED BY:

PLOT DATE: 7/9/2024 4:20 PM

STATUS: PRELIMINARY

CLIENT: CITY OF BANNING
99 E. RAMSEY STREET
BANNING, CA 92220

PROJECT: BANNING WWTP
2242 CHARLES STREET
BANNING, CA 92220

TITLE: MECAHNICAL PLAN AND SECTION

PROJECT NO. 105-0002

ORIGINAL SHEET SIZE ANSI-D

SHEET: M-101

FILE: C:\USERS\IRIS JIMENEZ\N2W ENGINEERING\N2W SERVER - SERVER (L)\PROJECTS\105-CITY OF BANNING\105-0002 OWNER ADVISOR W&WWTP\6. PROJECT ENGINEERING AND DESIGN\06.01_PRELIMINARY DESIGN\DESIGN DRAWING\MBR SITE PLAN JAMES WANG 02.28.2024.DWG

ABBREVIATIONS

@	AT	IN	INLET
APPROX	APPROXIMATELY	INFL	INFLUENT
ARV	AIR RELEASE VALVE	INV	INVERT
BF	BUTTERFLY VALVE	KV	KNIFE GATE VALVE
BLDG	BUILDING		
BLW	BLOWER	LF	LINEAR FEET
BOC	BOTTOM OF CONCRETE	LAM	LAMELLA CLARIFIER
BPR	BELT FILTER PRESS		
BPV	BACK PRESSURE VALVE	MAX	MAXIMUM
BV	BALL VALVE	MGD	MILLION GALLONS PER DAY
BW	BACKWASH	MFGR	MANUFACTURER
BWW	BACKWASH WATER	MH	MANHOLE
		MIN	MINIMUM
CB	CATCH BASIN	MJ	MECHANICAL JOINT
CEN	CENTRATE	MMC	MEMBRANE MODULE CASSETTE
CL	CENTERLINE	MO	MOTOR OPERATED
CML	CEMENT MORTAR LINED		
CML & EC	CEMENT MORTAR LINED AND EPOXY COATED	N	NORTH
CMLC	CEMENT MORTAR LINED AND COATED	NE	NORTHEAST
CONC	CONCRETE	NO, #	NUMBER
CONT	CONTINUATION	NTS	NOT TO SCALE
CPVC	CHLORINATED POLYVINYL CHLORIDE	NW	NORTHWEST
CS	CARBON STEEL		
CTRL	CONTROL CHECK VALVE	OD	OUTER DIAMETER
		OF	OVERFLOW
DC	DISK CHECK VALVE		
DIA, Ø	DIAMETER	PDS	DIFFERENTIAL PRESSURE SWITCH
DIM	DIMENSION	PG	PRESSURE GAUGE
DISCH	DISCHARGE	PI	PRESSURE INDICATOR
DR	DRAIN	PP	POLYPROPYLENE
DWG	DRAWING	PVC	POLYVINYL CHLORIDE
DV	DIAPHRAGM VALVE		
		RED	REDUCER
E	EAST	REINF	REINFORCED
EC	EPOXY COATED	REQ'D	REQUIRED
ECC	ECCENTRIC		
EFF	EFFLUENT	S	SOUTH
EJ	EXPANSION JOINT	SD	STORM DRAIN
ELEC	ELECTRICAL	SE	SOUTHEAST
EPC	EPOXY COATED	SH	SODIUM HYPOCHLORITE
EPL	EPOXY LINED	SLU	SLUDGE
EPLC	EPOXY LINED AND COATED	SP	SAMPLE PORT
EXIST	EXISTING	SS	STAINLESS STEEL
		ST	STREET
FAB	FABRICATED	STD	STANDARD
FF	FINISHED FLOOR	STL	STEEL
FG	FINISHED GRADE	STR	STRAINER
FIN	FINISH	SW	SOUTHWEST
FL	FLOOR		
FLG	FLANGE	TC	TOP OF CURB
FLT	FILTRATE	THK	THICKNESS
FRP	FIBER REINFORCED PLASTIC	TOC	TOP OF CONCRETE
FS	FINISHED SURFACE	TURB	TURBIDITY ANALYZER
		TW	TREATED WATER
GR	GRADE	TYP	TYPICAL
GV	GATE VALVE		
GW	GROUNDWATER	UW	UTILITY WATER
		US	ULTRASONIC
HDPE	HIGH DENSITY POLYETHYLENE		
HS	HYDROGEN DULFIDE	W	WEST
HYDRO	HYDROSTATIC	WT	WEIGHT
		WTR	WATER
		WS	WATER SURFACE
		WW	WASTE WATER

LABELING

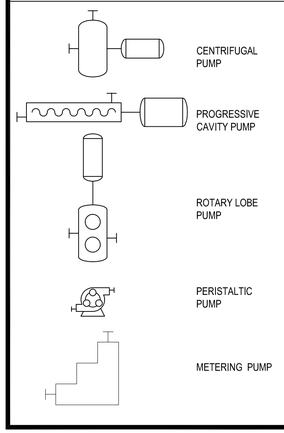


REVISION VERSION

TW SCOPE OF SUPPLY. SUPPLIED AS PACKAGE AND/OR SKID.

TW SCOPE OF SUPPLY. LOOSE SUPPLY UNLESS OTHERWISE NOTED.

EQUIPMENT



MECHANICAL/PIPING SYMBOLOGY

PIPING

SINGLE LINE	DOUBLE LINE	DESCRIPTION
		NEW PIPE
		ELBOW
		TEE
		CROSS
		REDUCER
		ECCENTRIC REDUCER
		FLANGED JOINT
		BLIND FLANGE
		MECHANICAL COUPLING
		GROOVED COUPLING

PIPE SIZING

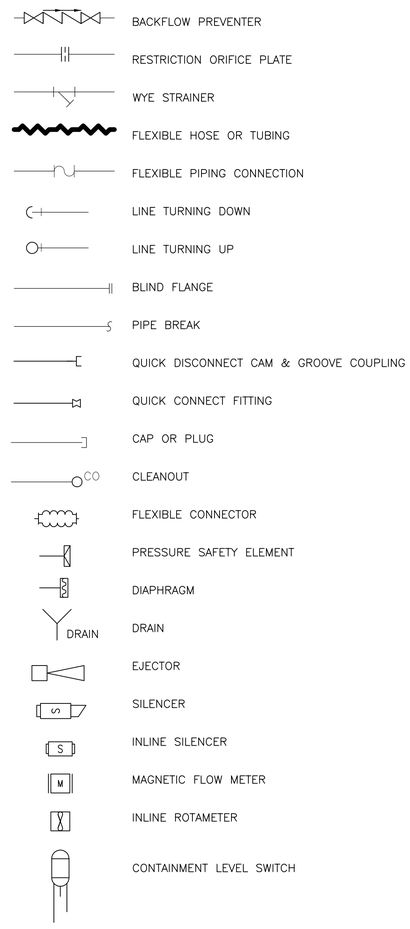
MAXIMUM VELOCITY

AIR: 300 FT/MIN FORCE MAIN: 7 FT/S
SUCTION PIPING: 4 FT/S GRAVITY PIPE: 4 FT/S
DISCHARGE: 7 FT/S

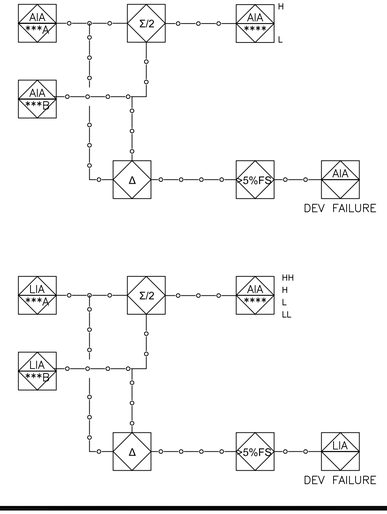
VALVES

SINGLE LINE	DOUBLE LINE	DESCRIPTION
		BALL VALVE
		BUTTERFLY VALVE
		DIAPHRAGM VALVE
		GATE VALVE
		GLOBE VALVE
		KNIFE GATE VALVE
		NEEDLE VALVE
		PINCH VALVE
		PLUG VALVE
		THREE WAY BALL VALVE
		THREE WAY PLUG VALVE
		BALL CHECK VALVE
		CHECK VALVE
		DISC CHECK VALVE
		CONE VALVE
OR	OR	PRESSURE RELIEF VALVE
		PRESSURE REDUCING VALVE
X	X	AIR RELEASE/VACUUM VALVE A = AIR RELEASE V = VACUUM
		PRESSURE REGULATING VALVE
S	S	SOLENOID VALVE
M	M	MOTOR OPERATED VALVE
		PNEUMATIC VALVE

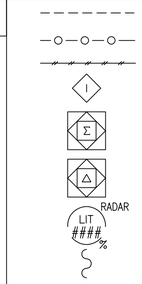
MISCELLANEOUS



REDUNDANT INSTRUMENT LOGIC



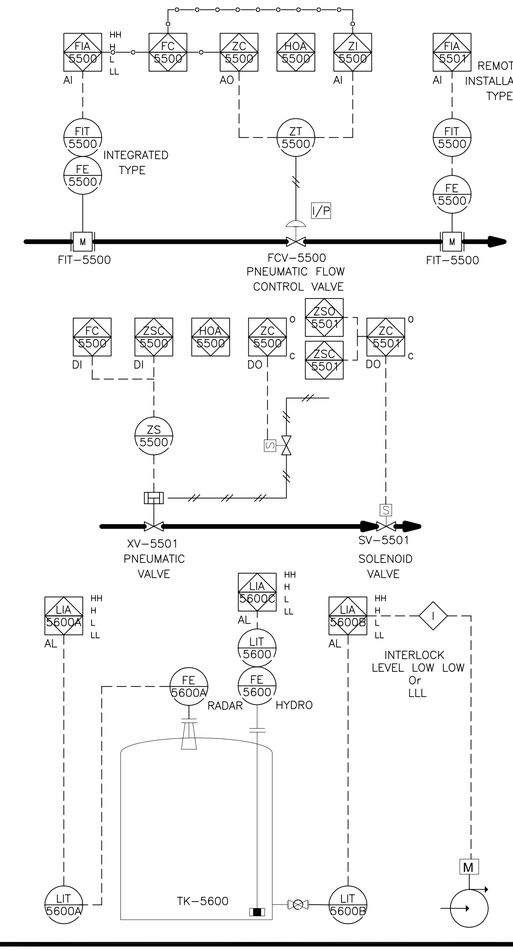
SIGNALING



ROTATING DEVICES:
TYPE 1 PUMP, DOL
TYPE 2 PUMP, VFD
TYPE 3 CHEMICAL PUMP, DOL
TYPE 4 CHEMICAL PUMP, STROKE CONTROLLER
TYPE 5 MIXER, DOL
TYPE 6 MIXER, VFD

AUTOMATIC VALVE:
XV–#### PNEUMATIC VALVE, ON/OFF VALVE
SV–#### SOLENOID VALVE, ON/OFF VALVE
MV–#### MOTORIZED VALVE, ON/OFF VALVE
FCV–#### FLOW CONTROL VALVE, MODULATING
PCV–#### PRESSURE CONTROL VALVE, MODULATING

ENCLOSURE:
JUCTION BOX (JB)
SOLENOID BOX (SB)
LOCAL OPERATION PANEL (LOP)
LOCAL CONTROL PANEL(LCP)
MAIN CONTROL PANEL (MCP)
POWER DISTRIBUTION PANEL (PDP)
ANALYZER INDICATOR CONTROLLER (AIC)
AIR MANIFOLD



GENERAL NOTES

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			FL	FL	JW	JW

PLOT DATE: 03.19.2024

STATUS:

CITY OF BANNING
99 E. RAMSEY STREET
BANNING, CA 92220

BANNING WWTP
2242 CHARLES STREET
BANNING, CA 92220

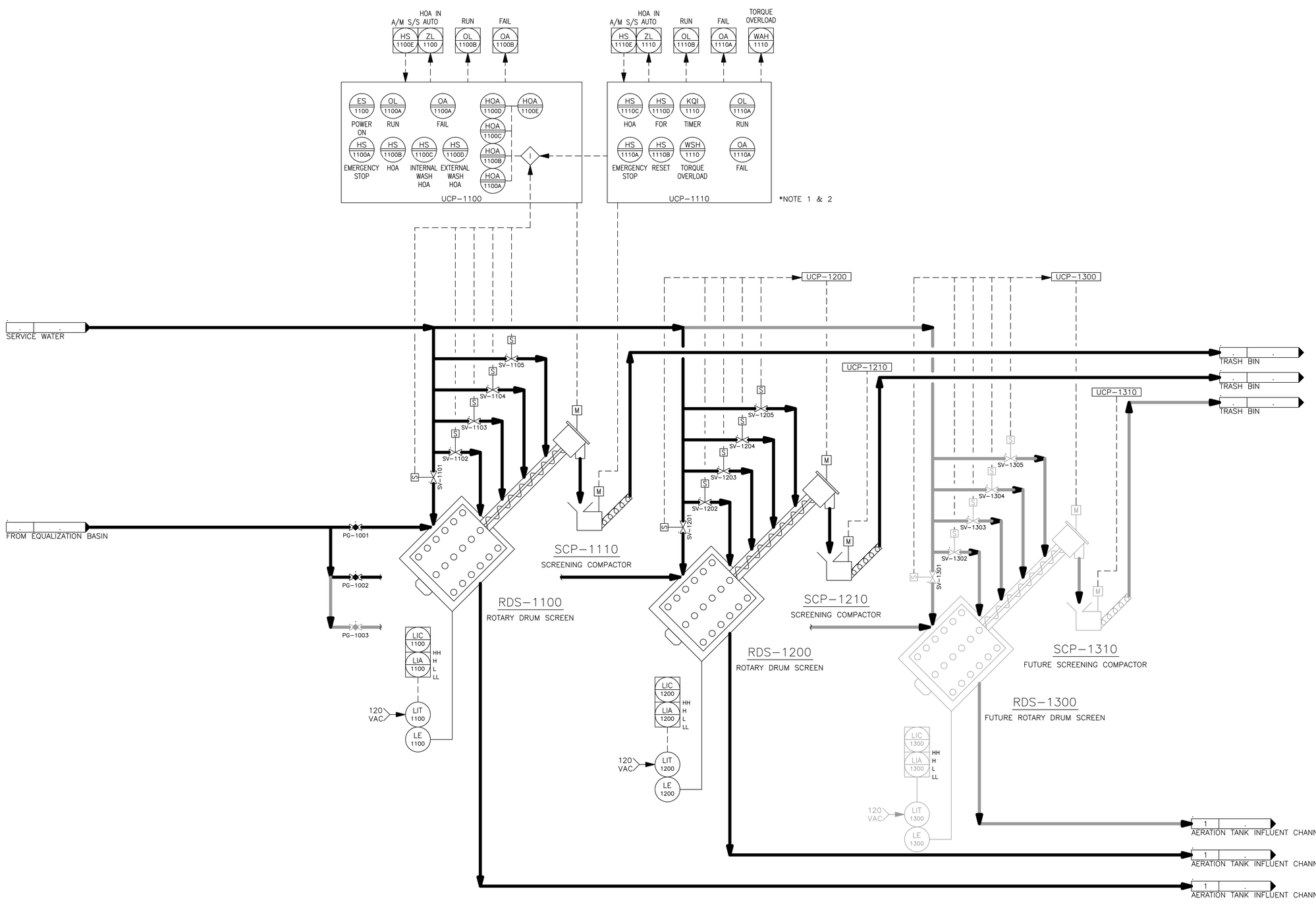
LEGEND

PROJECT NO.
105-0002

ORIGINAL SHEET SIZE
22"X34"

SHEET NUMBER
I-100

AREA NUMBER
#####



GENERAL NOTES

*1: UNIT CONTROL PANEL (UCP–1100 AND UCP–1110) ARE TYPICAL FOR ROTARY DRUM SCREENS 1200 AND 1300.
*2: UCP PROVIDED BY VENDOR.

\\CDK_waterDrop2-Ip-1.png

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APPROVED BY: JW

PLOT DATE: 03.19.2024

STATUS:

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99 E. RAMSEY STREET
BANNING, CA 92220

BANNING WWTP
2242 CHARLES STREET
BANNING, CA 92220

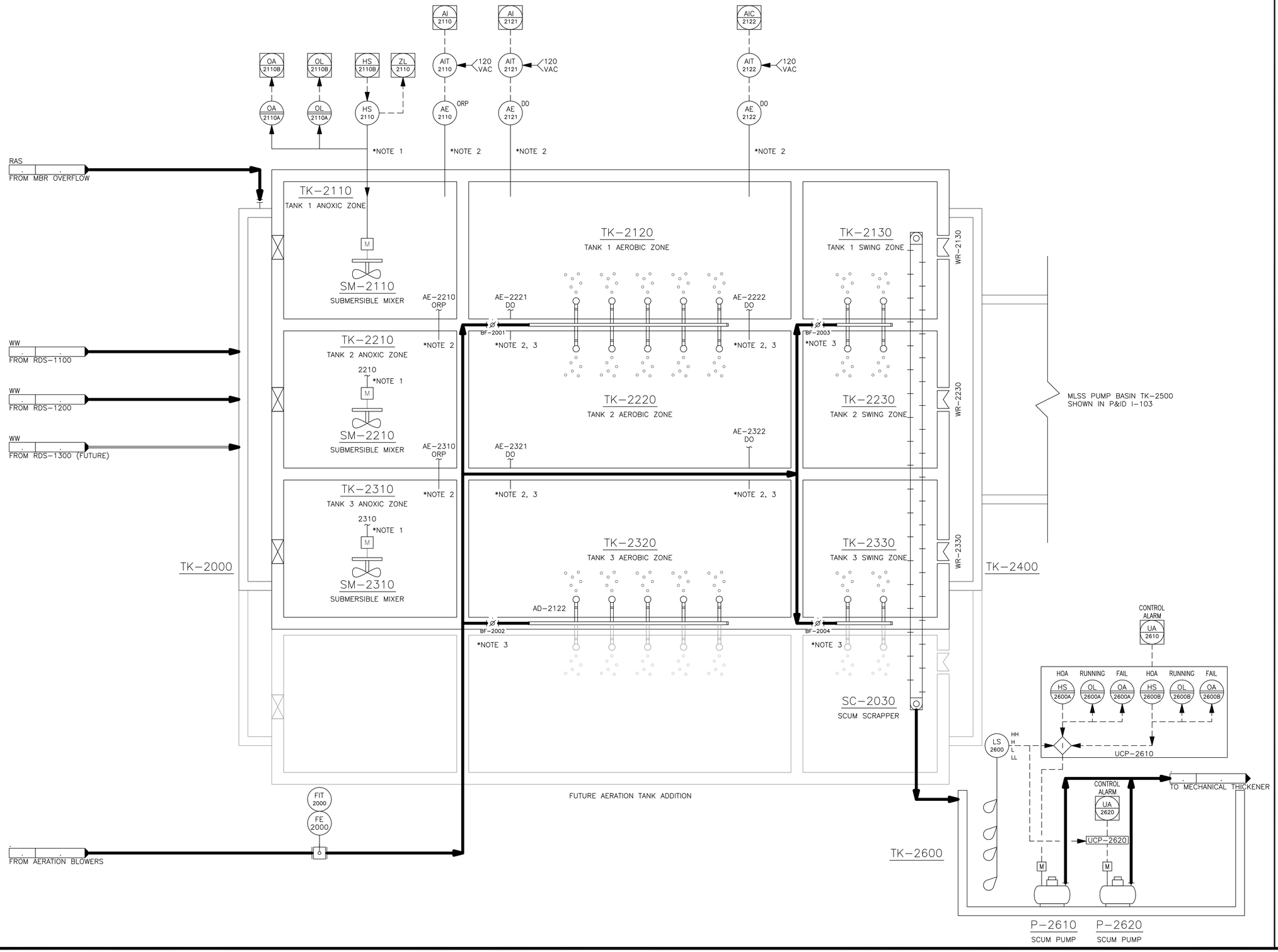
FINE SCREENS

PROJECT NO.
105-0002

ORIGINAL SHEET SIZE
22"X34"

SHEET NUMBER
I-101

AREA NUMBER
####



GENERAL NOTES

*1: CONTROLS FOR SM-2110 ARE TYPICAL FOR SM-2210 AND SM-2310.
*2: CONTROLS FOR AE-2110. AE-2121, AND AE-2122 ARE TYPYCAL FOR AE IN TANKS TK-2220 AND TK-2320.
*3: DROP LEGS, AERATION HEADERS, CONTROL VALVES, AND DO SENSORS PER DBE.

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STATUS:

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BANNING, CA 92220

BANNING WWTP
2242 CHARLES STREET
BANNING, CA 92220

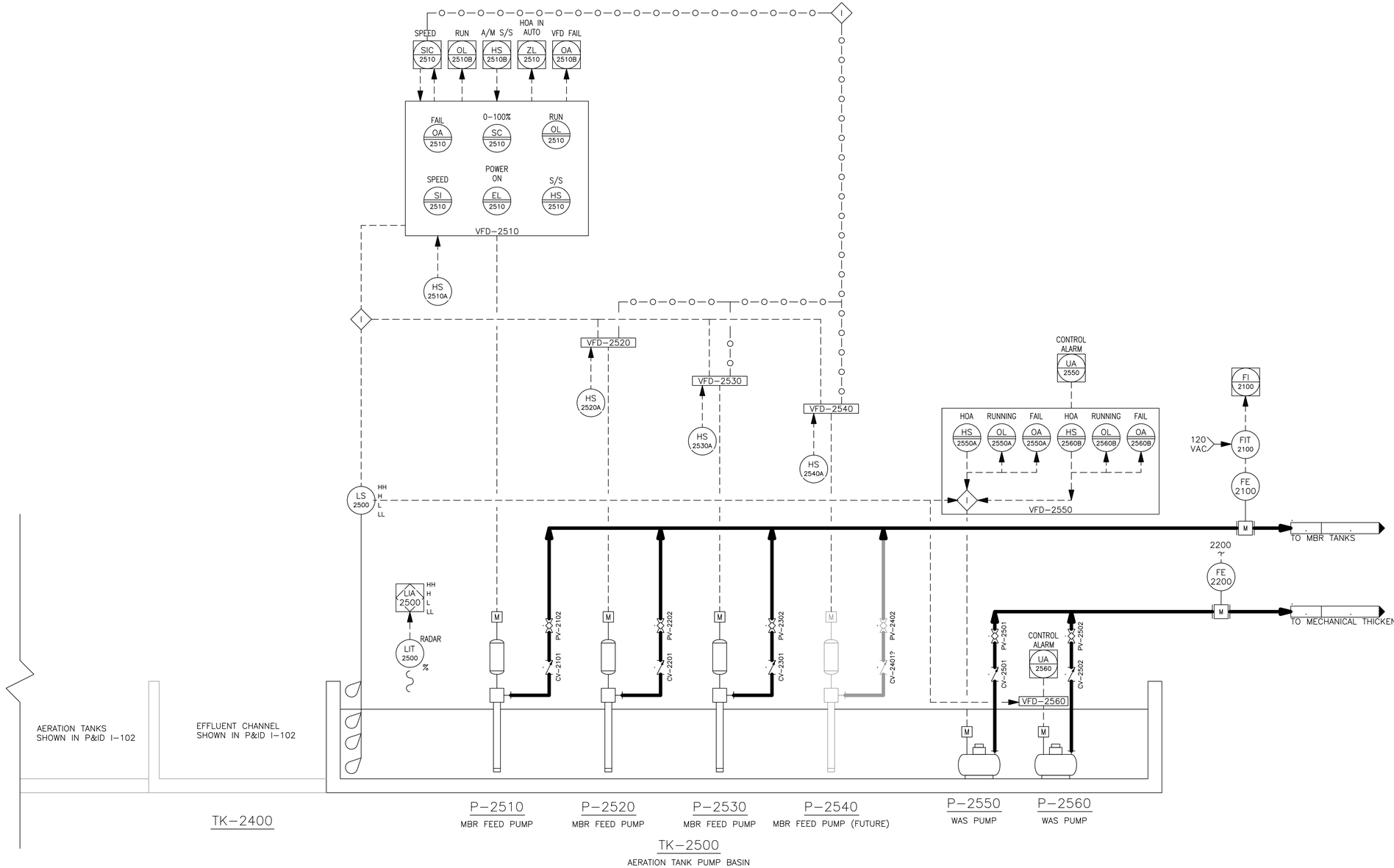
AERATION TANKS

PROJECT NO.
105-0002

ORIGINAL SHEET SIZE
22"X34"

SHEET NUMBER
I-102

AREA NUMBER
####



GENERAL NOTES

*1: EQUIPMENT CONTROLS AND INSTRUMENTS SHOWN ON THIS P&ID ARE CONNECTED TO PLC. EQUIPMENT CONTROLS SHOWN FOR MBR FEED PUMP P–2510 ARE TYPICAL FOR PUMPS P–2520, P–2530, AND P–2540.

*2: EQUIPMENT CONTROLS SHOWN FOR SUBMERSIBLE WAS PUMP P–2550 ARE TYPICAL FOR PUMP P–2560.

*3: FE/FIT 2000 SHALL TRANSMIT POSITIVE FLOW VALUES TO PLC.

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CITY OF BANNING
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BANNING, CA 92220

BANNING WWTP
2242 CHARLES STREET
BANNING, CA 92220

MBR FEED PUMPS

PROJECT NO.
105-0002

ORIGINAL SHEET SIZE
22"X34"

SHEET NUMBER
I-103

AREA NUMBER
####

BLOWER BUILDING ELECTRICAL ROOM

HMI

LOCATED ON MASTER PLC PANEL DOOR

MASTER BLOWER PLC CONTROL PANEL

PLC–2000

DATA LINK TO PLANT SCADA SYSTEMS

UCP–2100

S

FILTER BOX

B–2100

AERATION BLOWER A

DC–2101

BF–2102

TI 2101

PIC 2100

TIT 2101

TI 2100

TE 2101

PIT 2100

TO AERATION TANK

UCP–2200

S

FILTER BOX

B–2200

AERATION BLOWER B

DC–2201

BF–2202

TI 2201

PIC 2200

TIT 2201

TI 2200

TE 2201

PIT 2200

UCP–2300

S

FILTER BOX

B–2300

AERATION BLOWER C

DC–2301

BF–2302

TI 2301

PIC 2300

TIT 2301

TI 2300

TE 2301

PIT 2300

UCP–2400

S

FILTER BOX

B–2400

AERATION BLOWER D (FUTURE)

DC–2401

BF–2402

TI 2401

PIC 2400

TIT 2401

TI 2400

TE 2401

PIT 2400

GENERAL NOTES

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PLOT DATE: 03.19.2024

STATUS:

CITY OF BANNING
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BANNING, CA 92220

BANNING WWTP
2242 CHARLES STREET
BANNING, CA 92220

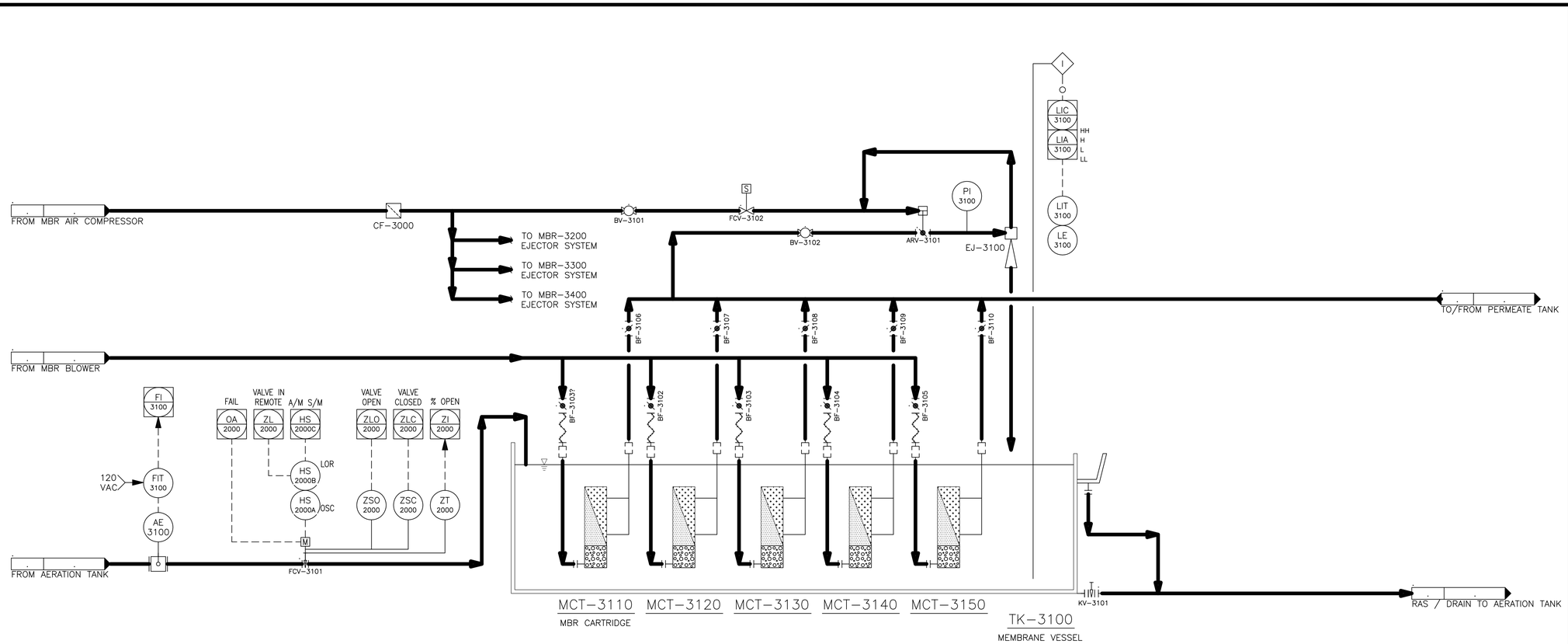
AERATION BLOWERS

PROJECT NO.
105-0002

ORIGINAL SHEET SIZE
22"X34"

SHEET NUMBER
I-104

AREA NUMBER
####



MBR TANKS 3100-3400 INSTRUMENT TAG NUMBERS				
DESCRIPTION	MBR TANK 3100	MBR TANK 3200	MBR TANK 3300	MBR TANK 3400 (FUTURE)
MBR INLET FLOWMETER	FE/FIT-3100	FE/FIT-3200	FE/FIT-3300	FE/FIT-3400
MBR TANK LEVEL TRANSMITTER	LE/LIT-3100	LE/LIT-3200	LE/LIT-3300	LE/LIT-3400
MBR TANK INLET CONTROL VALVE	FCV-3101	FCV-3201	FCV-3301	FCV-3401
MBR TANK DRAIN VALVE	KV-3101	KV-3201	KV-3301	KV-3401
CASSETTE ISOLATION VALVES	BF-3106 BF-3107 BF-3108 BF-3109 BF-3110	BF-3206 BF-3207 BF-3208 BF-3209 BF-3210	BF-3306 BF-3307 BF-3308 BF-3309 BF-3310	BF-3406 BF-3407 BF-3408 BF-3409 BF-3410
PERMEATE HEADER ARV	ARV-3101	ARV-3102	ARV-3103	ARV-3104
AIR HEADER ISOLATION VALVES	BF-3101 BF-3102 BF-3103 BF-3104 BF-3105	BF-3201 BF-3202 BF-3203 BF-3204 BF-3205	BF-3301 BF-3302 BF-3303 BF-3304 BF-3305	BF-3401 BF-3402 BF-3403 BF-3404 BF-3405
COMPRESSED AIR HEAD HAND VALVE	BV-3101	BV-3201	BV-3301	BV-3401
CONMPRESSED AIR HEAD SOLENOID VALVE	FCV-3102	FCV-3202	FCV-3302	FCV-3402
PERMEATE HEADER PRESSURE GAUGE	PI-3100	PI-3200	PI-3300	PI-3400
PERMEATE HEADER HAND VALVE	BV-3102	BV-3202	BV-3302	BV-3402
VACUUM EJECTOR	EJC-3100	EJC-3200	EJC-3300	EJC-3400

GENERAL NOTES

*1: P&ID SHOWN FOR MBR VESSEL TK-3100 IS TYPICAL FOR VESSELS TK-3200, TK-3300, AND TK-3400.

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BANNING, CA 92220

BANNING WWTP
2242 CHARLES STREET
BANNING, CA 92220

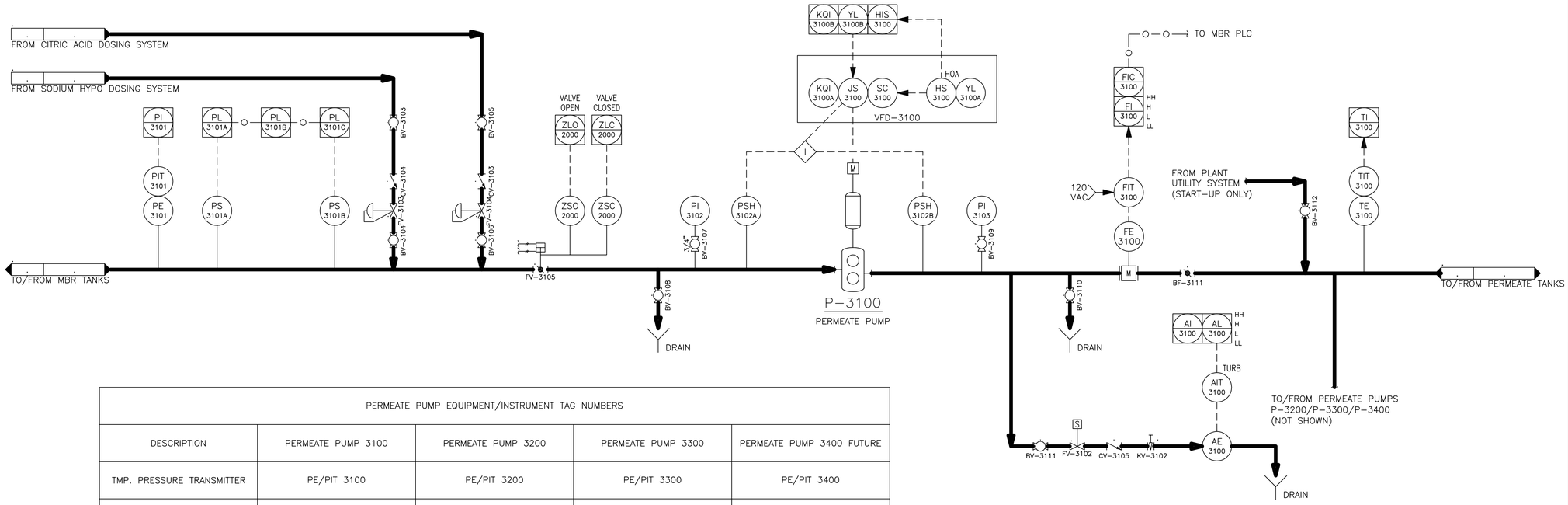
MEMBRANE BIOREACTORS

PROJECT NO.
105-0002

ORIGINAL SHEET SIZE
22"X34"

SHEET NUMBER
I-105

AREA NUMBER
####



PERMEATE PUMP EQUIPMENT/INSTRUMENT TAG NUMBERS				
DESCRIPTION	PERMEATE PUMP 3100	PERMEATE PUMP 3200	PERMEATE PUMP 3300	PERMEATE PUMP 3400 FUTURE
TMP. PRESSURE TRANSMITTER	PE/PIT 3100	PE/PIT 3200	PE/PIT 3300	PE/PIT 3400
PRESSURE SWITCH 1	PSH-3101A	PSH-3201A	PSH-3301A	PSH-3401A
PRESSURE SWITCH 2	PSH-3101B	PSH-3201B	PSH-3301B	PSH-3401B
PERMEATE SUCTION ISOLATION VALVE	FV-3101	FV-3201	FV-3301	FV-3401
PERMEATE PUMP INLET PRESSURE INDICATOR	PI-3102	PI-3202	PI-3302	PI-3402
PERMEATE PUMP INLET PRESSURE SWITCH	PSH-3102A	PSH-3202A	PSH-3302A	PSH-3402A
PEARMEATE PUMP DISCHARGE PRESSURE SWITCH	PSH-3102B	PSH-3202B	PSH-3302B	PSH-3402B
PERMEATE PUMP DISCHARGE PRESSURE INDICATOR	PI-3103	PI-3203	PI-3303	PI-3403
PERMEATE MAG FLOW METER	FE/FIT-3100	FE/FIT-3200	FE/FIT-3300	FE/FIT-3400
PERMEATE PUMP INLET SAMPLE VALVE	BV-3108	BV-3208	BV-3308	BV-3408
PERMEATE PUMP DISCHARGE SAMPLE VALVE	BV-3110	BV-3210	BV-3310	BV-3410
PERMEATE PUMP DISCHARGE ISOLATION VALVE	BV-3111	BV-3211	BV-3311	BV-3411
TURBIDMETER INLET ISOLATION VALVE	BV-3111	BV-3211	BV-3311	BV-3411
TURBIDMETER INLET SOLENOID VALVE	FV-3102	FV-3202	FV-3302	FV-3402
TURBIDMETER INLET CHECK VALVE	CV-3105	CV-3205	CV-3305	CV-3405
TURBIDMETER HAND CONTROL VALVE	KV-3102	KV-3202	KV-3302	KV-3402
TURBIDMETER	AE/AIT-3100	AE/AIT-3200	AE/AIT-3300	AE/AIT-3400

GENERAL NOTES

*1: EQUIPMENT CONTROLS AN INSTRUMENTS SHOWN ON THIS P&ID ARE CONNECTED TO MBR VENDOR PLC.
*2: EQUIPMENT CONTROLS AND INSTRUMENTS SHOWN FOR PERMEATE PUMP P-3100 ARE TYPICAL FOR PERMEATE PUMPS P-3200, P-3300, AND P-3400.
*3: EQUIPMENT CONTROLS, INSTRUMENTS, AND VALVES SHOWN ON THIS P&ID ARE FURNISHED BY MBR VENDOR.
*4: PERMEATE PUMP VFD-3100, VFD-3200, VFD-3300, AND VFD-3400 ARE TO BE FURNISHED BY CONTRACTOR.
*5: FE/FIT 3100-3400 SHALL TRANSMIT POSITIVE FLOW VALUES TO PLC.

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\N2W_waterDrop2-tp-1.png

REV.	DATE	DESCRIPTION

DESIGNED BY: FL
DRAWN BY: FL
CHECKED BY: JW
APPROVED BY: JW

PLOT DATE: 03.19.2024

STATUS:

CITY OF BANNING
99 E. RAMSEY STREET
BANNING, CA 92220

BANNING WWTP
2242 CHARLES STREET
BANNING, CA 92220

MBR PERMEATE PUMPS

PROJECT NO. 105-0002
ORIGINAL SHEET SIZE 22"X34"
SHEET NUMBER I-106
AREA NUMBER ####

BLOWER BUILDING ELECTRICAL ROOM

HMI

LOCATED ON MASTER PLC PANEL DOOR

MASTER BLOWER PLC CONTROL PANEL

PLC-2000?

DATA LINK TO PLANT SCADA SYSTEMS

UCP-3100

PV-3107

DC-3101

BF-3101

TI 3101

PIC 3100

TIT 3101

TI 3100

TE 3101

PIT 3100

TO MBR TANK 3100

B-3100

MBR AIR SCOUR BLOWER A

UCP-3200

PV-3108

DC-3201

BF-3201

TI 3201

PIC 3200

TIT 3201

TI 3200

TE 3201

PIT 3200

TO MBR TANK 3200

B-3200

MBR AIR SCOUR BLOWER B

UCP-3300

PV-3109

DC-3301

BF-3301

TI 3301

PIC 3300

TIT 3301

TI 3300

TE 3301

PIT 3300

TO MBR TANK 3300

B-3300

MBR AIR SCOUR BLOWER C

UCP-3400

PV-3106

DC-3401

BF-3401

TI 3401

PIC 3400

TIT 3401

TI 3400

TE 3401

PIT 3400

TO MBR TANK 3400

B-3400

MBR AIR SCOUR BLOWER D (FUTURE)

GENERAL NOTES

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BANNING WWTP
2242 CHARLES STREET
BANNING, CA 92220

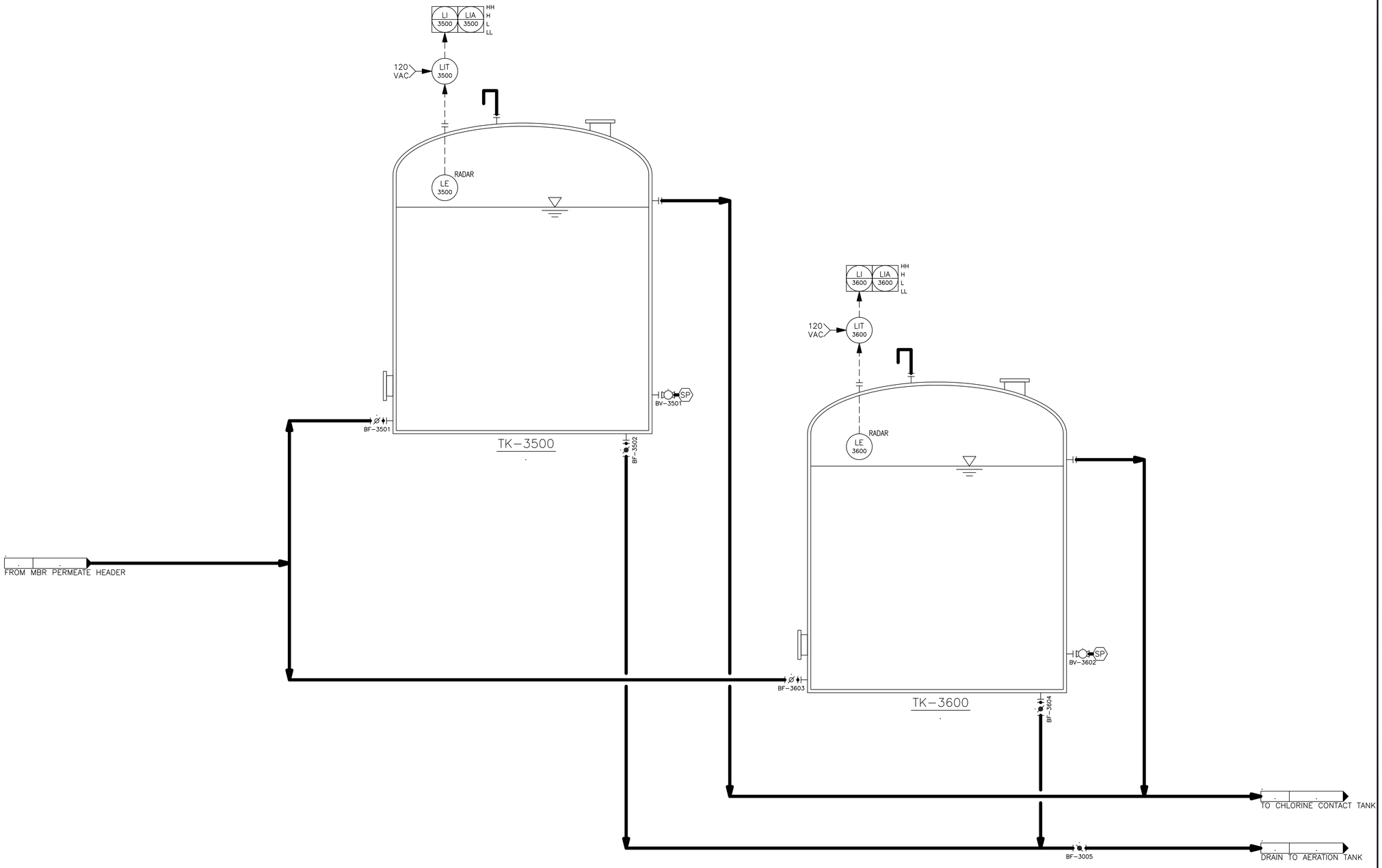
MBR BLOWERS

PROJECT NO.
105-0002

ORIGINAL SHEET SIZE
22"X34"

SHEET NUMBER
I-107

AREA NUMBER
####



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BANNING WWTP
2242 CHARLES STREET
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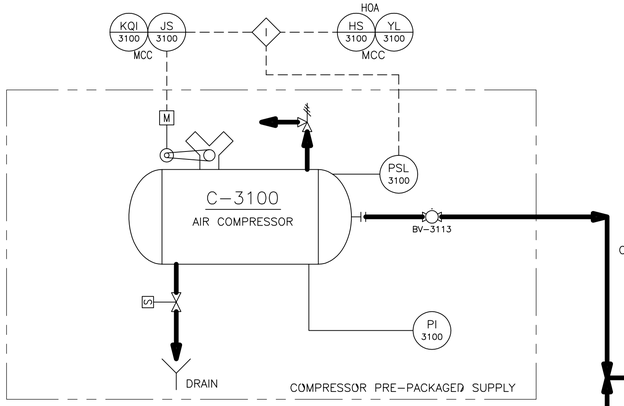
MBR PERMEATE TANKS

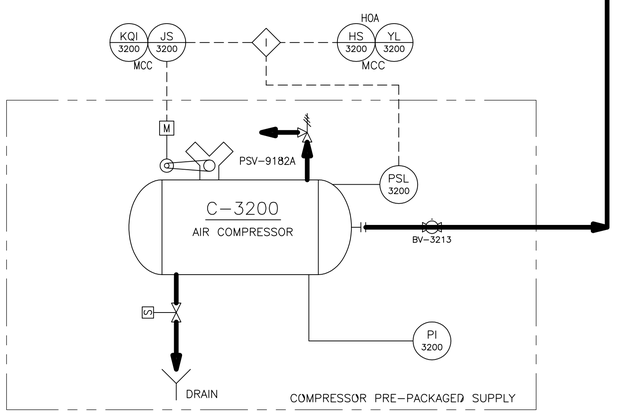
PROJECT NO.
105-0002

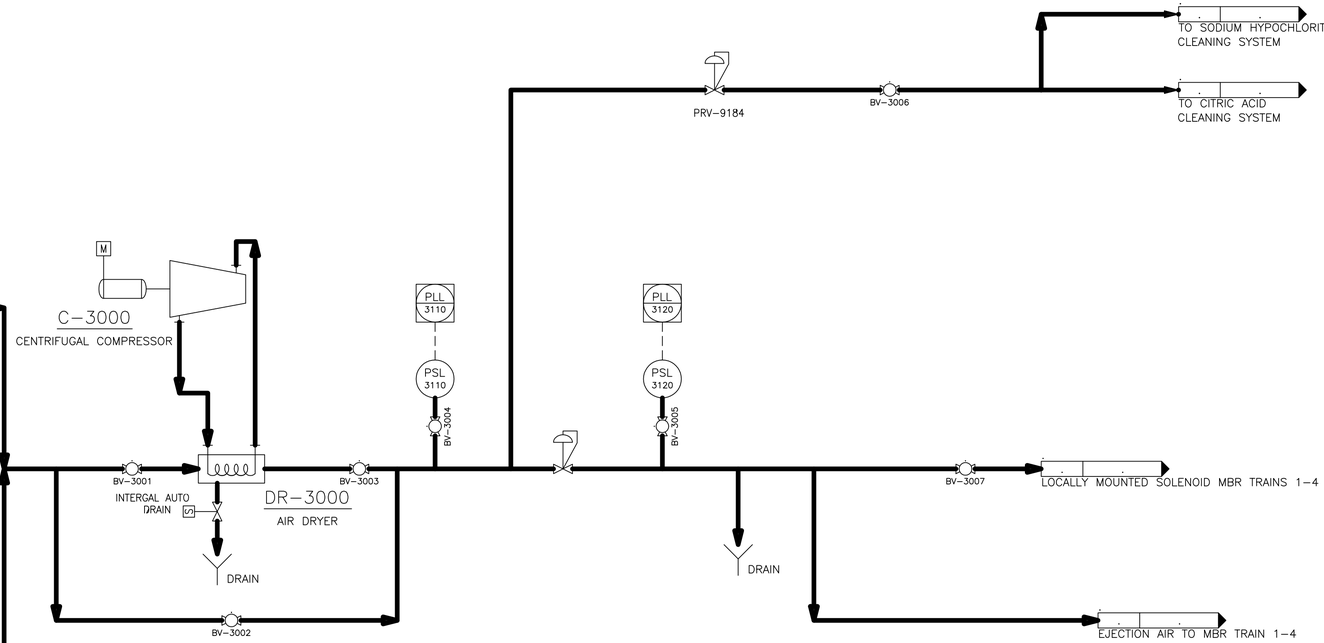
ORIGINAL SHEET SIZE
22"X34"

SHEET NUMBER
I-108

AREA NUMBER
####







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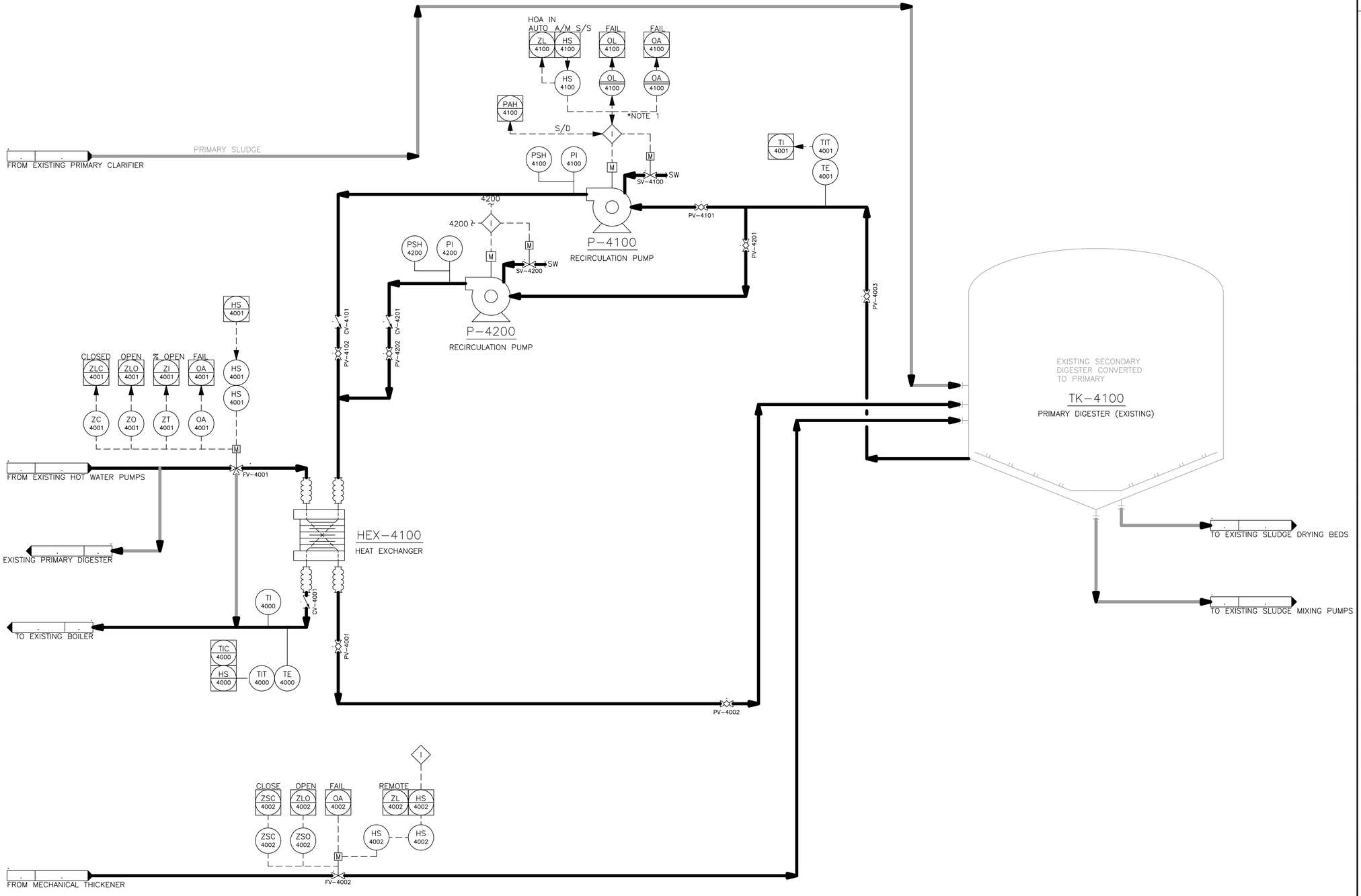
PLANT AIR COMPRESSORS

PROJECT NO.
105-0002

ORIGINAL SHEET SIZE
22"X34"

SHEET NUMBER
I-109

AREA NUMBER
####



GENERAL NOTES

*1: PUMP CONTROLS ARE TYPICAL FOR P-4100 AND P-4200.

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BANNING WWTP
2242 CHARLES STREET
BANNING, CA 92220

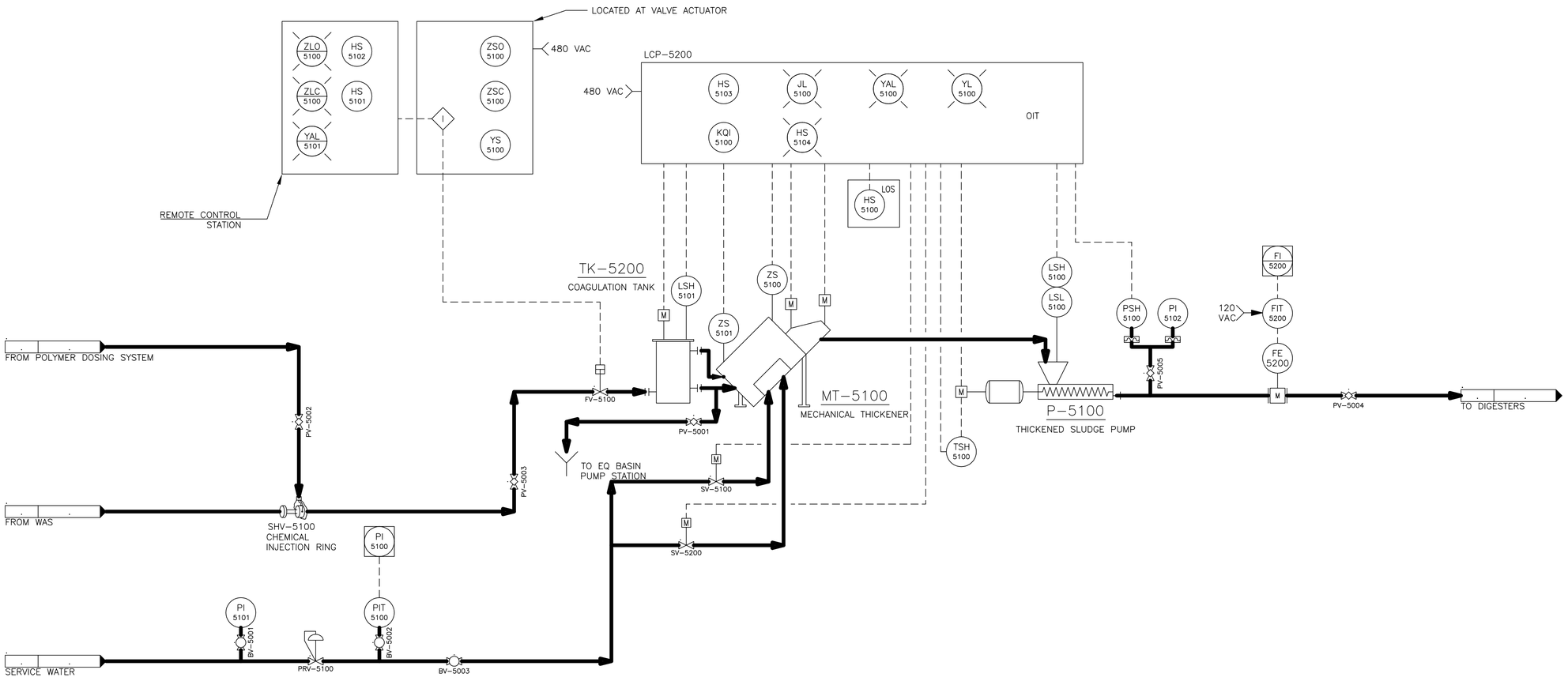
DIGESTER

PROJECT NO.
105-0002

ORIGINAL SHEET SIZE
22"X34"

SHEET NUMBER
I-110

AREA NUMBER
####



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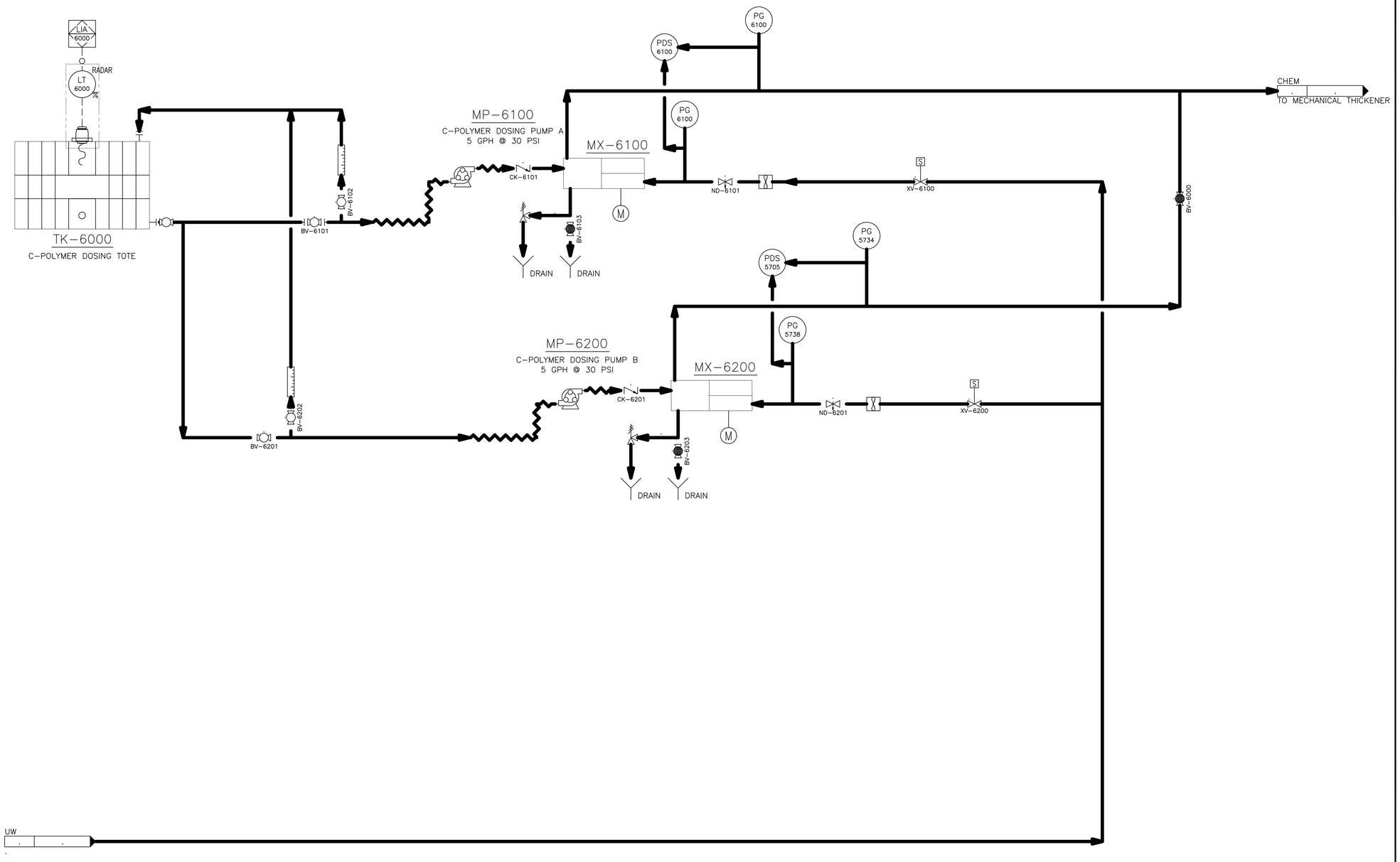
MECHANICAL THICKENER

PROJECT NO.
105-0002

ORIGINAL SHEET SIZE
22"X34"

SHEET NUMBER
I-111

AREA NUMBER
####



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CATIONIC POLYMER DOSING SYSTEM

PROJECT NO.
105-0002

ORIGINAL SHEET SIZE
22"X34"

SHEET NUMBER
I-112

AREA NUMBER
####

GENERAL NOTES

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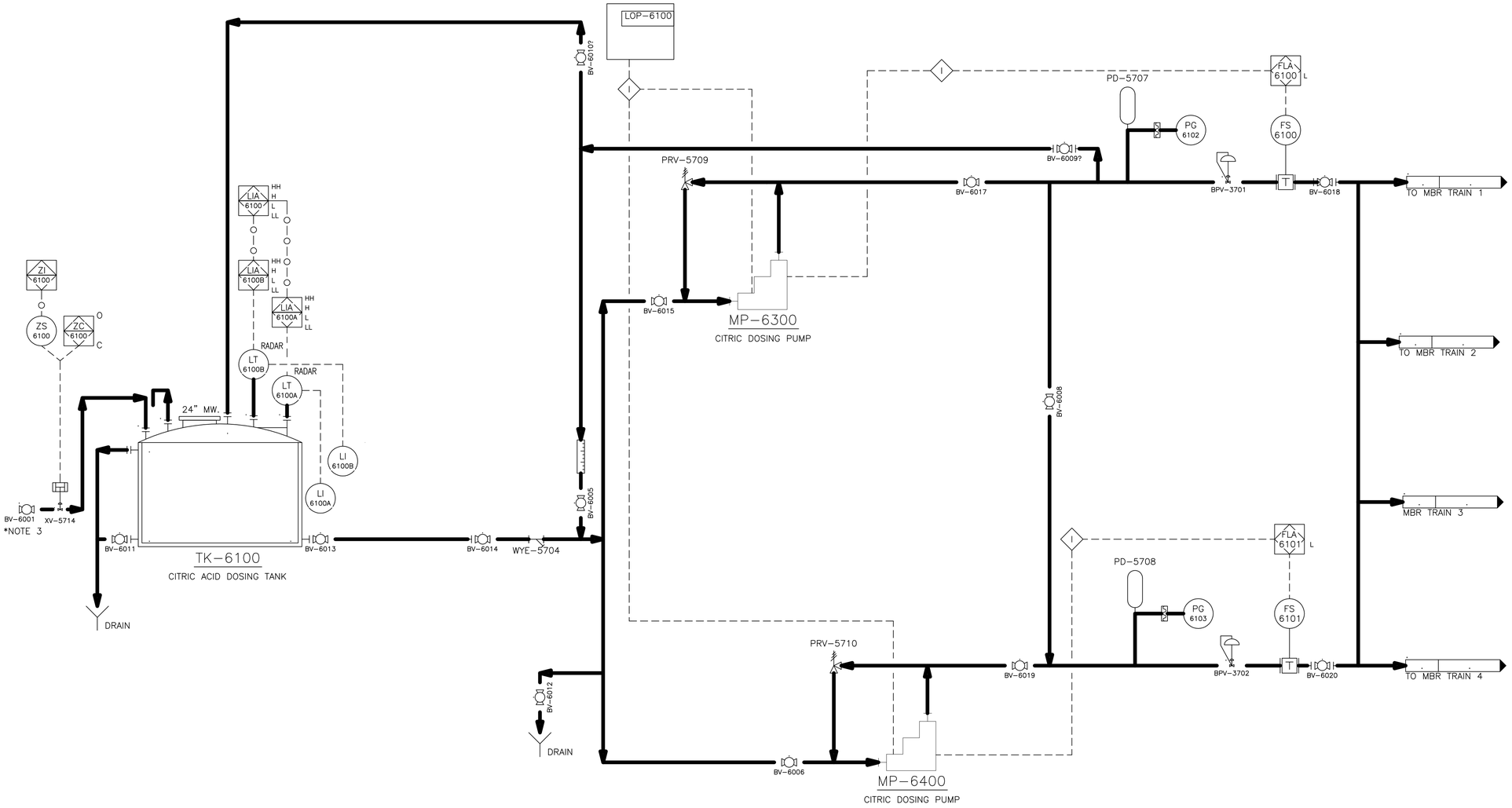

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CITRIC ACID DOSING SYSTEM

PROJECT NO.
105-0002

ORIGINAL SHEET SIZE
22"X34"

SHEET NUMBER
I-113

AREA NUMBER
####

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2242 CHARLES STREET
BANNING, CA 92220

SODIUM HYPOCHLORITE DOSING SYSTEM

PROJECT NO. 105-0002

ORIGINAL SHEET SIZE 22"X34"

SHEET NUMBER I-114

AREA NUMBER ####

LOP-6200

BV-6038

PD-5707

PG 6200

FLA 6300 L

FS 6300

PRV-5709

BV-6037

BV-6023

BPV-3704

BV-6027

TO CHLORINE CONTACT TANK

LIA 6200 HH H L LL

LIA 6220B HH H L LL

LIA 6200A HH H L LL

ZI 6200

ZS 6200

ZC 6200 O C

RADAR

LT 6200B

RADAR

LT 6200A

24" MW.

LI 6200B

LI 6200A

BV-6030

MP-6500
NaOCl DOSING PUMP

BV-6035

PRV-5711

BV-6032

BV-6036 XV-6200
*NOTE 3

BV-6039

TK-6200
SODIUM HYPOCHLORITE DOSING TANK

BV-6028

BV-6029

WYE-5704

BV-6034

MP-6700
NaOCl DOSING PUMP

BV-6041

PD-5708

PG 6200

FLA 6200 L

FS 6400

PRV-5710

BV-6021

BPV-3703

BV-6022

TO MBR TRAIN 1

TO MBR TRAIN 2

MBR TRAIN 3

TO MBR TRAIN 4

BV-6040

DRAIN

DRAIN

BV-6033

MP-6600
NaOCl DOSING PUMP

TK-7000
EXISTING CHLORINE CONTACT TANK

TO PERCHLORATION PONDS

BF-7000

CONTROL ALARM
UA 7110

HOA HS 7110A | RUNNING OL 7110A | FAIL OA 7110A | HOA HS 7110B | RUNNING OL 7110B | FAIL OA 7110B

I

UCP-7110

LIA 2500 HH H L LL

RADAR

LIT 2500 %

TK-7100
NEW CHLORINE CONTACT TAMK

LS 7100 HH H L LL

TO RECYCLE WATER RESERVOIR

CONTROL ALARM
UA 7120

UCP-7120

M M

FROM SODIUM HYPO DOSING SYTEM

FROM PERMEATE TANKS

P-7110 SUBMERSIBLE PUMP

P-7120 SUBMERSIBLE PUMP

TK-7200
FUTURE CHLORINE CONTACT TANK

TK-7300
FUTURE CHLORINE CONTACT TANK

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STATUS:

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99 E. RAMSEY STREET
BANNING, CA 92220

BANNING WWTP
2242 CHARLES STREET
BANNING, CA 92220

CHLORINE CONTACT TANKS

PROJECT NO.
105-0002

ORIGINAL SHEET SIZE
22"X34"

SHEET NUMBER
I-115

AREA NUMBER
####

Exhibit B

Scope of Work and Schedule

AECOM

W. M. LYLES CO.

a joint venture

Proposal submitted to
City of Banning
December 2024

City of Banning CA
Wastewater Treatment Plant and Recycled Water Upgrades Project
Progressive Design–Build Services, Phase 1 Scope of Work

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Introduction

As requested by the City of Banning (City), AECOM/W. M. LYLES JOINT VENTURE (AECOM/WML) has developed a scope of services and preliminary schedule for Phase 1 of the progressive design-build services for the Wastewater Treatment Plant and Recycled Water Upgrades Project (Project).

Background

The City of Banning is responsible for the collection, conveyance, treatment, and disposal of wastewater generated within its service area. The local collector sewers discharge into larger sewer trunk mains, then to the Banning WWTP, located in the southeast corner of the City.

The existing WWTP has a current capacity of 3.6 million gallons per day (MGD) and is designed to treat wastewater to secondary standards. The WWTP consists of preliminary treatment, primary treatment, secondary treatment, solids handling, disinfection (currently not in use), and evaporation/percolation ponds. The preliminary treatment system consists of a mechanical bar screen, compactor, grit removal system, and cyclone separator. Effluent from the preliminary treatment system is gravity fed to two primary clarifiers. Primary effluent is pumped to two Trickling Filters, each rated for 1.8 MGD. The Trickling Filter effluent is sent to two secondary clarifiers.

Secondary effluent flows through a chlorine contact chamber and is then discharged to 10 unlined evaporation/percolation ponds which recharges the Cabazon Groundwater Basin. This recharge is provided only through surface percolation, and no injection wells are used by the City.

Primary and secondary sludge is processed via two primary anaerobic digesters. A second-stage digester is currently used as a sludge holding tank before thickened sludge is sent to the sludge drying beds. Sludge is allowed to dry and then is hauled offsite for final disposal. A gravity thickener was used to thicken secondary sludge but is currently not in service.

At this time, effluent from the WWTP is in compliance with effluent water quality discharge requirements. However, the WWTP will not be able to meet the impending discharge limits proposed by the Colorado River Basin Regional Water Quality Control Boad (RWQCB). In addition, many treatment facilities at the plant, including the two Trickling Filters, have reached the end of their useful life.

Project Description

The Project involves upgrading the Banning WWTP to Title 22 standards for recycled water use.

The existing Trickling Filters and secondary clarifiers will be abandoned, and a new MBR facility and UV disinfection system will be installed to meet Title 22 recycled water standards. Other miscellaneous upgrades of the WWTP, including fine screening upstream of the aeration tanks, modifications to digester facilities, dewatering, chemical systems, and ancillary facilities (office, electrical and control systems including new SCADA, plant water, potable water, stormwater, etc.) will also be implemented as part of the project. An RO system and associated evaporations ponds may be needed as well and is included in this scope of services, if confirmed.

Progressive Design Build Approach Implementation

In accordance with the RFP, AECOM/WML proposes to implement the project on a progressive design-build basis. This approach involves bringing design and construction resources together in an integrated team to

manage the project in a competitive manner but with a single source of responsibility and accountability. This approach is broken down into two distinct phases:

Phase 1 Services – Planning, Design Development, Permitting and Preparation of the Design-Build Price. This phase includes all the planning, engineering, and permitting to prepare a complete design to develop a Guaranteed Maximum Price (GMP) and schedule for Phase 2.

Phase 2 Services– Project Execution. Upon agreement on the GMP for the project and the release of required approvals, AECOM/WML will proceed with Phase 2 for equipment and material procurement, construction, engineering design support during construction, construction management, start-up, and acceptance testing.

Phase 1 – Scope of Work

AECOM/WML will provide Phase 1 engineering services including the preparation of a Preliminary Design Report (PDR) and a complete design to develop the Phase 2 Proposal, including a GMP for the construction of the Project.

The scope of work for Phase 1 has been organized into four interrelated tasks as follows:

- Task 1- Design
- Task 2- Cost Estimating
- Task 3- Meetings & Reports
- Task 4 – Investigations / Support

A detailed description of these tasks is provided in the following subsections.

Task 1 - Design

Sub Task 1.1 – Preliminary Design Report

Objective: Further develop design concepts and formally document project scope and rationale in a Preliminary Design Report (PDR).

AECOM/WML Activities: Prepare a PDR incorporating the results of kick-off and progress meetings, technical collaboration sessions, and workshops with the City conducted to date. A draft PDR will document these results and describe the proposed scope of work for new facilities. The final PDR will document the rationale for all design decisions and will present the initial scope of work for design and GMP development.

The PDR for the WWTP will define the overall project goals and design intent and the detailed design criteria for all project components, systems and subsystems such as:

- Design criteria for flows and loads.
- Anticipated unit process flow rates and chemical use and storage requirements.
- Wastewater treatment process design, including mass balances, equipment capacities and related design criteria.
- Geotechnical data and design criteria (Geotechnical Report).
- Base Map from topographic survey.
- Civil concepts and design criteria. Including facilities planning in regard to location and orientation of proposed facilities and relation to existing facilities and hydraulic profile.

- Foundation, structural and architectural concepts and design criteria.
- Architectural concepts and design criteria.
- Process mechanical concepts and design criteria.
- HVAC concepts and design criteria.
- Plumbing concepts and design criteria.
- Fire protection design criteria.
- SCADA system architecture and outline process control descriptions for critical unit operations and draft P&IDs.
- Physical and electronic security/surveillance systems.
- Electrical power supply and distribution strategy.
- Permitting requirements.
- Potholing/utility searches

Deliverables:

- Draft PDR including Geotechnical Report and Base map.
- Updated List of drawings and specifications
- Preliminary drawings including process flow diagrams, hydraulic profile, mass balances, conceptual site plans; major process general arrangement plans and sections (fine screens, MBR, UV disinfection, dewatering);
- Final PDR incorporating City comments.
- Deliverables will be provided in electronic format (PDF)

Key Understanding: The main purpose of preparing the draft PDR is to further develop the design while formally documenting project scope and rationale. This document will provide the basis for the Initial Cost Baseline.

Drawings for all design phases will be prepared with AutoCAD or Revit, and in accordance with the United States National CAD Standard® (NCS). Design plans will be developed utilizing industry standard scales, in English (not metric) engineering units. Attachment A (Draft Index of Drawings and Specifications) shows a list of drawings and specifications anticipated for the Project and at what stage they will be provided.

Specifications for all design phases will be prepared in Microsoft Word using the industry standard. AECOM/WML's budget for this task assumes no Division 0 and Division 1 specifications will be required to be prepared by AECOM/WML, and that AECOM/WML's Design-Build specifications (16 Divisions format) will be used as a basis for the technical provisions.

Meetings/Travel: Refer to Task 3 – Meetings and Reports for planned meetings and workshops. Ad-hoc calls may be needed to coordinate and discuss emerging technical issues.

Information and Services Provided by Others: As-builts of existing facilities, available geotechnical reports and data, City's input on the design concepts and alternatives. City to provide comments in spreadsheet for tracking and disposition purposes.

City's operations staff to provide additional sampling and sample analysis as part of routine monthly efforts and as may be needed by MBR and RO equipment manufacturers to size their equipment and provide performance warranties.

Sub Task 1.2 – 30 Percent Design Phase

Objective: Preparation of 30 Percent Design.

AECOM/WML Activities: Develop initial discipline design drawings and specifications for City review. A preliminary list of the anticipated drawings and specifications included in this submittal is detailed in the Draft

Index of Drawing List and Specifications included in Appendix A. The proposed number of drawings and level of details in each drawing are consistent with a 30 percent design level.

Deliverables:

- 30 percent Design drawings and major equipment specifications and draft hydraulic profile
- Deliverables will be provided in electronic format (PDF)

Key Understanding: The main purpose of the 30 percent design package is to incorporate design requirements and develop the design sufficiently so that a cost estimate can be prepared. The 30 percent design will set the stage for subsequent design phases and development of the GMP and will be the basis for the Cost Update No. 1. The overall scope for the Project will be fixed after the City comments on the 30 percent design are addressed.

Meetings/Travel: Refer to Task 3 – Meetings and Reports for planned meetings and workshops.

Information and Services Provided by Others: City's input on PDR and technical collaboration sessions. City to provide comments in spreadsheet for tracking and disposition purposes.

Sub Task 1.3 – 60 Percent Design Phase

Objective: Preparation of 60 Percent Design.

AECOM/WML Activities:

Advance individual disciplines design for City review. A preliminary list of the anticipated drawings and specifications is included in this submittal is detailed in the Draft List of Drawing List and Specifications included in Appendix A. The proposed number of drawings and level of details in each drawing are consistent with a 60 percent design level.

Finalize 60 percent design package and update cost estimate based on City comments.

Deliverables:

- 60 percent Design drawings and specifications and final hydraulic profile calculations.
- Deliverables will be provided in electronic format (PDF)

Key Understanding: The main purpose of the 60 percent design package is to progress the develop the design from the 30 percent design package sufficiently to develop the Draft GMP and ultimately the Final GMP as well as setting the stage for the final design package.

Included in the 60 percent design will be markups of as-built drawings and specifications developed for in-kind replacement of the equipment listed below to include in the GMP. No drawings will be developed for the replacement of equipment and construction will be performed from the shop drawings supplied by the equipment suppliers:

- Upgrade Ferric Sulfate Feed/Storage System
- Digester Coating
- Replace Piping in Grit Chamber
- Replace East Primary Clarifier Center Drive
- Replace Existing PVC Digester Gas Piping

- Replace Digester Hot Water Boiler
- Replace Grit/Cyclone Unit
- Replace Two Old Grit Pumps

Title 24 analysis to comply with CalGreen regulations is included and will be provided after the 60 percent design review is provided by the City.

Meetings/Travel: Refer to Task 3 – Meetings and Reports for planned meetings and workshops.

Information and Services Provided by Others: City's input from review of the 30 Percent Design and technical collaboration sessions. City to provide comments in spreadsheet for tracking and disposition purposes.

Sub Task 1.4 – Hydraulic Profile Modeling

Objective: For the selected process configuration, develop and revise hydraulic profile for the proposed facility expansion.

AECOM/WML Activities: Use existing drawings and conceptual design information on the proposed expansion to develop a hydraulic model of the new and existing infrastructure. Model to be developed in AECOM's plant hydraulic profile (PHP) program.

Deliverables: None. All information collected in this task will be incorporated into the PDR and design drawings.

Key Understanding: The goal of the modeling will be to minimize inter-process pumping after, as well as set elevations of major new facilities.

Meetings/Travel: None.

Information and Services Provided by Others: City to provide any hydraulic profile information for the existing plant including the condition of existing pipelines or facility modifications. City to provide comments in spreadsheet for tracking and disposition purposes.

Sub Task 1.5 – Final Design Phase

Objective: Preparation of Final Design to issue for Construction pending Phase 2 notice to proceed.

AECOM/WML Activities:

Address the City comments on the complete design provided in the 60 Percent Design Submittal and provide a Final Design for the Project. A preliminary list of the anticipated drawings and specifications included in this submittal is detailed in the Draft List of Drawing List and Specifications in Appendix A. Proposed number of drawings and level of details in each drawing are consistent with a Final Design ready to be issued for construction.

Deliverables:

- Final Design (Sealed and Signed by Engineer-of- Record for each discipline) drawings and specifications.
- Deliverables will be provided in electronic format (PDF).

Key Understanding: The Final Design will be the basis for the final cost update (Cost Update No. 4). The Final Design package will set the stage for the preparation of the GMP submittal and the overall scope for Phase 2 of this Project. Any modifications by the City to this design will be handled as design change notices in Phase 2.

Meetings/Travel: Refer to Task 3 – Meetings and Reports for planned meetings and workshops.

Information and Services Provided by Others: City's input on 60 percent design packages. City to provide comments in spreadsheet for tracking and disposition purposes.

Task 2 - Cost Estimating

Sub Task 2.1. – Initial Baseline Cost Model and Updates

Objective: Preparation of initial baseline cost model and one cost update and draft and final GMP.

AECOM/WML Activities: Provide cost estimates tracking different stages of design as follows:

- Initial Baseline Cost Estimate – After submittal of Draft PDR Report
- Cost Update No. 1 – After 30% Design Submittal
- Draft GMP – After 60% Design Submittal
- Final GMP – After Draft GMP Submittal and reconciliation of 60% Design Submittal comments

Deliverables:

- Initial Baseline Cost Estimate, Cost Update, Draft GMP, and Final GMP.
- Initial Draft Phase 2 CPM Schedule, Schedule Update, Draft Phase 2 Baseline Schedule, and Final Phase 2 Baseline Schedule
- Deliverables will be provided in electronic format (PDF).

Key Understanding: The main purpose of the baseline cost estimate is to incorporate confirmation of concept design and establish the format and base for cost updates through design development. The baseline cost estimate and subsequent cost updates will set the stage for development of the GMP. This will allow the City and AECOM/WML to ensure the Project is being designed to budget.

Meetings/Travel: Virtual meetings will be held to present the Initial Baseline Cost Estimate and up to four Cost Updates. These meetings will be held as part of the technical collaboration portion of the Project Progress Meetings.

Information and Services Provided by Others: City's input on design concepts and input on potential value engineering ideas.

Sub Task 2.2. – GMP Development

Objective: Complete a Phase 2 proposal including development of a guaranteed maximum price (GMP) based on a combination of competitive bidding and self-performing construction work based on final design documents.

AECOM/WML Activities: Using the Phase 1 work products, the AECOM/WML team will obtain pricing for equipment and materials and solicit bids for construction of the proposed project. The AECOM/WML will then prepare and submit a detailed Phase 2 proposal for City review. The Phase 2 Proposal will detail all the necessary services for permitting, equipment and materials procurement, physical construction of the Project, engineering design support during construction, construction management, quality control activities, start-up, commissioning and acceptance testing, O&M manual and record drawings, training and any additional contracted

services for the duration of the Project. It shall contain a construction schedule, Substantial and Final Completion dates, and a Startup, Commissioning and Acceptance Testing Plan.

Alternative approaches and materials of construction will be evaluated using bidding or through in-house cost estimates and final recommendations will be made to the City. After completion of bidding and pricing efforts, the Phase 2 proposal will be updated to summarize a description of the recommended project approach and the details of the GMP estimate.

Deliverables: Phase 2 proposal (Draft and Final) documenting the design-build project scope of work, design drawings and detailed cost estimate including the following:

- Contract amendment (general conditions)
- Final design including drawings and specifications.
- GMP, including recommended Design-Builder contingency, process guarantee, assumptions, clarifications, and exceptions.
- Org Chart for Phase 2
- Phase 2 schedule
- Draft Quality Management Plan
- Draft Startup, Commissioning and Training Plan (Final needs to be done in Phase 2 in coordination with vendors)
- Risk Register

Key Understanding: The AECOM/WML team will provide GMP for the project using an open book bidding process. Certain portions of the work such as concrete work, installation of process equipment and process piping will be self-performed by the AECOM/WML team. Items such as unforeseen site conditions and scope additions are not to be carried in the Design-Builder contingency and should be managed as change orders.

AECOM/WML will provide a Draft Phase 2 Proposal followed by a Final Phase 2 Proposal incorporating the results and agreements of the negotiations with the City.

Meetings/Travel: One full day meeting to review draft Phase 2 Proposal

Information and Services Provided by Others: Input from City on draft Phase 2 Proposal.

Task 3 - Meetings & Reports

Sub Task 3.1 – Kick-off Meeting/Workshop

Objective*:* Discuss project expectations with the City including project scope and execution, roles and responsibilities, quality control, progress reporting, schedule, and deliverables. Review concept design and discuss major unit process treatment that will meet the project performance goals.

AECOM/WML Activities: Prior to the workshop, AECOM/WML will prepare an agenda and PowerPoint presentation all the items described in the objective. Also, AECOM/WML will prepare a data request to gather all information available that can assist in the development of the activities scoped in Phase 1.

Deliverables: Workshop agenda and data request will be issued at least three days before the meeting. A summary of workshop findings will be issued after the meeting. A Project Quality Plan and Project Execution Plan will be developed for discussion in the kick-off meeting.

Key Understanding: The main purpose of the Kick-off / Workshop is to set project expectations and facilitate effective collaboration between the City and AECOM/WML and to plan the specifics of the next steps for Phase 1.

Meetings/Travel: A 4-hour workshop will be held to kick-off the Project at a location chosen by the City. The PM, DM, Process Lead, and Preconstruction Manager will attend in person.

Information and Services Provided by Others: City to attend workshop with key staff and provide a venue.

Sub Task 3.2 – Progress Meetings and Reports

Objective: The overall objective of this task is to ensure on-time and on-budget project progression according to the scope, fluid and coordinated communication with City staff, adequate project controls and quality of all deliverables. Included in this task are 16 Progress Meetings. Progress Meetings will be broken down into a Project Management Segment, to discuss overall project progression and issues, followed by a Technical Collaboration Segment. Technical Collaboration Segments will be used to discuss specific technical items, such as process options or preferences, or to review design submittals for the different design phases after the City has provided their comments.

The following Technical Collaboration Segments are included:

- MBR and Disinfection Technical Collaboration
- Site Layout Technical Collaboration
- Permitting Technical Collaboration
- Other Emerging Topics for Technical Collaboration
- Draft PDR Review
- 30 Percent Design / VE Review
- 60 Percent Design Review
- 100 Percent Design Review

Progress Meetings and Reports

AECOM/WML Activities: Schedule and conduct 16 Progress Meetings with City and City's representatives at City offices or by video conference calls.

Deliverables: Meeting agendas prior to each meeting date. Other relevant documents requiring City review prior to the meeting will be submitted in advance.

Key Understanding: Half-day Progress Meetings will be held. It is envisioned that, typically, the Project Management portion of the Progress Meetings will last one hour and will be attended by the DB project manager, design manager and process lead. The Technical Collaboration Portion of the Progress Meeting will be attended by the same team members plus additional discipline leads as needed to cover the selected technical item.

Meetings/Travel: Meetings will be held with a combination of in person and video conference calls as needed.

Information and Services Provided by Others: City to attend meetings with key staff to provide input on overall Project progress and performance as well as ensuring that appropriate key technical staff participates in the Technical Collaboration segments.

Sub Task 3.3 – Project Status Reports & Monthly Invoices

AECOM/WML Activities: Prepare monthly invoices in accordance with actual progress and a monthly progress report to accompany each invoice for the previous month's work. Progress reports will review major work activities and budget and schedule status by task, summarizing work hours by task and job title and person assigned for the invoice period, and document progress made during the past month, accomplishments, and a look-ahead to the next month's progress goals. Update Phase 1 schedule periodically, comparing actual progress to the originally proposed schedule and identifying any necessary corrective measures.

Deliverables: PDF of monthly invoices and monthly progress reports.

Meetings/Travel: None.

Information and Services Provided by Others: None.

Sub Task 3.4 – Risk Management Workshop

AECOM/WML Activities: AECOM/WML will develop and maintain a risk log. The risk log is the key document used in managing risk. The log records risks identified during proposal and work plan development; workshops, technical reviews, and monthly project meetings; and through other events that occur during the project. Initially the log will be populated with generic risks and those captured through past experience on similar projects. Each identified event is assigned a score based on one of three probability ratings and one of five impact (cost or schedule) severity ratings. This allows a semi-quantitative approach for prioritizing the various risks and to calculate and assign values for the important risks.

A workshop will be used to discuss this risk register and build consensus among stakeholders and as a means to bring the Project together to identify and evaluate potential risks.

The workshop will be held after the 30 Percent Design Submittal and will focus on design and procurement risks, especially those areas indicated in the proposal analysis. After the risk register is developed, it will be maintained through the end of Phase 1 and submitted as part of the Phase 2 Proposal.

Deliverables: Develop and maintain risk log. For workshop, PDF of workshop agenda and risk register will be issued before the workshop. A summary of workshop findings issued after the meeting.

Meetings/Travel: None.

Information and Services Provided by Others: City's input on additional risks and valuation of identified risks.

Sub Task 3.5 – Constructability Review Workshops

Objective: Conduct constructability reviews as a tool to plan and sequence the construction and identify potential capital cost savings for the Project

AECOM/WML Activities:
AECOM/WML technical, construction, and operations specialists will perform constructability reviews to evaluate constructability and potential for less-costly means of achieving City's project value objectives. The constructability review team will conduct reviews of the 30 Percent and 60 Percent Designs. Findings will be presented in a workshop format to promote collaboration between the Design-build team and City staff. Two workshops are planned.

Deliverables:

- PowerPoint presentation for each workshop with agenda and constructability analysis and results. Meeting minutes after each workshop.

Key Understanding: City to provide input during workshop on constructability preferences and constrains.

Meetings/Travel: Constructability Workshops will be conducted in person or virtually. It is anticipated that each workshop will last 2-3 hours.

Information and Services Provided by Others: City's input on the constructability information provided.

Sub Task 3.6 –SCADA Development and Scoping Workshops

Objective: Interact with City staff to analyze and collaborate on electrical, instrumentation, and SCADA needs for the Project

AECOM/WML Activities: Four workshops are planned to discuss electrical, instrumentation, and SCADA needs for the Project.

Prior to the initial Workshop (SCADA Workshop No. 1), prepare a summary of proposed electrical, instrumentation, and SCADA components (including SCADA architecture) of the Project to be presented during the initial workshop to receive input and exchange ideas with City staff and validate project scope and preferences. This will include input from the City on equipment preferences, controls, including automated and fail-safe control, and any SCADA system hardware, software, and programming requirements, including quantity and location of SCADA Human Machine Interfaces (HMIs).

SCADA Workshops No. 2 and 3 will focus on reviewing the conceptual control narratives (control philosophies) developed as part of the design to *ensure obtain* the City*'s* agrees with *input on* the control philosoph*ies* being proposed for the different processes.

SCADA Workshop No. 4 will focus on how the input received in the previous workshops were addressed as well as other topics such as *site-wide* communications, security, cybersecurity, SCADA screens planning for Phase 2, etc.

Deliverables: PowerPoint presentation for each workshop with agenda and technical content. Meeting minutes after each workshop.

Key Understanding: These workshops will provide the basis for the electrical, instrumentation, and SCADA concepts for design and cost estimate. The conceptual control narratives developed in the design phase are preliminary in nature and will have to be adjusted during Phase 2 after the submittals for the equipment are available. However, they will have enough information to provide an understanding to the City how the equipment will be controlled and their level of automation. Equipment and Instrumentation tagging nomenclature will be established in the first workshop and will adhere by all parties.

Meetings/Travel: Four SCADA Workshops will be conducted in person or virtually. It is anticipated that each workshop will last 4 hours. AECOM/WML team members, including design manager, preconstruction manager, *programming lead,* process lead, electrical lead, and I&C lead, will attend in person or virtually.

Information and Services Provided by Others: City to attend workshops with key facility staff to provide input on electrical, instrumentation, and SCADA.

Task 4 – Preliminary Investigations & Support

Sub Task 4.1 – Potholing

AECOM/WML Activities: Potholing activities will be conducted if necessary to locate buried infrastructure, verify as-built locations, and determine utility locations throughout the project site.

Deliverables: None. All information collected in this task will be incorporated into the PDR or design drawings

Key Understanding: A budget of $15k is being carried for potholing and ground radar penetration (GPR) for utility investigation. It is our understanding that the existing plant and the area allocated for the new plant does not have any cultural significance and no special cultural monitoring provisions are required.

Meetings/Travel: It is assumed that the field activities associated with this task will be conducted in a period of two days.

Sub Task 4.2 – Topographic Survey

Objective: Provide a Boundary and Topographic Survey for the WWTP to supplement existing available information and fill information gaps to assist on further development of concept layout, detail design activities, and construction cost estimates.

AECOM/WML Activities: Perform boundary and topographic survey including the existing WWTP and areas of the proposed expanded plant to the west of the existing plant as shown in red in the figure below.



Surveying activities include the following:

<u>Aerial Topographic Survey</u>

- Field locate and recover an existing benchmark and establish survey datum for the project. Vertical datum shall be based on the North America Vertical Datum of 1988 (NAVD88), and Horizontal control will be North American Datum of 1983 (NAD83) State Plan Coordinates, Zone VI.
- Set ground control and aerial targets for aerial topographic mapping of the project limits by aerial subconsultant.
- Fly overall site and process aerial imagery and control.

- Map existing ground surface elevations and identify surface features within the project limits, including curb, gutter, pavement areas, sidewalk, utility appurtenances, structures, fence lines, and other existing visible features for the West and East limits of the project, depicted in Figure 1.
- Provide a 1" = 40' scale digital aerial topographic survey of property with one-foot contour, for the project limits.

Title Report

- Obtain and furnish one Title Report from a title company for APNs: 532-180-008, -009. The Title report will be used to verify legal ownership, legal description of the property, along with easements/encumbrances on the property that may impact the project design and/or property rights.

Boundary Survey

- Utilizing the obtained title report, together with available public records tools, research and compile all appropriate reference materials pertaining to the property, including reference Record Maps, Corner Records, Tie Sheets, Vesting Deeds, Right-of-Way Deeds and Easement Documents.
- Perform field survey to locate and recover existing survey monuments and establish survey control for the project. Horizontal control datum and basis of bearings shall be based on the California State Plane Coordinate System, North American Datum of 1983 (NAD83), Zone VI.
- Map existing property lines, easements, right-of-way, and street centerlines, based on public records research data and items noted in the obtained title report.
- Prepare a boundary survey to show the existing property lines, easements, right-of-way, and street centerlines, for APNs: 532-180-008, -009.

Deliverables:
Digital color orthorectified photo (1” = 40’ scale).

Electronic PDF & CAD of Aerial Topographic Survey from Aerial.

Title Report for APNs: 532-180-008, -009

Electronic PDF of Boundary Survey, signed & stamped by a Licensed Land Surveyor.

AutoCAD file with 2D linework for the existing property lines, easements, right-of-way, and

street centerlines to be used and referenced for design.

Information and Services Provided by Others: City to provide any past survey data, location of historical benchmarks, property survey of newly acquired land to the north of the main plant area, right of ways, easements, etc.

Sub Task 4.3 – Environmental Support

Objective: Identify necessary environmental support and scope of work to be provided as an allowance of $30,000.

AECOM/WML Activities: AECOM/WML will support the update of the previous IS-MND (included as an attachment to the RFP). The City is in the process of updating this IS-MND to include new CEQA and NEPA requirements; the completion of the update is anticipated in Q1 of 2025.

Deliverables: As required to support the update of the IS-MND. It is anticipated that this may include narratives, figures, and other supporting documentation to describe the Project.

Key Understanding: The City will lead this effort and request support to AECOM/WML as needed.

Meetings/Travel: None. Except phone calls as needed as part of the normal communication for the Project.

Information and Services Provided by Others: Preparation of IS-MND

Sub Task 4.4 – Geotechnical Investigation

Objective: Collect subsurface information to determine soil and groundwater conditions as well as corrosivity potential to assist on the development of alternative analyses, detail design activities, and construction cost estimates.

AECOM/WML Activities: The AECOM/WML team will conduct subsurface investigations to supplement the existing information from the previous investigations at the site. The geotechnical investigation includes approximately 4-acres in the area of the proposed WWTP expansion west of the existing WWTP. This task includes the following:

Document Review and Field Preparation

- Review available geotechnical maps and documents to evaluate the subsurface conditions prior to performing field investigation.
- Obtain boring permits.
- Site reconnaissance
- Call Dig Alert and mark out borings.

Geotechnical Investigation

- 8 borings (1 to 100 feet, 5 to 30 feet and 2 to 50')
- Install groundwater monitoring well in the 100' boring (This may be changed to a shorter boring depending on where groundwater is encountered
- Mud rotary drilling methods for two 50' borings and the 100' boring.
- Hollow stem auger drilling methods for other borings
- Drum and dispose of cuttings for mud rotary borings, including analytical testing.
- Assumed thin spread other soil cuttings on site.

Laboratory Testing

- Based on soil conditions encountered, perform collapse potential as well as other lab tests, including moisture and density, grain size distribution, Atterberg limits, corrosion potential, and direct shear tests.

Analyses

- Perform engineering analyses to evaluate the foundation bearing and settlement for the structures, lateral loading conditions, foundation types, groundwater and uplift conditions, as applicable.
- Evaluate the seismic conditions based on the California Building Code.

Report

- Geotechnical report with results of the field investigation and laboratory testing.
- Geotechnical engineering recommendations for the seismic design (code-based parameters), foundations, slope stability, and earthwork for the project.

Deliverables: A draft Geotechnical Report, including corrosion analysis and mitigations, will be included as appendices in the PDR.

Key Understanding: The location and extent of the field investigations will be further refined based on revisions to the proposed site plan and associated facilities.

Meetings/Travel: A representative from AECOM/WML's will travel to the site to supervise the geotechnical investigations.

Information and Services Provided by Others: City to provide any available past geotechnical data, including subsurface investigations and analyses conducted at the site prior to the beginning of the field investigations.

Sub Task 4.5 – Permitting Support

Objective: Provide support for permit review and issuance, as well as compliance and verification, coordinating with regulatory agencies. Develop a plan to be implemented to timely obtain all permits necessary to build and operate the proposed improvements at the WWTP.

AECOM/WML Activities:

The following agencies have jurisdiction over the Banning WWTP in relation to the proposed Project improvements, and the City of Banning will need to coordinate with multiple agencies regarding the review and approval of permit applications to construct and commission the proposed improvements. Permitting support will include regional, state, and federal levels include approvals from and coordination with the following:

- City of Banning (CEQA Lead Agency)
    - Community Development
        - Building Permit
    - Public Works
        - Encroachment Permit
- County of Riverside
    - Department of Environmental Health
        - Solid Waste Facility Requirements
    - Fire Department – Hazardous Materials Division
        - Hazardous Material Business Plan
- California State Waterboard Region 7: Colorado River
    - Stormwater Pollution Prevention Plan (SWPPP) Updates - Proposed changes to the facility that may affect the existing National Pollution Discharge Elimination System (NPDES) General Permit (for stormwater discharges associated with industrial activities) requirements and/or stormwater monitoring, the existing SWPPP must be updated.
    - Salinity and Nitrogen Technical Memorandum
    - Title 22 Engineering Report for the Production, Distribution, and Use of Recycled Water
    - Title 27 Permit
- South Coast Air Quality Management District
    - Authority to Construct Permit
    - Permit to Operate

Key Understanding: AECOM/WML will provide preliminary preparation of all necessary permit applications and facilitation of regulatory agency approval of all permits that are Contractor's responsibility. City will maintain a lead role with the permitting agencies. It is understood that applying and securing these permits will be part of Phase 2 of this Project. Includes permitting new backup generator.

Meetings/Travel: AECOM/WML permitting lead to attend up to 4 meetings and conference calls as needed.

Information and Services Provided by Others: City will sign permit applications, furnish permit application fees, and attend permitting coordination and review meetings with regulatory agencies as necessary. City to provide copies of all relevant existing permits, plus relevant communications with permitting agencies. City staff or consultant will assist in timely contacting regulatory agencies to gather information to prepare schedule and action plan for permitting.

Deliverables: Permitting Plan and submissions will include a draft for City review and final for submittal to agencies.

Sub Task 4.6 – Energy Tax Credits / Incentives

Objective: Explore Federal and State tax credits for energy generating and storage facilities and other incentives related to facilities such as energy savings equipment and electrical vehicles charging stations.

AECOM/WML Activities: AECOM/WML will explore the feasibility of the City obtaining funding from the following:

Solar Incentives (Federal ITC):
The Federal Investment Tax Credit (ITC) allows the water treatment facility to claim 30% of the total cost of their solar installation. This includes solar panels, inverters, labor, and other associated costs like permitting fees. The ITC applies to projects completed between now and 2032, providing significant tax savings. For instance, a $100,000 solar installation would result in a $30,000 tax credit, reducing upfront expenses. If the facility's tax liability is less than the credit, the remaining amount can be carried over into future years. This makes solar installation more affordable and offers a quicker return on investment.

Battery Energy Storage Incentives (SGIP):
The California Self-Generation Incentive Program (SGIP) provides rebates for battery energy storage systems (BESS). The rebate starts at $150 per kilowatt-hour (kWh) of installed battery capacity. After the SGIP rebate is applied, the federal Investment Tax Credit (ITC) allows you to claim 30% of the remaining project cost. For example, if a battery system costs $100,000 and qualifies for a $15,000 SGIP rebate, the ITC would then apply to the remaining $85,000. This combined approach can significantly reduce the overall cost.

Direct Pay Provision:
For tax-exempt entities like nonprofits or government-run facilities, Direct Pay allows them to receive the full value of the ITC as a direct payment instead of a tax credit. This ensures that even entities without tax liabilities can fully benefit from both the ITC and any bonus credits.

Deliverables: PowerPoint presentation for workshop with agenda and technical content. Meeting minutes after workshop.

Key Understanding: This effort is limited to the identification of the programs that the City qualifies for and does not include planning and designing a renewable energy facilities.

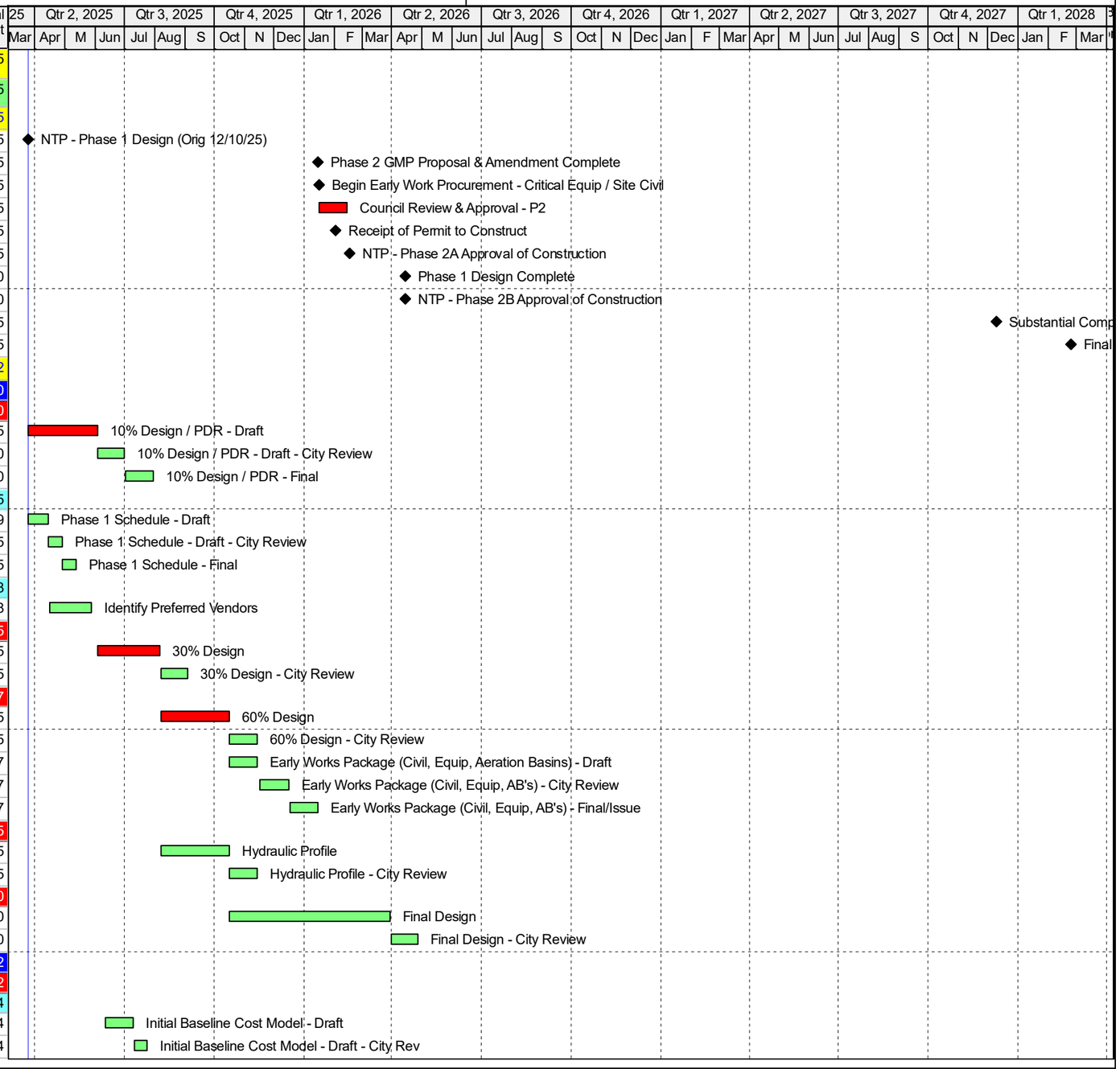
Meetings/Travel: PowerPoint presentation will be delivered virtually.

Information and Services Provided by Others: City to provide type of energy generating and storage facilities is targeting.

Scope Clarifications, Assumptions, and Exclusions

- Our Phase 1 Services are based on the technical approach and concepts presented in our Technical Proposal (Section 3).
- No CCTV or other video surveillance systems are included in the Phase 1 Services.
- We have assumed a 2-week City review time for each submittal.
- The facility sizing is based on information provided in the concept documents and discussions with the City. Key assumptions include a Maximum Month Flow rate of 3.6 mgd, BOD of 317 mg/l, TSS of 318 mg/l and total Nitrogen of 58 mg/l.
- The extent of SCADA integration of existing facilities will be determined during Phase 1.
- Our Phase 1 scope of services does not include any services related to asbestos or hazardous or toxic materials, paint, etc.
- Costs for unplanned upgrades to existing structures or buildings to comply with National Fire Protection Agency, ADA, or building code requirements triggered by electrical or renovation work in existing facilities is not included.
- The requested and provided Bid Bond (20% of the Phase 1 Cost) will be deemed satisfied and no longer in effect upon the execution of a Phase 1 contract. It will not be carried forward to Phase 2.
- Performance and Payment Bonds for the PDB Basis of Design Services are not included in the Pricing Information Form PDB Basis of Design Services. Cost of Payment and Performance bonds for the full value of the contract will be provided upon execution of the GMP and Phase 2 contract amendment.
- The Phase 1 Baseline Preliminary services follow the schedule and timeline presented as part of this proposal submission.
- We assume progress meetings will be conducted via video conference using Microsoft Teams.
- Cost for phase 1 will be managed as a whole and not by individual tasks requested to be provided in the cost forms on a time and material basis. The Design Build team will have the ability to move funds as needed between tasks to complete the Phase 1 activities without exceeding the total contract value. The price breakdown presented in the Proposal Forms is provided for reference only and does not represent the cost to perform individual items of work separately.
- Electrical design will be limited to all new facilities and not inclusive of the design of a facility-wide upgrade and/or replacement of the existing electrical infrastructure.

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
City of Banning - WWTP & Recycled Water Project - Up		732	25-Mar-25	23-Feb-28	35
Design & Construction Project		732	25-Mar-25	23-Feb-28	35
Key Milestones & Dates		732	25-Mar-25	23-Feb-28	35
ADM.10	NTP - Phase 1 Design (Orig 12/10/25)	0	25-Mar-25		35
ADM.20	Phase 2 GMP Proposal & Amendment Complete	0		15-Jan-26	35
ADM.50	Begin Early Work Procurement - Critical Equip / Site Civil	0	16-Jan-26		55
ADM.30	Council Review & Approval - P2	20	16-Jan-26	13-Feb-26	35
ADM.45	Receipt of Permit to Construct	0	02-Feb-26		45
ADM.40	NTP - Phase 2A Approval of Construction	0	17-Feb-26		35
ADM.60	Phase 1 Design Complete	0		14-Apr-26	110
ADM.70	NTP - Phase 2B Approval of Construction	0	14-Apr-26		110
ADM.80	Substantial Completion - Phase 2 Construction	0		09-Dec-27	75
ADM.90	Final Completion & Accept - Anticipated (Orig End Q4 2027)	0		23-Feb-28	35
Tasks		716	25-Mar-25	31-Jan-28	52
Design		275	25-Mar-25	27-Apr-26	100
Task 1.1: Preliminary Design Report (PDR) / 10% Design		90	25-Mar-25	30-Jul-25	60
P1D.1000	10% Design / PDR - Draft	50	25-Mar-25	03-Jun-25	35
P1D.1010	10% Design / PDR - Draft - City Review	20	04-Jun-25	01-Jul-25	40
P1D.1020	10% Design / PDR - Final	20	02-Jul-25	30-Jul-25	40
Phase 1 Schedule		35	25-Mar-25	12-May-25	115
P1D.1040	Phase 1 Schedule - Draft	15	25-Mar-25	14-Apr-25	39
P1D.1050	Phase 1 Schedule - Draft - City Review	10	15-Apr-25	28-Apr-25	115
P1D.1060	Phase 1 Schedule - Final	10	29-Apr-25	12-May-25	115
Preferred Vendor Identification		30	15-Apr-25	28-May-25	38
P1D.1030	Identify Preferred Vendors	30	15-Apr-25	28-May-25	38
Task 1.2: 30% Design Phase		65	04-Jun-25	04-Sep-25	65
P1D.1070	30% Design	45	04-Jun-25	06-Aug-25	35
P1D.1080	30% Design - City Review	20	07-Aug-25	04-Sep-25	65
Task 1.3: 60% Design Phase		110	07-Aug-25	15-Jan-26	37
P1D.1090	60% Design	50	07-Aug-25	16-Oct-25	35
P1D.1100	60% Design - City Review	20	17-Oct-25	14-Nov-25	75
P1D.1810	Early Works Package (Civil, Equip, Aeration Basins) - Draft	20	17-Oct-25	14-Nov-25	37
P1D.1820	Early Works Package (Civil, Equip, AB's) - City Review	20	17-Nov-25	16-Dec-25	37
P1D.1830	Early Works Package (Civil, Equip, AB's) - Final/Issue	20	17-Dec-25	15-Jan-26	37
Task 1.4: Hydraulic Profile Modeling		70	07-Aug-25	14-Nov-25	75
P1D.1110	Hydraulic Profile	50	07-Aug-25	16-Oct-25	75
P1D.1120	Hydraulic Profile - City Review	20	17-Oct-25	14-Nov-25	75
Task 1.5: Final Design Phase		130	17-Oct-25	27-Apr-26	100
P1D.1130	Final Design	110	17-Oct-25	30-Mar-26	100
P1D.1140	Final Design - City Review	20	31-Mar-26	27-Apr-26	100
Task 2.0: Cost Estimating		229	12-Jun-25	11-May-26	162
Task 2.1: Initial Baseline Cost Model & Updates		229	12-Jun-25	11-May-26	162
Initial Baseline Cost Estimate		30	12-Jun-25	24-Jul-25	64
P1D.1160	Initial Baseline Cost Model - Draft	20	12-Jun-25	10-Jul-25	64
P1D.1170	Initial Baseline Cost Model - Draft - City Rev	10	11-Jul-25	24-Jul-25	64



Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone

AECOM W.M. LYLES CO. a joint venture

TASK filter: All Activities

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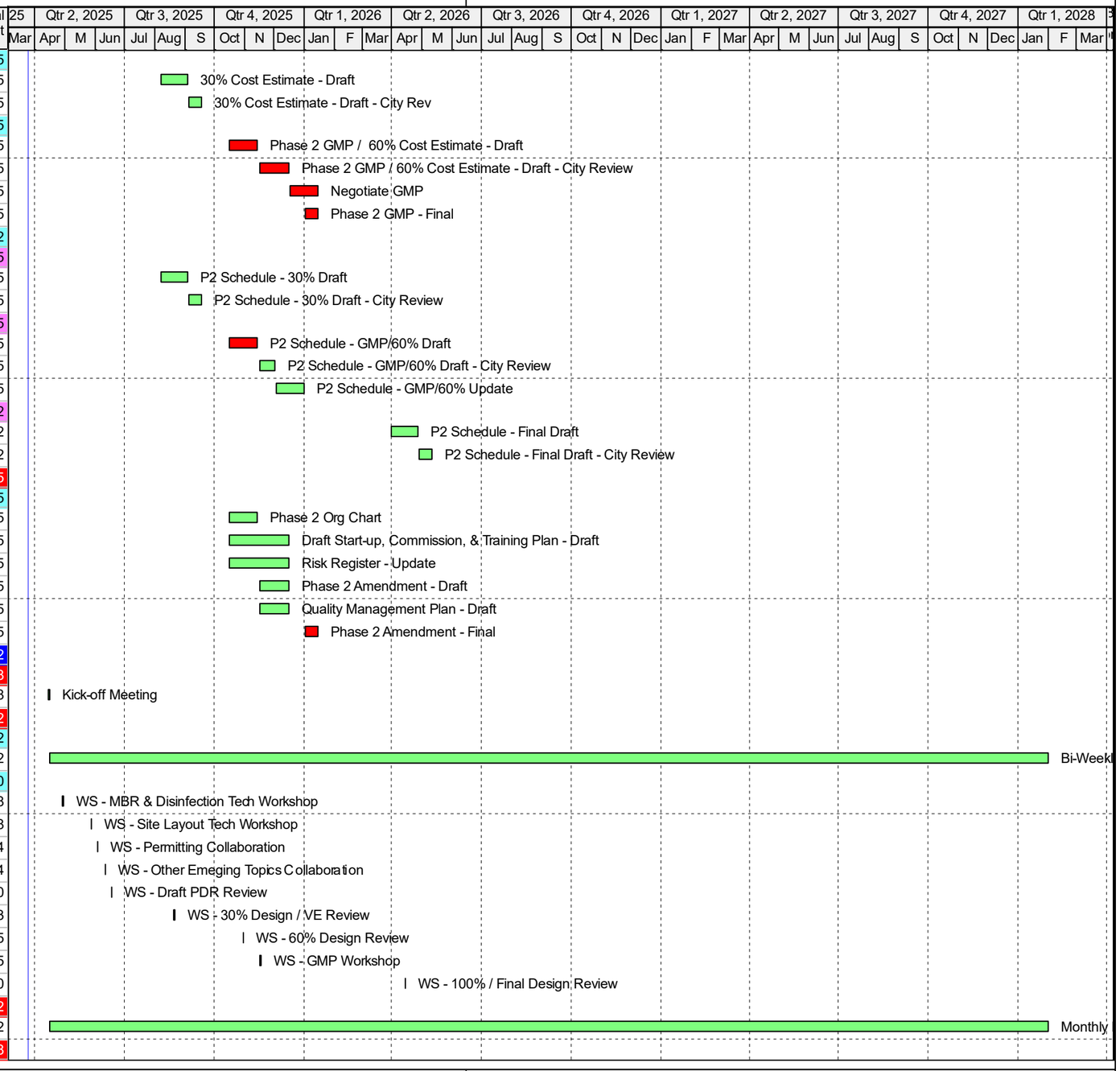
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
30% Cost Estimate / Cost Update #1		30	07-Aug-25	18-Sep-25	55
P1D.1180	30% Cost Estimate - Draft	20	07-Aug-25	04-Sep-25	55
P1D.1190	30% Cost Estimate - Draft - City Rev	10	05-Sep-25	18-Sep-25	55
GMP / 60% Cost Estimate		60	17-Oct-25	15-Jan-26	35
P1D.1280	Phase 2 GMP / 60% Cost Estimate - Draft	20	17-Oct-25	14-Nov-25	35
P1D.1290	Phase 2 GMP / 60% Cost Estimate - Draft - City Review	20	17-Nov-25	16-Dec-25	35
P1D.1310	Negotiate GMP	20	17-Dec-25	15-Jan-26	35
P1D.1320	Phase 2 GMP - Final	10	02-Jan-26	15-Jan-26	35
Phase 2 CPM Schedules		190	07-Aug-25	11-May-26	162
Initial Phase 2 Schedule - 30%		30	07-Aug-25	18-Sep-25	55
P1D.1200	P2 Schedule - 30% Draft	20	07-Aug-25	04-Sep-25	55
P1D.1210	P2 Schedule - 30% Draft - City Review	10	05-Sep-25	18-Sep-25	55
Draft Baseline Phase 2 Schedule		50	17-Oct-25	31-Dec-25	45
P1D.1340	P2 Schedule - GMP/60% Draft	20	17-Oct-25	14-Nov-25	35
P1D.1350	P2 Schedule - GMP/60% Draft - City Review	10	17-Nov-25	02-Dec-25	45
P1D.1360	P2 Schedule - GMP/60% Update	20	03-Dec-25	31-Dec-25	45
Final Baseline Phase 2 Schedule		30	31-Mar-26	11-May-26	162
P1D.1260	P2 Schedule - Final Draft	20	31-Mar-26	27-Apr-26	162
P1D.1270	P2 Schedule - Final Draft - City Review	10	28-Apr-26	11-May-26	162
Task 2.2: GMP Development		60	17-Oct-25	15-Jan-26	35
Phase 2 GMP / Proposal Documents		60	17-Oct-25	15-Jan-26	35
P1D.1870	Phase 2 Org Chart	20	17-Oct-25	14-Nov-25	45
P1D.1850	Draft Start-up, Commission, & Training Plan - Draft	40	17-Oct-25	16-Dec-25	45
P1D.1860	Risk Register - Update	40	17-Oct-25	16-Dec-25	45
P1D.1300	Phase 2 Amendment - Draft	20	17-Nov-25	16-Dec-25	45
P1D.1840	Quality Management Plan - Draft	20	17-Nov-25	16-Dec-25	45
P1D.1330	Phase 2 Amendment - Final	10	02-Jan-26	15-Jan-26	35
Task 3.0: Meeting & Reports		701	15-Apr-25	31-Jan-28	52
Task 3.1: Kick-off Meeting/Workshop		1	15-Apr-25	15-Apr-25	38
P1D.1370	Kick-off Meeting	1	15-Apr-25	15-Apr-25	38
Task 3.2: Progress Meetings & Reports		700	15-Apr-25	31-Jan-28	52
Progress Meetings		700	15-Apr-25	31-Jan-28	52
P1D.1460	Bi-Weekly Progress Meetings	700	15-Apr-25	31-Jan-28	52
Technical Collaborations / Workshops		240	29-Apr-25	14-Apr-26	110
P1D.1380	WS - MBR & Disinfection Tech Workshop	1	29-Apr-25	29-Apr-25	58
P1D.1390	WS - Site Layout Tech Workshop	1	28-May-25	28-May-25	38
P1D.1400	WS - Permitting Collaboration	1	04-Jun-25	04-Jun-25	64
P1D.1410	WS - Other Emeging Topics Collaboration	1	11-Jun-25	11-Jun-25	64
P1D.1900	WS - Draft PDR Review	1	18-Jun-25	18-Jun-25	50
P1D.1420	WS - 30% Design / VE Review	1	21-Aug-25	21-Aug-25	53
P1D.1430	WS - 60% Design Review	1	31-Oct-25	31-Oct-25	85
P1D.1440	WS - GMP Workshop	1	17-Nov-25	17-Nov-25	75
P1D.1880	WS - 100% / Final Design Review	1	14-Apr-26	14-Apr-26	110
Task 3.3: Project Status Reports & Monthly Invoicing		700	15-Apr-25	31-Jan-28	52
P1D.1470	Monthly PSRs & Invoicing	700	15-Apr-25	31-Jan-28	52
Task 3.4: Risk Management Workshop		21	07-Aug-25	05-Sep-25	48



Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone

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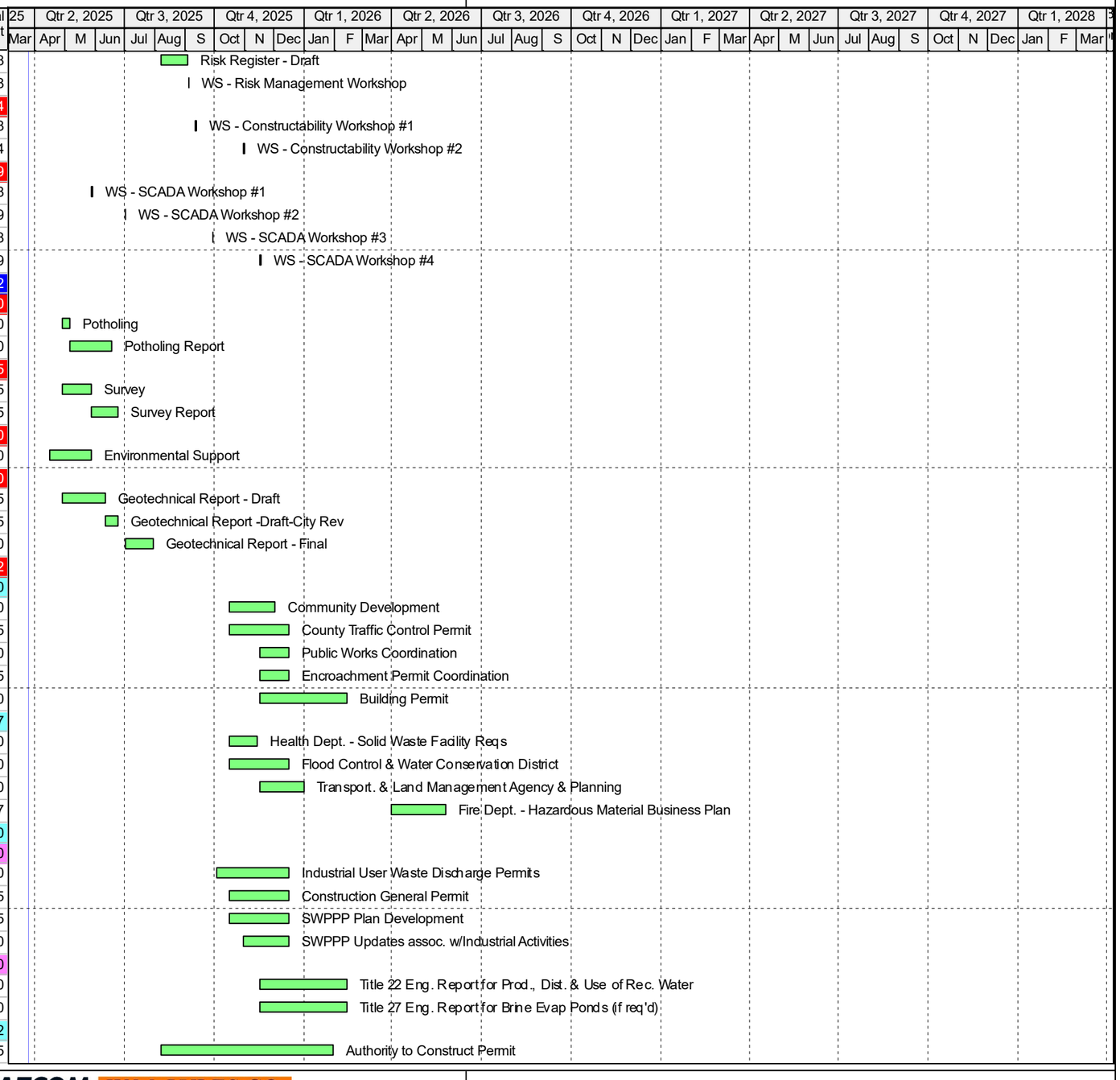
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
P1D.1890	Risk Register - Draft	20	07-Aug-25	04-Sep-25	48
P1D.1480	WS - Risk Management Workshop	1	05-Sep-25	05-Sep-25	48
Task 3.5: Constructability Review Workshops		36	12-Sep-25	31-Oct-25	84
P1D.1490	WS - Constructability Workshop #1	1	12-Sep-25	12-Sep-25	48
P1D.1500	WS - Constructability Workshop #2	1	31-Oct-25	31-Oct-25	84
Task 3.6: SCADA Development & Scoping Workshops		120	29-May-25	17-Nov-25	189
P1D.1510	WS - SCADA Workshop #1	1	29-May-25	29-May-25	38
P1D.1520	WS - SCADA Workshop #2	1	02-Jul-25	02-Jul-25	59
P1D.1530	WS - SCADA Workshop #3	1	29-Sep-25	29-Sep-25	48
P1D.1540	WS - SCADA Workshop #4	1	17-Nov-25	17-Nov-25	189
Task 4.0: Preliminary Investigations & Support		360	15-Apr-25	17-Sep-26	322
Task 4.1: Potholing		35	29-Apr-25	18-Jun-25	70
P1D.1550	Potholing	5	29-Apr-25	06-May-25	70
P1D.1560	Potholing Report	30	06-May-25	18-Jun-25	70
Task 4.2: Topographic Survey (Aerial, Title Report, Boundary Summary)		40	29-Apr-25	25-Jun-25	65
P1D.1570	Survey	20	29-Apr-25	28-May-25	65
P1D.1580	Survey Report	20	28-May-25	25-Jun-25	65
Task 4.3: Environmental Support		30	15-Apr-25	28-May-25	40
P1D.1590	Environmental Support	30	15-Apr-25	28-May-25	40
Task 4.4: Geotechnical Investigation		65	29-Apr-25	30-Jul-25	40
P1D.1600	Geotechnical Report - Draft	30	29-Apr-25	11-Jun-25	45
P1D.1610	Geotechnical Report -Draft-City Rev	10	11-Jun-25	25-Jun-25	45
P1D.1620	Geotechnical Report - Final	20	02-Jul-25	30-Jul-25	40
Task 4.5: Permitting Support		280	07-Aug-25	17-Sep-26	322
City of Banning		80	17-Oct-25	13-Feb-26	150
P1D.1760	Community Development	30	17-Oct-25	02-Dec-25	180
P1D.1750	County Traffic Control Permit	40	17-Oct-25	16-Dec-25	75
P1D.1780	Public Works Coordination	20	17-Nov-25	16-Dec-25	170
P1D.1790	Encroachment Permit Coordination	20	17-Nov-25	16-Dec-25	75
P1D.1770	Building Permit	60	17-Nov-25	13-Feb-26	150
County of Riverside		150	17-Oct-25	26-May-26	397
P1D.1630	Health Dept. - Solid Waste Facility Reqs	20	17-Oct-25	14-Nov-25	190
P1D.1640	Flood Control & Water Conservation District	40	17-Oct-25	16-Dec-25	170
P1D.1650	Transport. & Land Management Agency & Planning	30	17-Nov-25	31-Dec-25	160
P1D.1660	Fire Dept. - Hazardous Material Business Plan	40	31-Mar-26	26-May-26	397
CA State Waterboard R7: Colorado River		90	03-Oct-25	13-Feb-26	130
Stormwater		50	03-Oct-25	16-Dec-25	170
P1D.1670	Industrial User Waste Discharge Permits	50	03-Oct-25	16-Dec-25	170
P1D.1680	Construction General Permit	40	17-Oct-25	16-Dec-25	75
P1D.1690	SWPPP Plan Development	40	17-Oct-25	16-Dec-25	75
P1D.1700	SWPPP Updates assoc. w/Industrial Activities	30	31-Oct-25	16-Dec-25	170
Recycled Water		60	17-Nov-25	13-Feb-26	130
P1D.1710	Title 22 Eng. Report for Prod., Dist. & Use of Rec. Water	60	17-Nov-25	13-Feb-26	130
P1D.1720	Title 27 Eng. Report for Brine Evap Ponds (if req'd)	60	17-Nov-25	13-Feb-26	130
South Coast Air Quality Management District (AQMD)		280	07-Aug-25	17-Sep-26	322
P1D.1730	Authority to Construct Permit	120	07-Aug-25	30-Jan-26	45



Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone

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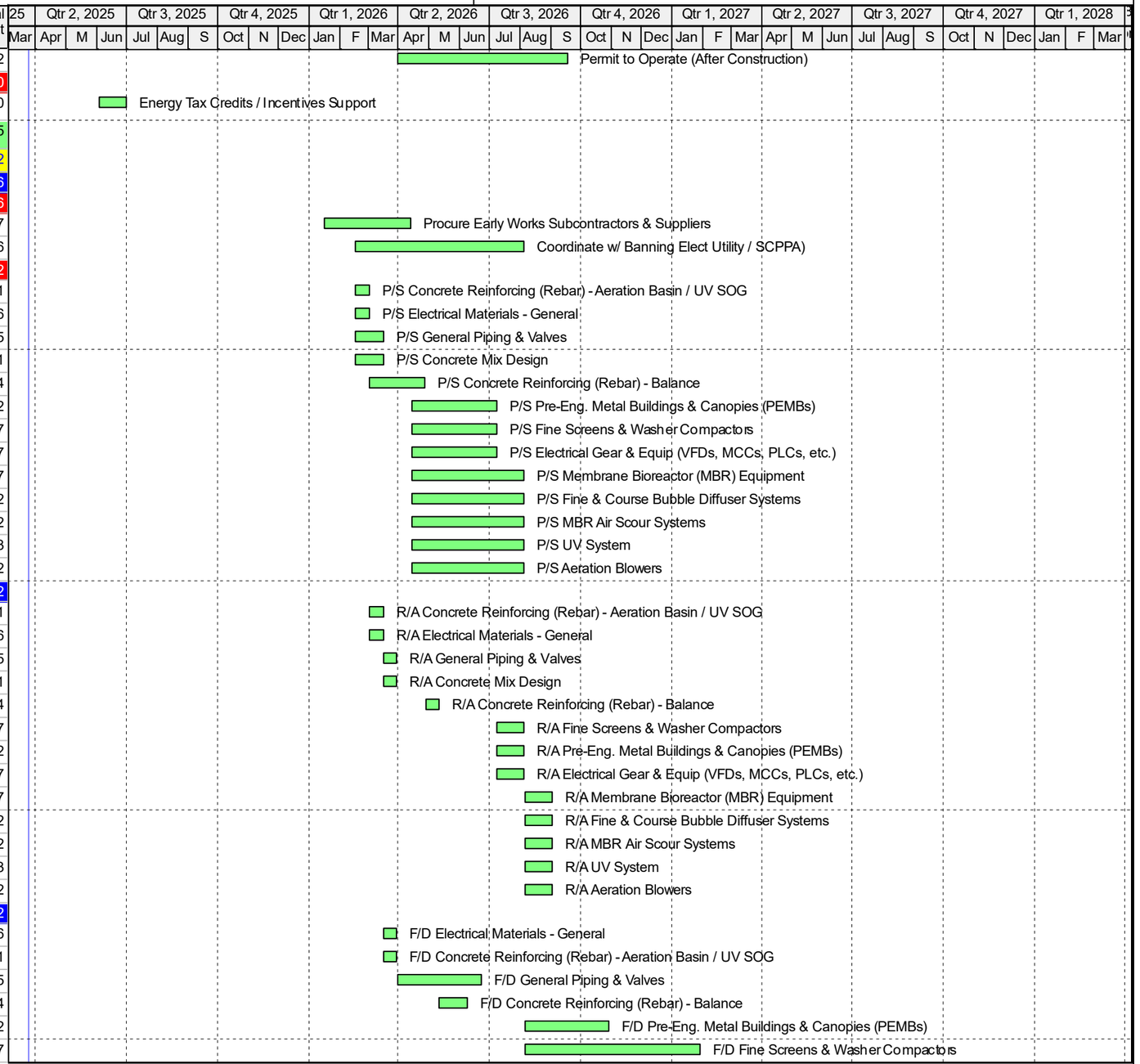
City of Banning - WWTP Recycled Water Project - Update_02182025

APPENDIX A
PROPOSED PHASE 1 DESIGN & PHASE 2 CONSTRUCTION SCHEDULE

18-Feb-25 11:02
Datadate 25-Mar-25

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
P1D.1740	Permit to Operate (After Construction)	120	31-Mar-26	17-Sep-26	322
Energy Tax Credits / Incentives		20	04-Jun-25	01-Jul-25	40
P1D.1800	Energy Tax Credits / Incentives Support	20	04-Jun-25	01-Jul-25	40
CONSTRUCTION		527	16-Jan-26	23-Feb-28	35
Construction Phase 2A - Early Work		400	16-Jan-26	18-Aug-27	62
Early Procurement		140	16-Jan-26	05-Aug-26	306
Early Administative Tasks		140	16-Jan-26	05-Aug-26	306
C2A.1000	Procure Early Works Subcontractors & Suppliers	60	16-Jan-26	13-Apr-26	37
C2A.1010	Coordinate w/ Banning Elect Utility / SCPPA)	120	17-Feb-26	05-Aug-26	306
Prepare Early Submittals & Submit		120	17-Feb-26	05-Aug-26	182
C2A.1020	P/S Concrete Reinforcing (Rebar) - Aeration Basin / UV SOG	10	17-Feb-26	02-Mar-26	41
C2A.1050	P/S Electrical Materials - General	10	17-Feb-26	02-Mar-26	36
C2A.1030	P/S General Piping & Valves	20	17-Feb-26	16-Mar-26	105
C2A.1040	P/S Concrete Mix Design	20	17-Feb-26	16-Mar-26	41
C2A.1060	P/S Concrete Reinforcing (Rebar) - Balance	40	03-Mar-26	27-Apr-26	184
C2A.1070	P/S Pre-Eng. Metal Buildings & Canopies (PEMBs)	60	14-Apr-26	08-Jul-26	182
C2A.1100	P/S Fine Screens & Washer Compactors	60	14-Apr-26	08-Jul-26	197
C2A.1130	P/S Electrical Gear & Equip (VFDs, MCCs, PLCs, etc.)	60	14-Apr-26	08-Jul-26	37
C2A.1080	P/S Membrane Bioreactor (MBR) Equipment	80	14-Apr-26	05-Aug-26	97
C2A.1110	P/S Fine & Course Bubble Diffuser Systems	80	14-Apr-26	05-Aug-26	62
C2A.1120	P/S MBR Air Scour Systems	80	14-Apr-26	05-Aug-26	182
C2A.1170	P/S UV System	80	14-Apr-26	05-Aug-26	153
C2A.1180	P/S Aeration Blowers	80	14-Apr-26	05-Aug-26	62
Early Submittal Review & Approval		130	03-Mar-26	02-Sep-26	182
C2A.1440	R/A Concrete Reinforcing (Rebar) - Aeration Basin / UV SOG	10	03-Mar-26	16-Mar-26	41
C2A.1470	R/A Electrical Materials - General	10	03-Mar-26	16-Mar-26	36
C2A.1450	R/A General Piping & Valves	10	17-Mar-26	30-Mar-26	105
C2A.1460	R/A Concrete Mix Design	10	17-Mar-26	30-Mar-26	41
C2A.1480	R/A Concrete Reinforcing (Rebar) - Balance	10	28-Apr-26	11-May-26	184
C2A.1490	R/A Fine Screens & Washer Compactors	20	09-Jul-26	05-Aug-26	197
C2A.1500	R/A Pre-Eng. Metal Buildings & Canopies (PEMBs)	20	09-Jul-26	05-Aug-26	182
C2A.1510	R/A Electrical Gear & Equip (VFDs, MCCs, PLCs, etc.)	20	09-Jul-26	05-Aug-26	37
C2A.1560	R/A Membrane Bioreactor (MBR) Equipment	20	06-Aug-26	02-Sep-26	97
C2A.1580	R/A Fine & Course Bubble Diffuser Systems	20	06-Aug-26	02-Sep-26	62
C2A.1590	R/A MBR Air Scour Systems	20	06-Aug-26	02-Sep-26	182
C2A.1600	R/A UV System	20	06-Aug-26	02-Sep-26	153
C2A.1610	R/A Aeration Blowers	20	06-Aug-26	02-Sep-26	62
Early Fabrication & Delivery Release		360	17-Mar-26	18-Aug-27	62
C2A.1220	F/D Electrical Materials - General	10	17-Mar-26	30-Mar-26	36
C2A.1200	F/D Concrete Reinforcing (Rebar) - Aeration Basin / UV SOG	10	17-Mar-26	30-Mar-26	41
C2A.1210	F/D General Piping & Valves	60	31-Mar-26	23-Jun-26	105
C2A.1230	F/D Concrete Reinforcing (Rebar) - Balance	20	12-May-26	09-Jun-26	184
C2A.1270	F/D Pre-Eng. Metal Buildings & Canopies (PEMBs)	60	06-Aug-26	29-Oct-26	182
C2A.1260	F/D Fine Screens & Washer Compactors	120	06-Aug-26	29-Jan-27	197



Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone

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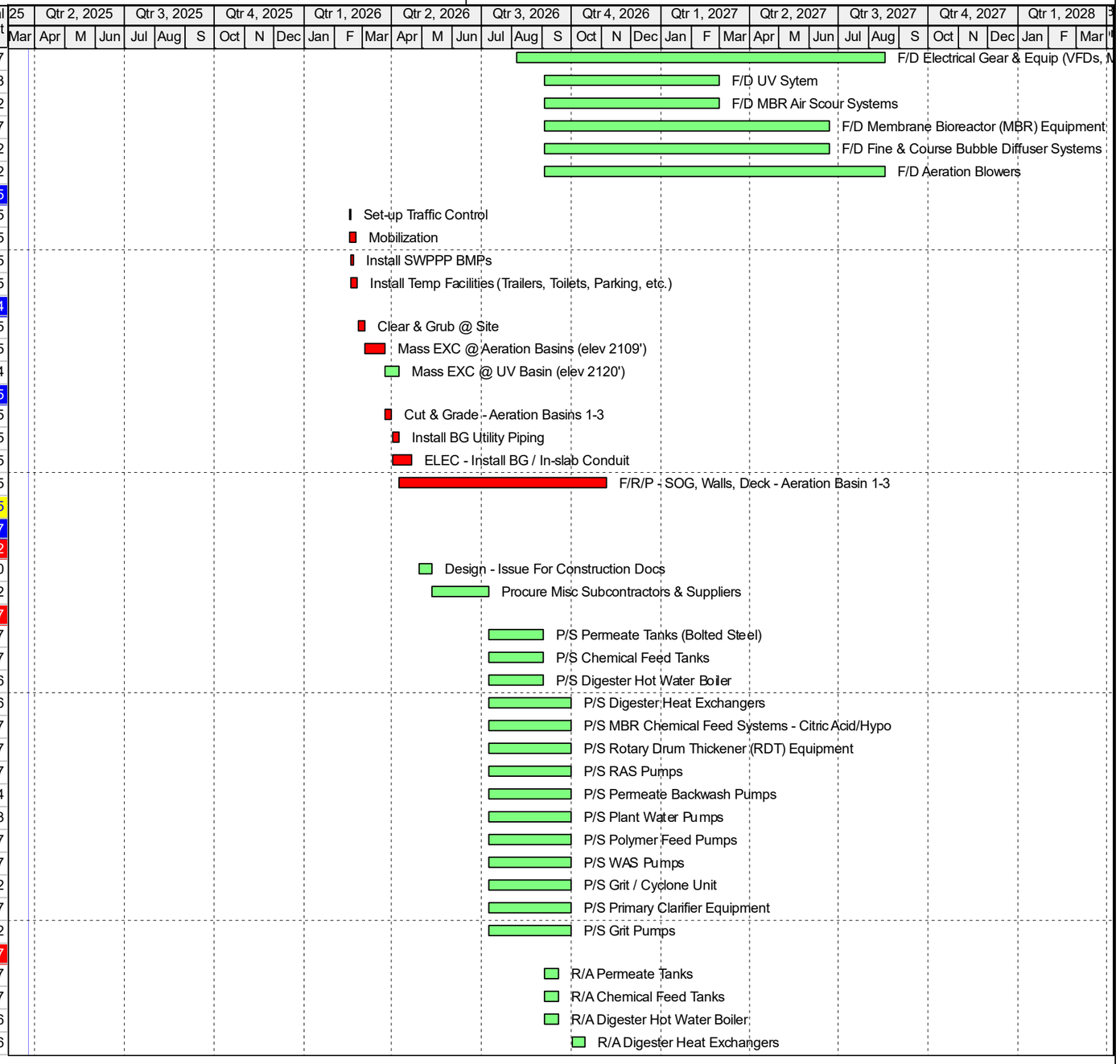
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
C2A.1250	F/D Electrical Gear & Equip (VFDs, MCCs, PLCs, etc.)	260	06-Aug-26	18-Aug-27	37
C2A.1320	F/D UV Sytem	120	03-Sep-26	01-Mar-27	153
C2A.1330	F/D MBR Air Scour Systems	120	03-Sep-26	01-Mar-27	182
C2A.1300	F/D Membrane Bioreactor (MBR) Equipment	200	03-Sep-26	22-Jun-27	97
C2A.1340	F/D Fine & Course Bubble Diffuser Systems	200	03-Sep-26	22-Jun-27	62
C2A.1350	F/D Aeration Blowers	240	03-Sep-26	18-Aug-27	62
Mobilization		6	17-Feb-26	24-Feb-26	35
C2A.1380	Set-up Traffic Control	1	17-Feb-26	17-Feb-26	35
C2A.1370	Mobilization	5	17-Feb-26	23-Feb-26	35
C2A.1390	Install SWPPP BMPs	3	18-Feb-26	20-Feb-26	35
C2A.1400	Install Temp Facilities (Trailers, Toilets, Parking, etc.)	5	18-Feb-26	24-Feb-26	35
Early Civil Site Work		30	25-Feb-26	07-Apr-26	154
C2A.1410	Clear & Grub @ Site	5	25-Feb-26	03-Mar-26	35
C2A.1420	Mass EXC @ Aeration Basins (elev 2109')	15	04-Mar-26	24-Mar-26	35
C2A.1430	Mass EXC @ UV Basin (elev 2120')	10	25-Mar-26	07-Apr-26	154
Early Aeration Basins / Reactors 1-3 Work		160	25-Mar-26	06-Nov-26	35
C2A.1620	Cut & Grade - Aeration Basins 1-3	5	25-Mar-26	31-Mar-26	35
C2A.1630	Install BG Utility Piping	5	01-Apr-26	07-Apr-26	35
C2A.1640	ELEC - Install BG / In-slab Conduit	15	01-Apr-26	21-Apr-26	35
C2A.1650	F/R/P - SOG, Walls, Deck - Aeration Basin 1-3	150	08-Apr-26	06-Nov-26	35
Construction Phase 2B		457	28-Apr-26	23-Feb-28	35
Procurement		250	28-Apr-26	26-Apr-27	167
Administrative Tasks		50	28-Apr-26	08-Jul-26	122
C2B.2350	Design - Issue For Construction Docs	10	28-Apr-26	11-May-26	100
C2B.2360	Procure Misc Subcontractors & Suppliers	40	12-May-26	08-Jul-26	122
Prepare Submittals & Submit		60	09-Jul-26	01-Oct-26	207
C2B.2300	P/S Permeate Tanks (Bolted Steel)	40	09-Jul-26	02-Sep-26	217
C2B.2330	P/S Chemical Feed Tanks	40	09-Jul-26	02-Sep-26	227
C2A.1670	P/S Digester Hot Water Boiler	40	09-Jul-26	02-Sep-26	196
C2A.1140	P/S Digester Heat Exchangers	60	09-Jul-26	01-Oct-26	176
C2A.1150	P/S MBR Chemical Feed Systems - Citric Acid/Hypo	60	09-Jul-26	01-Oct-26	137
C2A.1190	P/S Rotary Drum Thickener (RDT) Equipment	60	09-Jul-26	01-Oct-26	207
C2B.2280	P/S RAS Pumps	60	09-Jul-26	01-Oct-26	177
C2B.2290	P/S Permeate Backwash Pumps	60	09-Jul-26	01-Oct-26	154
C2B.2310	P/S Plant Water Pumps	60	09-Jul-26	01-Oct-26	123
C2B.2320	P/S Polymer Feed Pumps	60	09-Jul-26	01-Oct-26	147
C2B.2340	P/S WAS Pumps	60	09-Jul-26	01-Oct-26	147
C2A.1160	P/S Grit / Cyclone Unit	60	09-Jul-26	01-Oct-26	122
C2A.1700	P/S Primary Clarifier Equipment	60	09-Jul-26	01-Oct-26	167
C2A.1730	P/S Grit Pumps	60	09-Jul-26	01-Oct-26	182
Review & Approve Submittals		40	03-Sep-26	29-Oct-26	197
C2B.2230	R/A Permeate Tanks	10	03-Sep-26	17-Sep-26	217
C2B.2260	R/A Chemical Feed Tanks	10	03-Sep-26	17-Sep-26	227
C2A.1680	R/A Digester Hot Water Boiler	10	03-Sep-26	17-Sep-26	196
C2A.1520	R/A Digester Heat Exchangers	10	02-Oct-26	15-Oct-26	176



Remaining Level of Effort
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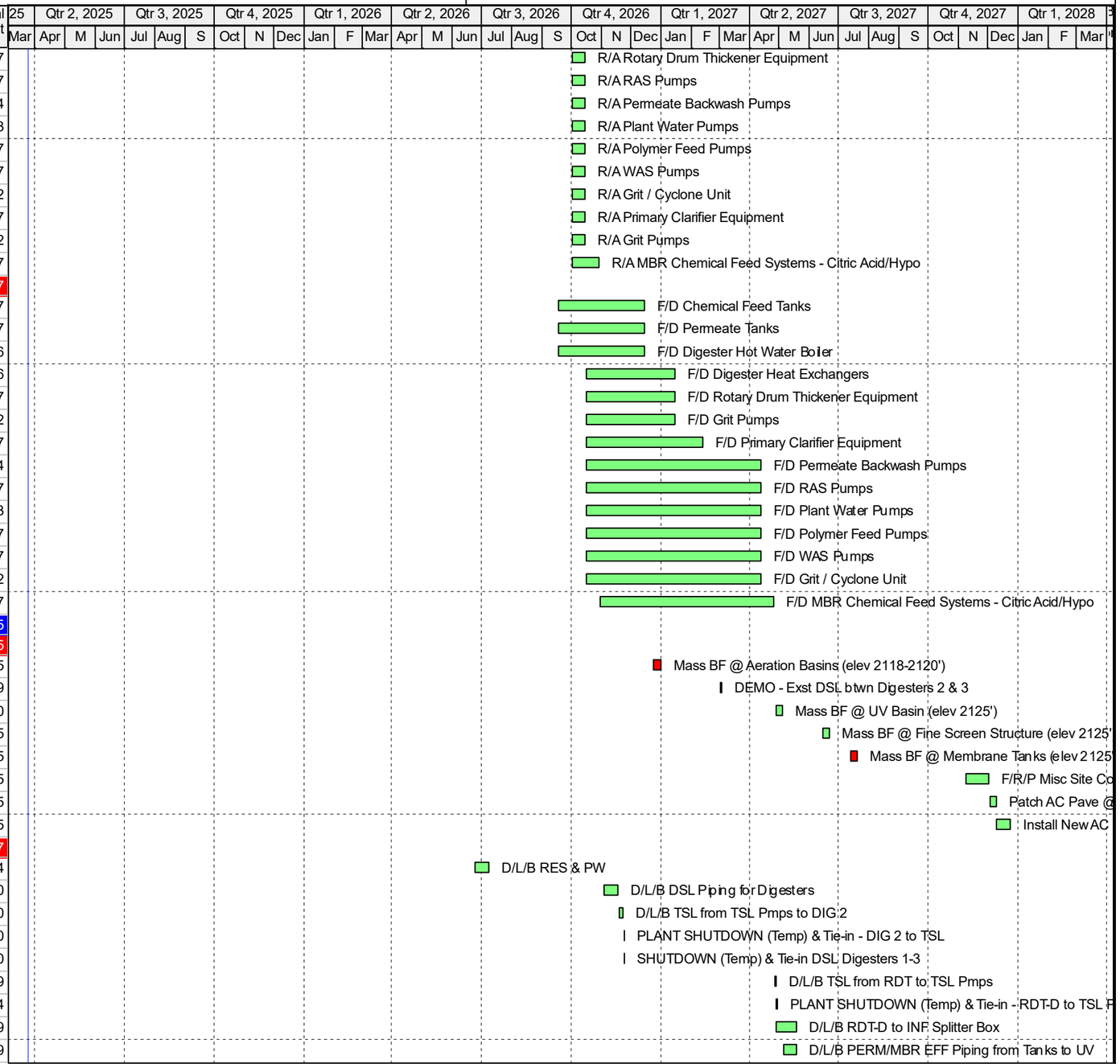
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
C2A.1550	R/A Rotary Drum Thickener Equipment	10	02-Oct-26	15-Oct-26	207
C2B.2210	R/A RAS Pumps	10	02-Oct-26	15-Oct-26	177
C2B.2220	R/A Permeate Backwash Pumps	10	02-Oct-26	15-Oct-26	154
C2B.2240	R/A Plant Water Pumps	10	02-Oct-26	15-Oct-26	123
C2B.2250	R/A Polymer Feed Pumps	10	02-Oct-26	15-Oct-26	147
C2B.2270	R/A WAS Pumps	10	02-Oct-26	15-Oct-26	147
C2A.1290	R/A Grit / Cyclone Unit	10	02-Oct-26	15-Oct-26	122
C2A.1710	R/A Primary Clarifier Equipment	10	02-Oct-26	15-Oct-26	167
C2A.1740	R/A Grit Pumps	10	02-Oct-26	15-Oct-26	182
C2A.1530	R/A MBR Chemical Feed Systems - Citric Acid/Hypo	20	02-Oct-26	29-Oct-26	137
Fabrication & Delivery		150	18-Sep-26	26-Apr-27	167
C2B.2180	F/D Chemical Feed Tanks	60	18-Sep-26	15-Dec-26	227
C2B.2200	F/D Permeate Tanks	60	18-Sep-26	15-Dec-26	217
C2A.1690	F/D Digester Hot Water Boiler	60	18-Sep-26	15-Dec-26	196
C2A.1240	F/D Digester Heat Exchangers	60	16-Oct-26	14-Jan-27	176
C2A.1360	F/D Rotary Drum Thickener Equipment	60	16-Oct-26	14-Jan-27	207
C2A.1750	F/D Grit Pumps	60	16-Oct-26	14-Jan-27	182
C2A.1720	F/D Primary Clarifier Equipment	80	16-Oct-26	12-Feb-27	167
C2B.2140	F/D Permeate Backwash Pumps	120	16-Oct-26	12-Apr-27	154
C2B.2150	F/D RAS Pumps	120	16-Oct-26	12-Apr-27	177
C2B.2160	F/D Plant Water Pumps	120	16-Oct-26	12-Apr-27	123
C2B.2170	F/D Polymer Feed Pumps	120	16-Oct-26	12-Apr-27	147
C2B.2190	F/D WAS Pumps	120	16-Oct-26	12-Apr-27	147
C2A.1660	F/D Grit / Cyclone Unit	120	16-Oct-26	12-Apr-27	122
C2A.1280	F/D MBR Chemical Feed Systems - Citric Acid/Hypo	120	30-Oct-26	26-Apr-27	137
Civil Site Work		407	12-May-26	23-Dec-27	75
Misc Site Work		251	24-Dec-26	23-Dec-27	75
C2B.2370	Mass BF @ Aeration Basins (elev 2118-2120')	5	24-Dec-26	31-Dec-26	35
C2B.2380	DEMO - Exst DSL btwn Digesters 2 & 3	3	02-Mar-27	04-Mar-27	279
C2B.2390	Mass BF @ UV Basin (elev 2125')	5	29-Apr-27	05-May-27	100
C2B.2400	Mass BF @ Fine Screen Structure (elev 2125')	5	15-Jun-27	21-Jun-27	45
C2B.2410	Mass BF @ Membrane Tanks (elev 2125')	5	14-Jul-27	20-Jul-27	35
C2B.2420	F/R/P Misc Site Concrete @ MBR Facilities	15	09-Nov-27	02-Dec-27	75
C2B.2440	Patch AC Pave @ Existing Plant	5	03-Dec-27	09-Dec-27	75
C2B.2430	Install New AC Paving @ MBR Facilities	10	10-Dec-27	23-Dec-27	75
Below Grade Pipe Installation		305	24-Jun-26	09-Sep-27	147
C2B.2450	D/L/B RES & PW	10	24-Jun-26	08-Jul-26	334
C2B.2490	D/L/B DSL Piping for Digesters	10	04-Nov-26	18-Nov-26	270
C2B.2500	D/L/B TSL from TSL Pmps to DIG 2	3	19-Nov-26	23-Nov-26	270
C2B.2510	PLANT SHUTDOWN (Temp) & Tie-in - DIG 2 to TSL	1	24-Nov-26	24-Nov-26	270
C2B.2520	SHUTDOWN (Temp) & Tie-in DSL Digesters 1-3	1	24-Nov-26	24-Nov-26	270
C2B.2530	D/L/B TSL from RDT to TSL Pmps	2	27-Apr-27	28-Apr-27	149
C2B.2540	PLANT SHUTDOWN (Temp) & Tie-in - RDT-D to TSL Pmps	1	29-Apr-27	29-Apr-27	164
C2B.2550	D/L/B RDT-D to INF Splitter Box	15	29-Apr-27	19-May-27	149
C2B.2570	D/L/B PERM/MBR EFF Piping from Tanks to UV	10	06-May-27	19-May-27	139



Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone

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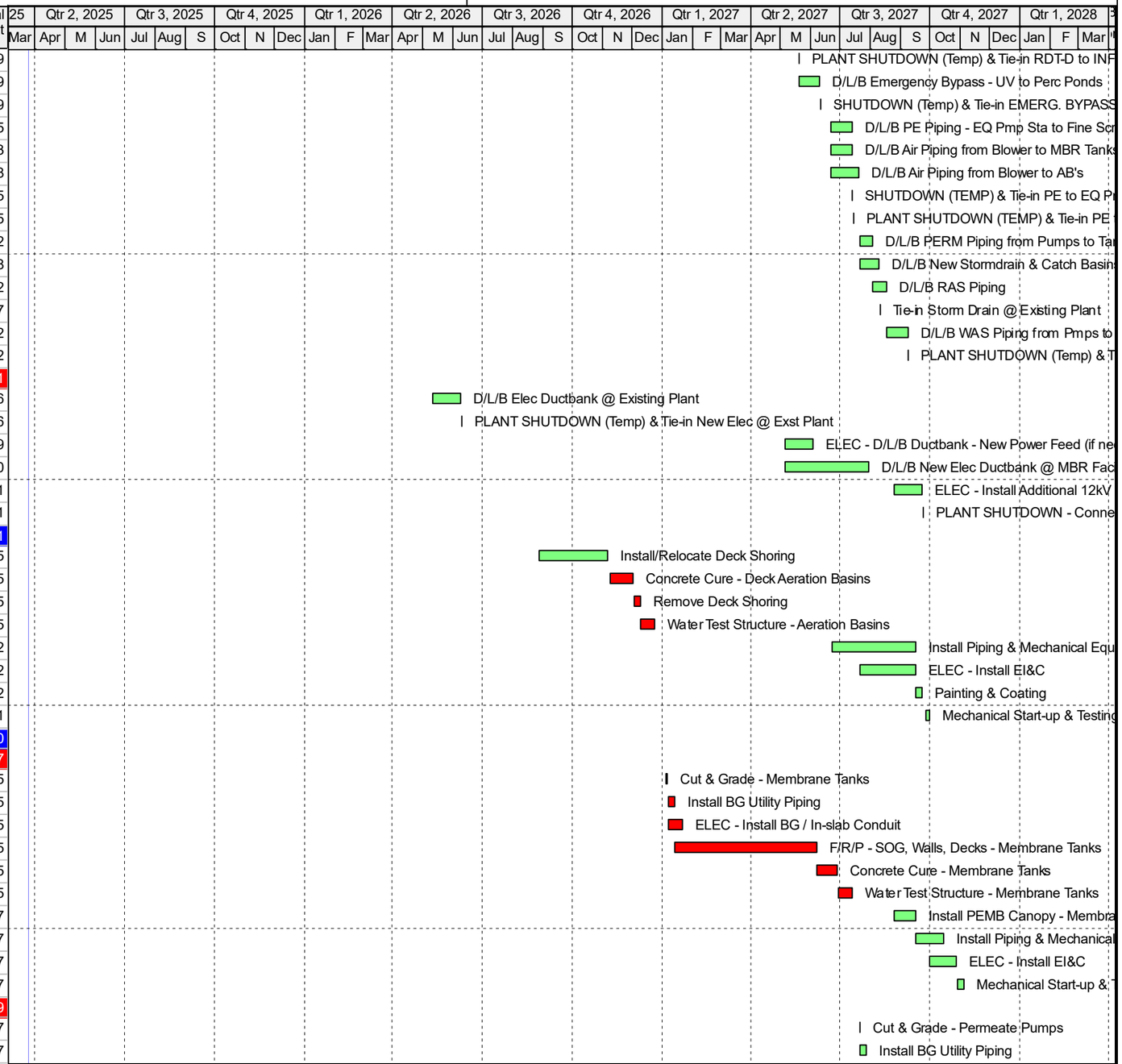
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
C2B.2560	PLANT SHUTDOWN (Temp) & Tie-in RDT-D to INF Split Box	1	20-May-27	20-May-27	149
C2B.2580	D/L/B Emergency Bypass - UV to Perc Ponds	15	20-May-27	10-Jun-27	139
C2B.2590	SHUTDOWN (Temp) & Tie-in EMERG. BYPASS to PERC	1	11-Jun-27	11-Jun-27	139
C2B.2460	D/L/B PE Piping - EQ Pmp Sta to Fine Screen	15	22-Jun-27	13-Jul-27	95
C2B.2610	D/L/B Air Piping from Blower to MBR Tanks	15	22-Jun-27	13-Jul-27	113
C2B.2600	D/L/B Air Piping from Blower to AB's	20	22-Jun-27	20-Jul-27	108
C2B.2470	SHUTDOWN (TEMP) & Tie-in PE to EQ Pmp Sta	1	14-Jul-27	14-Jul-27	95
C2B.2480	PLANT SHUTDOWN (TEMP) & Tie-in PE to TRIK Filter INF	1	15-Jul-27	15-Jul-27	95
C2B.2630	D/L/B PERM Piping from Pumps to Tanks	10	21-Jul-27	03-Aug-27	72
C2B.2620	D/L/B New Stormdrain & Catch Basins	15	21-Jul-27	10-Aug-27	138
C2B.2640	D/L/B RAS Piping	10	04-Aug-27	17-Aug-27	72
C2B.2650	Tie-in Storm Drain @ Existing Plant	1	11-Aug-27	11-Aug-27	167
C2B.2660	D/L/B WAS Piping from Pmps to Digesters	15	18-Aug-27	08-Sep-27	72
C2B.2670	PLANT SHUTDOWN (Temp) & Tie-in - RSL/WAS at DIG 3	1	09-Sep-27	09-Sep-27	72
Site Electrical		346	12-May-26	24-Sep-27	61
C2B.2680	D/L/B Elec Ductbank @ Existing Plant	20	12-May-26	09-Jun-26	386
C2B.2690	PLANT SHUTDOWN (Temp) & Tie-in New Elec @ Exst Plant	1	10-Jun-26	10-Jun-26	386
C2B.2710	ELEC - D/L/B Ductbank - New Power Feed (if needed)	20	06-May-27	03-Jun-27	119
C2B.2700	D/L/B New Elec Ductbank @ MBR Facilities	60	06-May-27	30-Jul-27	100
C2B.2720	ELEC - Install Additional 12kV Power Feed (if needed)	20	26-Aug-27	23-Sep-27	61
C2B.2730	PLANT SHUTDOWN - Connect New Addtl Power Feed	1	24-Sep-27	24-Sep-27	61
Aeration Basins / Reactors 1-3		275	28-Aug-26	01-Oct-27	61
C2B.1390	Install/Relocate Deck Shoring	50	28-Aug-26	06-Nov-26	55
C2B.1400	Concrete Cure - Deck Aeration Basins	15	09-Nov-26	02-Dec-26	35
C2B.1410	Remove Deck Shoring	5	03-Dec-26	09-Dec-26	35
C2B.1420	Water Test Structure - Aeration Basins	10	10-Dec-26	23-Dec-26	35
C2B.1430	Install Piping & Mechanical Equipment	60	23-Jun-27	16-Sep-27	62
C2B.1440	ELEC - Install EI&C	40	22-Jul-27	16-Sep-27	62
C2B.1450	Painting & Coating	5	17-Sep-27	23-Sep-27	62
C2B.1460	Mechanical Start-up & Testing - Aeration Basins	5	27-Sep-27	01-Oct-27	61
Membrane Facilities		221	04-Jan-27	16-Nov-27	40
Membrane Tanks		214	04-Jan-27	04-Nov-27	37
C2B.1740	Cut & Grade - Membrane Tanks	3	04-Jan-27	06-Jan-27	35
C2B.1750	Install BG Utility Piping	5	07-Jan-27	13-Jan-27	35
C2B.1760	ELEC - Install BG / In-slab Conduit	10	07-Jan-27	21-Jan-27	35
C2B.1770	F/R/P - SOG, Walls, Decks - Membrane Tanks	100	14-Jan-27	07-Jun-27	35
C2B.1780	Concrete Cure - Membrane Tanks	15	08-Jun-27	28-Jun-27	35
C2B.1790	Water Test Structure - Membrane Tanks	10	29-Jun-27	13-Jul-27	35
C2B.1800	Install PEMB Canopy - Membrane / Permeate Pumps	15	26-Aug-27	16-Sep-27	37
C2B.1810	Install Piping & Mechanical Equipment	20	17-Sep-27	14-Oct-27	37
C2B.1820	ELEC - Install EI&C	20	01-Oct-27	28-Oct-27	37
C2B.1830	Mechanical Start-up & Testing - Membrane Tanks	5	29-Oct-27	04-Nov-27	37
Permeate Pumps		54	21-Jul-27	05-Oct-27	59
C2B.1840	Cut & Grade - Permeate Pumps	1	21-Jul-27	21-Jul-27	37
C2B.1850	Install BG Utility Piping	5	22-Jul-27	28-Jul-27	37



Remaining Level of Effort
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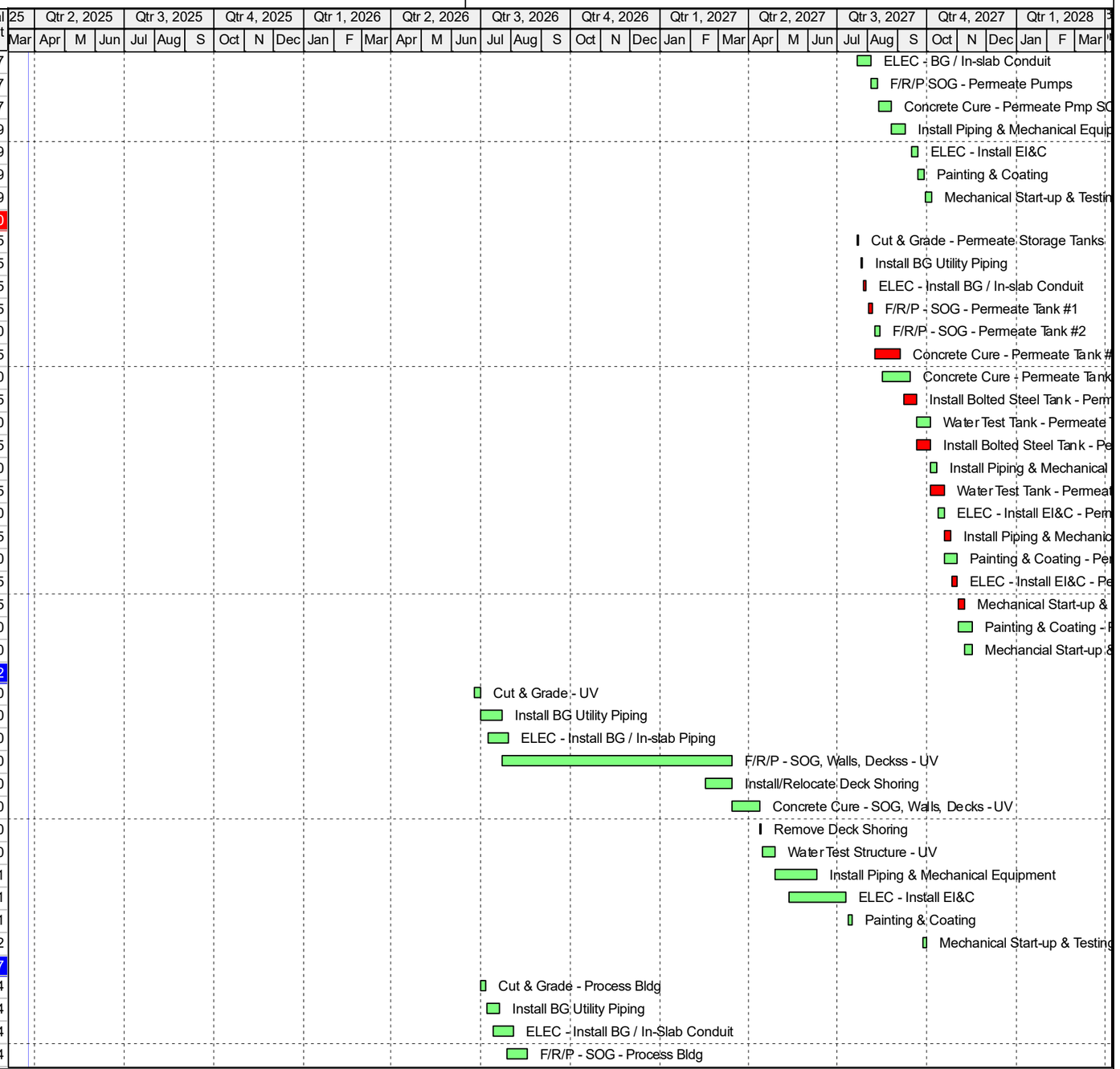
APPENDIX A
PROPOSED PHASE 1 DESIGN & PHASE 2 CONSTRUCTION SCHEDULE

18-Feb-25 11:02
Datadate 25-Mar-25

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
C2B.1860	ELEC - BG / In-slab Conduit	10	22-Jul-27	04-Aug-27	37
C2B.1870	F/R/P SOG - Permeate Pumps	5	05-Aug-27	11-Aug-27	37
C2B.1880	Concrete Cure - Permeate Pmp SOG	10	12-Aug-27	25-Aug-27	37
C2B.1890	Install Piping & Mechanical Equipment	10	26-Aug-27	09-Sep-27	59
C2B.1900	ELEC - Install EI&C	5	15-Sep-27	21-Sep-27	59
C2B.1920	Painting & Coating	5	22-Sep-27	28-Sep-27	59
C2B.1910	Mechanical Start-up & Testing - Permeate Pumps	5	29-Sep-27	05-Oct-27	59
Permeate Tanks		83	21-Jul-27	16-Nov-27	40
C2B.1930	Cut & Grade - Permeate Storage Tanks	3	21-Jul-27	23-Jul-27	35
C2B.1940	Install BG Utility Piping	2	26-Jul-27	27-Jul-27	35
C2B.1950	ELEC - Install BG / In-slab Conduit	3	28-Jul-27	30-Jul-27	35
C2B.1960	F/R/P - SOG - Permeate Tank #1	5	02-Aug-27	06-Aug-27	35
C2B.1980	F/R/P - SOG - Permeate Tank #2	5	09-Aug-27	13-Aug-27	40
C2B.1970	Concrete Cure - Permeate Tank #1	20	09-Aug-27	03-Sep-27	35
C2B.1990	Concrete Cure - Permeate Tank #2	20	16-Aug-27	13-Sep-27	40
C2B.2000	Install Bolted Steel Tank - Permeate Tank #1	10	07-Sep-27	20-Sep-27	35
C2B.2010	Water Test Tank - Permeate Tank #1	10	21-Sep-27	04-Oct-27	40
C2B.2020	Install Bolted Steel Tank - Permeate Tank #2	10	21-Sep-27	04-Oct-27	35
C2B.2030	Install Piping & Mechanical Equipment - Permeate Tank #1	5	05-Oct-27	11-Oct-27	40
C2B.2040	Water Test Tank - Permeate Tank #2	10	05-Oct-27	18-Oct-27	35
C2B.2050	ELEC - Install EI&C - Permeate Tank #1	5	12-Oct-27	18-Oct-27	40
C2B.2060	Install Piping & Mechanical - Permeate Tank #2	5	19-Oct-27	25-Oct-27	35
C2B.2090	Painting & Coating - Permeate Tank #1	10	19-Oct-27	01-Nov-27	40
C2B.2070	ELEC - Install EI&C - Permeate Tank #2	5	26-Oct-27	01-Nov-27	35
C2B.2080	Mechanical Start-up & Testing - Permeate Tank #1	5	02-Nov-27	08-Nov-27	35
C2B.2100	Painting & Coating - Permeate Tank #2	10	02-Nov-27	16-Nov-27	40
C2B.2870	Mechancial Start-up & Testing - Permeate Tank #2	5	09-Nov-27	16-Nov-27	40
UV Dinsinfection Facility		320	24-Jun-26	30-Sep-27	62
C2B.2740	Cut & Grade - UV	5	24-Jun-26	30-Jun-26	100
C2B.2750	Install BG Utility Piping	15	01-Jul-26	22-Jul-26	100
C2B.2760	ELEC - Install BG / In-slab Piping	15	09-Jul-26	29-Jul-26	100
C2B.2770	F/R/P - SOG, Walls, Deckss - UV	160	23-Jul-26	15-Mar-27	100
C2B.2780	Install/Relocate Deck Shoring	20	16-Feb-27	15-Mar-27	100
C2B.2790	Concrete Cure - SOG, Walls, Decks - UV	20	16-Mar-27	12-Apr-27	100
C2B.2800	Remove Deck Shoring	2	13-Apr-27	14-Apr-27	100
C2B.2810	Water Test Structure - UV	10	15-Apr-27	28-Apr-27	100
C2B.2820	Install Piping & Mechanical Equipment	30	29-Apr-27	10-Jun-27	111
C2B.2830	ELEC - Install EI&C	40	13-May-27	09-Jul-27	111
C2B.2840	Painting & Coating	5	12-Jul-27	16-Jul-27	111
C2B.2850	Mechanical Start-up & Testing - UV	4	27-Sep-27	30-Sep-27	62
Process Bldg (Blower, Elec, Lab/Officel)		340	01-Jul-26	04-Nov-27	37
C2B.1580	Cut & Grade - Process Bldg	3	01-Jul-26	06-Jul-26	214
C2B.1590	Install BG Utility Piping	10	07-Jul-26	20-Jul-26	214
C2B.1600	ELEC - Install BG / In-Slab Conduit	15	14-Jul-26	03-Aug-26	214
C2B.1610	F/R/P - SOG - Process Bldg	15	28-Jul-26	17-Aug-26	214



Remaining Level of Effort
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Milestone

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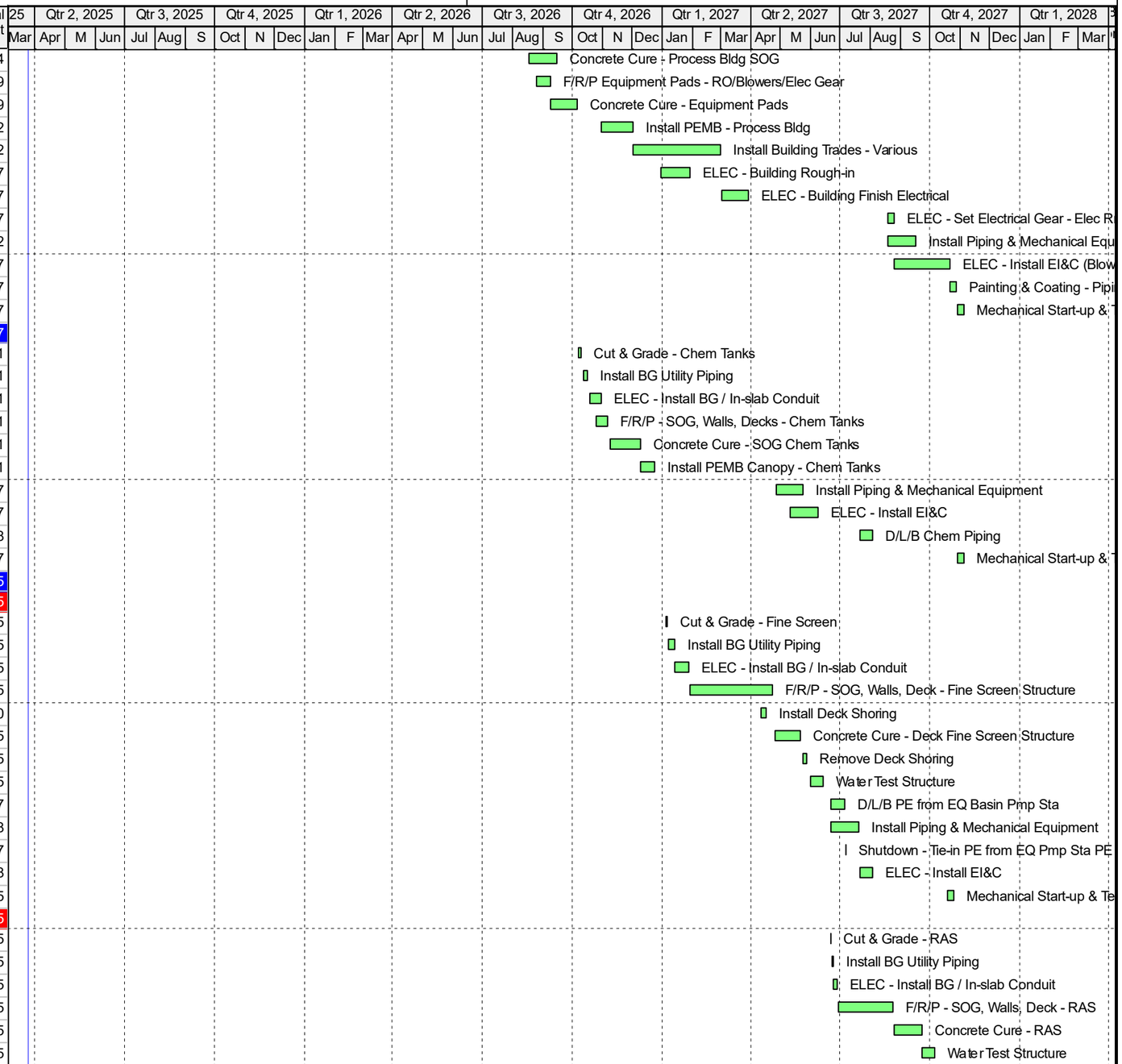
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
C2B.1620	Concrete Cure - Process Bldg SOG	20	18-Aug-26	15-Sep-26	214
C2B.1630	F/R/P Equipment Pads - RO/Blowers/Elec Gear	10	25-Aug-26	08-Sep-26	219
C2B.1640	Concrete Cure - Equipment Pads	20	09-Sep-26	06-Oct-26	219
C2B.1650	Install PEMB - Process Bldg	20	30-Oct-26	01-Dec-26	182
C2B.1660	Install Building Trades - Various	60	02-Dec-26	01-Mar-27	182
C2B.1670	ELEC - Building Rough-in	20	31-Dec-26	29-Jan-27	207
C2B.1680	ELEC - Building Finish Electrical	20	02-Mar-27	29-Mar-27	187
C2B.1700	ELEC - Set Electrical Gear - Elec Rm	5	19-Aug-27	25-Aug-27	37
C2B.1690	Install Piping & Mechanical Equipment - (Blowers, etc.)	20	19-Aug-27	16-Sep-27	62
C2B.1710	ELEC - Install EI&C (Blowers, etc.)	40	26-Aug-27	21-Oct-27	37
C2B.1720	Painting & Coating - Piping	5	22-Oct-27	28-Oct-27	37
C2B.1730	Mechanical Start-up & Testing - Blowers	5	29-Oct-27	04-Nov-27	37
Chemical Storage Areas		272	07-Oct-26	04-Nov-27	37
C2B.1480	Cut & Grade - Chem Tanks	3	07-Oct-26	09-Oct-26	221
C2B.1490	Install BG Utility Piping	5	12-Oct-26	16-Oct-26	221
C2B.1500	ELEC - Install BG / In-slab Conduit	10	19-Oct-26	30-Oct-26	221
C2B.1510	F/R/P - SOG, Walls, Decks - Chem Tanks	10	26-Oct-26	06-Nov-26	221
C2B.1520	Concrete Cure - SOG Chem Tanks	20	09-Nov-26	09-Dec-26	221
C2B.1530	Install PEMB Canopy - Chem Tanks	10	10-Dec-26	23-Dec-26	221
C2B.1540	Install Piping & Mechanical Equipment	20	27-Apr-27	24-May-27	137
C2B.1550	ELEC - Install EI&C	20	11-May-27	08-Jun-27	137
C2B.1560	D/L/B Chem Piping	10	21-Jul-27	03-Aug-27	98
C2B.1570	Mechanical Start-up & Testing - Chem Tanks	5	29-Oct-27	04-Nov-27	37
Fine Screen Facility / RAS Mixing		206	04-Jan-27	25-Oct-27	45
Fine Screen Facility		206	04-Jan-27	25-Oct-27	45
C2B.1170	Cut & Grade - Fine Screen	3	04-Jan-27	06-Jan-27	45
C2B.1180	Install BG Utility Piping	5	07-Jan-27	13-Jan-27	45
C2B.1190	ELEC - Install BG / In-slab Conduit	10	14-Jan-27	28-Jan-27	45
C2B.1200	F/R/P - SOG, Walls, Deck - Fine Screen Structure	60	29-Jan-27	23-Apr-27	45
C2B.1210	Install Deck Shoring	5	12-Apr-27	16-Apr-27	70
C2B.1220	Concrete Cure - Deck Fine Screen Structure	20	26-Apr-27	21-May-27	45
C2B.1230	Remove Deck Shoring	5	24-May-27	28-May-27	45
C2B.1240	Water Test Structure	10	01-Jun-27	14-Jun-27	45
C2B.1260	D/L/B PE from EQ Basin Pmp Sta	10	22-Jun-27	06-Jul-27	117
C2B.1250	Install Piping & Mechanical Equipment	20	22-Jun-27	20-Jul-27	98
C2B.1270	Shutdown - Tie-in PE from EQ Pmp Sta PE to Fine Screens	1	07-Jul-27	07-Jul-27	117
C2B.1280	ELEC - Install EI&C	10	21-Jul-27	03-Aug-27	98
C2B.1290	Mechanical Start-up & Testing - Fine Screens Struct	5	19-Oct-27	25-Oct-27	45
RAS / Flow Mix Structure		88	22-Jun-27	25-Oct-27	45
C2B.1300	Cut & Grade - RAS	1	22-Jun-27	22-Jun-27	45
C2B.1310	Install BG Utility Piping	2	23-Jun-27	24-Jun-27	45
C2B.1320	ELEC - Install BG / In-slab Conduit	2	25-Jun-27	28-Jun-27	45
C2B.1330	F/R/P - SOG, Walls, Deck - RAS	40	29-Jun-27	24-Aug-27	45
C2B.1340	Concrete Cure - RAS	20	25-Aug-27	22-Sep-27	45
C2B.1350	Water Test Structure	10	23-Sep-27	06-Oct-27	45



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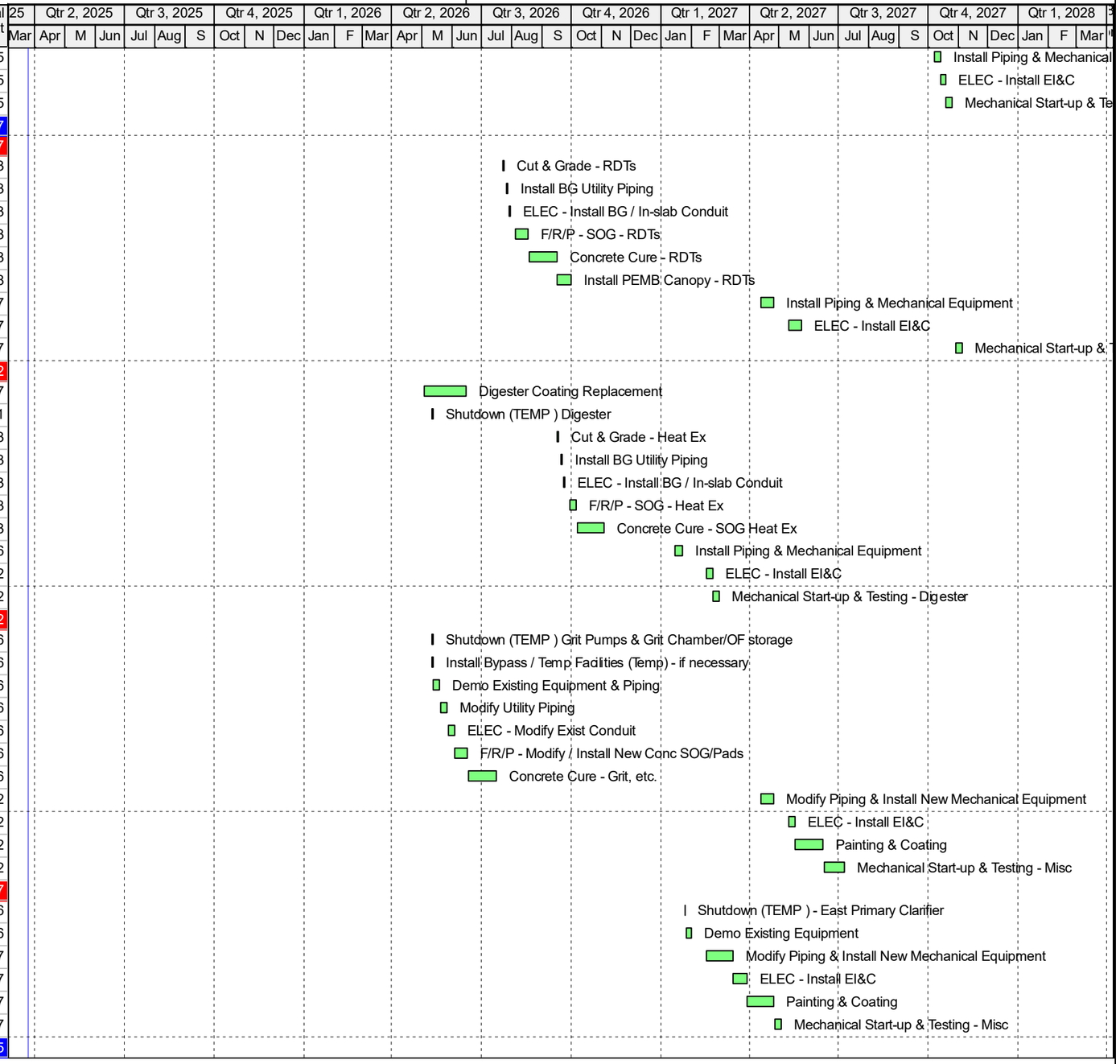
APPENDIX A
PROPOSED PHASE 1 DESIGN & PHASE 2 CONSTRUCTION SCHEDULE

18-Feb-25 11:02
Datadate 25-Mar-25

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
C2B.1360	Install Piping & Mechanical Equipment	5	07-Oct-27	13-Oct-27	45
C2B.1370	ELEC - Install EI&C	3	14-Oct-27	18-Oct-27	45
C2B.1380	Mechanical Start-up & Testing - RAS	5	19-Oct-27	25-Oct-27	45
Modifcations with Existing Plant Facilities		381	04-May-26	04-Nov-27	37
Rotary Drum Thickeners (RDTs)		325	23-Jul-26	04-Nov-27	37
C2B.1080	Cut & Grade - RDTs	2	23-Jul-26	24-Jul-26	223
C2B.1090	Install BG Utility Piping	2	27-Jul-26	28-Jul-26	223
C2B.1100	ELEC - Install BG / In-slab Conduit	2	29-Jul-26	30-Jul-26	223
C2B.1110	F/R/P - SOG - RDTs	10	05-Aug-26	18-Aug-26	223
C2B.1120	Concrete Cure - RDTs	20	19-Aug-26	16-Sep-26	223
C2B.1130	Install PEMB Canopy - RDTs	10	17-Sep-26	30-Sep-26	278
C2B.1140	Install Piping & Mechanical Equipment	10	13-Apr-27	26-Apr-27	147
C2B.1150	ELEC - Install EI&C	10	11-May-27	24-May-27	147
C2B.1160	Mechanical Start-up & Testing - RDTs	5	29-Oct-27	04-Nov-27	37
Digester		206	04-May-26	01-Mar-27	212
C2B.10119	Digester Coating Replacement	30	04-May-26*	15-Jun-26	317
C2B.10009	Shutdown (TEMP) Digester	1	12-May-26	12-May-26	311
C2B.1000	Cut & Grade - Heat Ex	2	17-Sep-26	18-Sep-26	223
C2B.1010	Install BG Utility Piping	2	21-Sep-26	22-Sep-26	223
C2B.1020	ELEC - Install BG / In-slab Conduit	2	23-Sep-26	24-Sep-26	223
C2B.1030	F/R/P - SOG - Heat Ex	5	30-Sep-26	06-Oct-26	223
C2B.1040	Concrete Cure - SOG Heat Ex	20	07-Oct-26	03-Nov-26	223
C2B.1050	Install Piping & Mechanical Equipment	5	15-Jan-27	22-Jan-27	176
C2B.1060	ELEC - Install EI&C	5	16-Feb-27	22-Feb-27	212
C2B.1070	Mechanical Start-up & Testing - Digester	5	23-Feb-27	01-Mar-27	212
Grit Facilities		290	12-May-26	07-Jul-27	122
C2B.10129	Shutdown (TEMP) Grit Pumps & Grit Chamber/OF storage	1	12-May-26	12-May-26	306
C2B.10089	Install Bypass / Temp Facilities (Temp) - if necessary	2	12-May-26	13-May-26	306
C2B.10019	Demo Existing Equipment & Piping	5	13-May-26	19-May-26	306
C2B.10099	Modify Utility Piping	5	20-May-26	27-May-26	306
C2B.10029	ELEC - Modify Exist Conduit	5	28-May-26	03-Jun-26	306
C2B.10039	F/R/P - Modify / Install New Conc SOG/Pads	10	04-Jun-26	17-Jun-26	306
C2B.10049	Concrete Cure - Grit, etc.	20	18-Jun-26	16-Jul-26	306
C2B.10059	Modify Piping & Install New Mechanical Equipment	10	13-Apr-27	26-Apr-27	122
C2B.10069	ELEC - Install EI&C	5	11-May-27	17-May-27	122
C2B.10109	Painting & Coating	20	18-May-27	15-Jun-27	122
C2B.10079	Mechanical Start-up & Testing - Misc	15	16-Jun-27	07-Jul-27	122
East Primary Clarifier		70	25-Jan-27	03-May-27	167
C2B.10149	Shutdown (TEMP) - East Primary Clarifier	1	25-Jan-27	25-Jan-27	176
C2B.10159	Demo Existing Equipment	5	26-Jan-27	01-Feb-27	176
C2B.10209	Modify Piping & Install New Mechanical Equipment	20	16-Feb-27	15-Mar-27	167
C2B.10219	ELEC - Install EI&C	10	16-Mar-27	29-Mar-27	167
C2B.10229	Painting & Coating	20	30-Mar-27	26-Apr-27	167
C2B.10239	Mechanical Start-up & Testing - Misc	5	27-Apr-27	03-May-27	167
Commissioning		70	09-Nov-27	23-Feb-28	35



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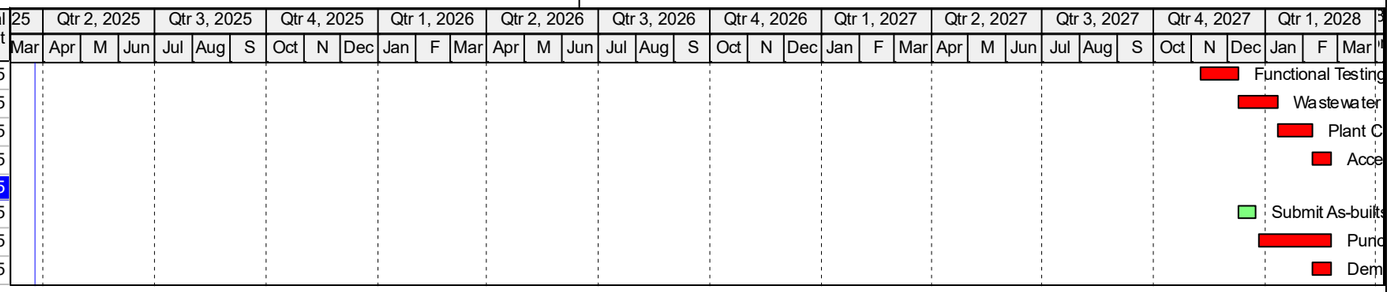
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
C2B.1470	Functional Testing (30 cal Days)	20	09-Nov-27	09-Dec-27	35
C2B.2880	Wastewater Start-up (30 cal Days)	20	10-Dec-27	10-Jan-28	35
C2B.9999	Plant Commissiong & Acceptance 30 cal Days)	20	11-Jan-28	08-Feb-28	35
C2B.2860	Acceptance Testing Report	10	09-Feb-28	23-Feb-28	35
Project Close-out		50	10-Dec-27	23-Feb-28	35
C2B.2120	Submit As-builts	10	10-Dec-27	23-Dec-27	75
C2B.2110	Punchlist	40	27-Dec-27	23-Feb-28	35
C2B.2130	Demobilization	10	09-Feb-28	23-Feb-28	35



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Appendix A
Index of Drawings and Specifications

AECOM / W.M. Lyles Co.
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(916) 375-1848 Fax
www.aecom.com
www.wmlyles.com

BANNING WWTP DRAWING LIST
Estimated Level of Detail for Each Percent (%) Submittal
p - partial, c - complete, f - final

NO.	DRAWING TITLE	30% DESIGN	60% DESIGN	90% DESIGN	100% DESIGN
General					
00 G-001	COVER SHEET	c	c	f	f
00 G-002	INDEX OF DRAWINGS I	p	c	f	f
00 G-003	INDEX OF DRAWINGS II	p	c	f	f
00 G-004	STRUCTURE DESIGNATION KEY	c	c	f	f
00 G-005	HYDRAULIC PROFILE				
~~00 G-006~~	~~DESIGN CRITERIA~~				
Civil					
C-001	LEGEND, ABBREIVATIONS, AND GENERAL NOTES	c	c	f	f
C-002	EXISTING CONDITIONS I				
C-003	EXISTING CONDITIONS II	c	c	f	f
C-004	EXCAVATION AND GRADING PLAN I	p	c	f	f
C-005	EXCAVATION AND GRADING PLAN II	p	c	f	f
C-006	EXCAVATION AND GRADING PLAN III	p	c	f	f
C-007	LINING SYSTEM I	-	p	c	f
C-008	LINING SYSTEM II	-	p	c	f
C-009	LINING SYSTEM III	-	p	c	f
C-010	SURVEY CONTROL PLAN I	p	c	f	f
C-011	SURVEY CONTROL PLAN II	p	c	f	f
C-012	SURVEY CONTROL PLAN III	p	c	f	f
C-013	EROSION CONTROL/STORMWATER II	-	c	f	f
C-014	EROSION CONTROL/STORMWATER II	-	c	f	f
C-015	YARD PIPING PLAN I	p	c	f	f
C-016	YARD PIPING PLAN II	p	c	f	f
C-017	YARD PIPING PLAN III	-	p	c	f
C-018	YARD PIPING PLAN IV	-	p	c	f
C-019	YARD PIPING PLAN V	-	p	c	f
C-020	YARD PIPING SECTIONs	-	c	f	f
C-021	PAVING AND GRADING I	p	c	f	f
C-022	PAVING AND GRADING II	-	c	f	f
C-023	GRADING SECTIONS I	-	c	f	f
C-024	GRADING SECTIONS II	-	c	f	f
C-025	GRADING SECTIONS III	-	c	f	f
C-026	GRADING SECTIONS IV	-	c	f	f
99 C-501	DETAILS I	-	c	f	f
99 C-502	DETAILS II	-	c	f	f
99 C-503	DETAILS III	-	p	c	f
99 C-504	DETAILS IV	-	p	c	f
99 C-505	DETAILS V	-	p	c	f
Architectural					
00 A-001	ARCHITECTURAL NOTES AND ABBREVIATIONS	p	c	f	f
00 A-001	ARCHITECTURAL CODE REVIEW/AREA CLASSIFICATION	-	c	f	f
03 A-101	MEMBRANE TANKS (W/ CANOPY) PLAN	p	c	f	f
03 A-102	MEMBRANE TANKS ROOF PLAN	p	c	f	f
03 A-201	MEMBRANE TANKS ELEVATIONS	p	c	f	f
03 A-301	MEMBRANE TANKS SECTIONS	-	p	c	f
04 A-101	PERMEATE PUMPS (W/ CANOPY) PLAN	p	c	f	f
04 A-102	PERMEATE PUMPS ROOF PLAN	p	c	f	f
04 A-201	PERMEATE PUMPS ELEVATIONS	p	c	f	f
04 A-301	PERMEATE PUMPS SECTIONS	-	p	c	f
05 A-001	PROCESS BUILDING (OFFICE, LAB, BLOWERS (PEMB)) LIFE SAFETY	p	c	f	f
05 A-101	PROCESS BUILDING PLAN	p	c	f	f
05 A-102	PROCESS BUILDING REFLECTED CEILING PLAN	-	p	c	f
05 A-103	PROCESS BUILDING ROOF PLAN	p	c	f	f
05 A-201	PROCESS BUILDING ELEVATIONS	p	c	f	f
05 A-301	PROCESS BUILDING SECTIONS	-	p	c	f
05 A-301	PROCESS BUILDING WALL SECTIONS	-	p	c	f
05 A-501	PROCESS BUILDING ENLARGED PLANS AND INT ELEVATIONS	-	p	c	f
07 A-101	CHEMICAL STORAGE (W/ CANOPY) PLAN	p	c	f	f
07 A-102	CHEMICAL STORAGES ROOF PLAN	p	c	f	f
07 A-201	CHEMICAL STORAGE ELEVATIONS	p	c	f	f
07 A-301	CHEMICAL STORAGE SECTIONS	-	p	c	f
08 A-101	ROTARY DRUM THICKENERS (W/ CANOPY) PLAN	p	c	f	f
08 A-102	ROTARY DRUM THICKENERS ROOF PLAN	p	c	f	f
08 A-201	ROTARY DRUM THICKENERS ELEVATIONS	-	p	c	f
08 A-301	ROTARY DRUM THICKENERS SECTIONS	-	p	c	f
99 A-501	DETAILS I	p	c	f	f
99 A-502	DETAILS II	-	p	c	f
99 A-503	DETAILS III	-	p	c	f
99 A-601	DOOR SCHEDULE AND DETAILS	-	p	c	f
99 A-602	WINDOW/ LOUVER SCHEDULE, FINISH SCHEDULE, & DETAILS	-	p	c	f
XX A-101	RO CHEMICAL STORAGE (W/ CANOPY) PLAN	p	c	f	f
XX A-102	RO CHEMICAL STORAGES ROOF PLAN	p	c	f	f
XX A-201	RO CHEMICAL STORAGE ELEVATIONS	p	c	f	f
XX A-301	RO CHEMICAL STORAGE SECTIONS	-	p	c	f
Structural					
00 S-001	STRUCTURAL NOTES & ABBREVIATIONS	c	c	f	f
00 S-002	STRUCTURAL NOTES II	p	c	c	f
00 S-003	STRUCTURAL NOTES III	p	c	c	f
01 S-101	FINE SCREENS - FOUNDATION PLAN	p	p	c	f
01 S-102	FINE SCREENS - UPPER LEVEL PLAN	p	p	c	f
01 S-301	FINE SCREENS - SECTIONS	-	c	c	f
02 S-101	REACTORS - FOUNDATION PLAN	p	c	c	f
02 S-102	REACTORS - UPPER LEVEL PLAN	p	p	c	f

BANNING WWTP DRAWING LIST
Estimated Level of Detail for Each Percent (%) Submittal
p - partial, c - complete, f - final

NO.	DRAWING TITLE	30% DESIGN	60% DESIGN	90% DESIGN	100% DESIGN
02 S-301	REACTORS - SECTIONS I	-	c	c	f
02 S-302	REACTORS - SECTIONS II	-	p	c	f
03 S-101	MEMBRANE TANKS/PERMEATE PUMPS - PLAN & SECTIONS	p	p	c	f
04 S-101	PERMEATE PUMPS - PLAN & SECTIONS	p	p	c	f
05 S-101	PROCESS BUILDING - PLAN & SECTIONS	p	p	c	f
06 S-101	UV SYSTEM UPPER LOWEER LEVEL PLAN	p	c	c	f
06 S-102	UV SYSTEM TANK- UPPER LEVEL PLAN	p	c	c	f
06 S-301	UV SYSTEM SECTIONS I	-	c	c	f
06 S-302	UV SYSTEM SECTIONS Ii	-	p	c	f
07 S-101	CHEMICAL STORAGE - PLAN & SECTIONS	-	p	c	f
08 S-101	ROTARY DRUM THICKENERSS - PLAN & SECTIONS	p	c	c	f
99 S-501	STRUCTURAL STANDARD DETAILS I	-	p	c	f
99 S-502	STRUCTURAL STANDARD DETAILS II	-	p	c	f
99 S-503	STRUCTURAL STANDARD DETAILS III	-	p	c	f
99 S-504	STRUCTURAL STANDARD DETAILS IV	-	-	c	f
99 S-505	STRUCTURAL STANDARD DETAILS V	-	-	c	f
XX-S-101	BLENDING TANK - PLANS AND SECTIONS	-	p	c	f
XX-S-102	CHEMICAL FACILITY - PLANS AND SECTIONS	-	p	c	f
Process Mechanical					
00 D-001	PROCESS LEGEND	p	c	f	f
00 D-002	NOTES AND ABBREVIATIONS	p	c	f	f
00 D-003	PIPE SCHEDULE	p	c	f	f
00 D-004	PROCESS SCHEDULES I (PUMPS, BLOWERS, CHEM METERING)	p	c	f	f
00 D-005	PROCESS SCHEDULES II (SLIDE GATES, STOP LOGS, HOISTING)	-	p	c	f
00 D-006	PROCESS SCHEDULES II (MIXING)	-	p	c	f
~~00 D-007~~	~~SCREENINGS PROCESS FLOW DIAGRAM~~				
~~00 D-008~~	~~MBR REACTOR PROCESS FLOW DIAGRAM I (INCL AERATION BLOWERS)~~				
~~00 D-009~~	~~MBR REACTOR PROCESS FLOW DIAGRAM II~~				
~~00 D-010~~	~~MEMBRANE TANK PROCESS FLOW DIAGRAM~~				
~~00 D-011~~	~~PERMEATE PROCESS FLOW DIAGRAM (INCL. BW PUMPS & AIR SCOUR BLOWERS)~~				
~~00 D-012~~	~~CHEMICAL FEED PFD I (HYPO)~~				
~~00 D-013~~	~~CHEMICAL FEED PFD II (POLYMER)~~				
~~00 D-014~~	~~CHEMICAL FEED PFD (CITRIC ACID)~~				
~~00 D-015~~	~~CHEMICAL FEED PFD (CARBON FOR MBR)~~				
~~00 D-016~~	~~UV PROCESS FLOW DIAGRAM~~				
~~00 D-017~~	~~RDT PROCESS FLOW DIAGRAM~~				
~~00 D-016~~	~~PLANT WATER PROCESS FLOW DIAGRAM~~				
~~00 D-017~~	~~SECONDARY DIGESTER CONVERSION PROCESS FLOW DIAGRAM~~				
01 D-101	FINE SCREEN LOWER PLAN	p	c	f	f
01 D-102	FINE SCREEN UPPER PLAN	p	c	f	f
01 D-301	FINE SCREEN SECTION I	-	c	f	f
01 D-302	FINE SCREEN SECTION II	-	p	c	f
02 D-101	AERATION TANKS LOWER LEVEL	p	c	f	f
02 D-102	AERATION TANKS LOWER LEVEL II	p	c	f	f
02 D-103	AERATION TANKS UPPER LEVEL	p	c	f	f
02 D-104	AERATION TANKS UPPER LEVEL II	p	c	f	f
02 D-301	AERATION TANKS SECTION I	-	c	f	f
02 D-302	AERATION TANKS SECTION II	-	c	f	f
03 D-101	MEMBRANE TANKS LOWER PLAN I	p	c	f	f
03 D-103	MEMBRANE TANKS UPPER PLAN I	p	c	f	f
03 D-301	MEMBRANE TANKS SECTION I	-	c	f	f
03 D-302	MEMBRANE TANKS SECTION II	-	c	f	f
04 D-101	PERMEATE & BW PUMPS	p	p	c	f
04 D-301	PERMEATE & BW PUMPS SECTION II	-	c	f	f
05 D-101	BLOWER ROOM PLAN & SECTION	p	p	c	f
05 D-102	PLANT WATER PUMPS PLAN & SECTION	-	c	f	f
06 D-101	UV DISINFECTION FACILITY LOWER PLAN (INCLUDES PUMPS)	p	p	c	f
06 D-301	UV DISINFECTION FACITILY SECTION I	-	c	f	f
06 D-302	UV DISINFECTION FACILITY SECTION II	-	c	f	f
07 D-101	CHEMICA AREA PLAN (HYPO, CITRIC, CARBON)	p	p	c	f
07 D-301	CHEMICAL AREA SECTION	-	p	c	f
08 D-101	RDT PLAN (INCLUDES POLYMER AREA)	p	c	f	f
08 D-102	RDT UPPER / PLATFORM PLAN	-	p	c	f
08 D-301	RDT SECTION I	-	p	c	f
09 DD-101	DIGESTER CONVERSION DEMO I	p	c	f	f
09 DD-102	DIGESTER CONVERSION DEMO II	-	p	c	f
09 D-101	DIGESTER CONVERSION PLAN I	p	c	f	f
09 D-102	DIGESTER CONVERSION PLAN II	-	p	c	f
99 D-001	TANK DETAILS I	-	p	c	f
99 D-002	TANK DETAILS II	-	p	c	f
99 D-002	DETAILS I	-	p	c	f
99 D-003	DETAILS II	-	p	c	f
99 D-004	DETAILS III	-	p	c	f
XX D-101	RO TANKS, CIP & PERMEATE TANKS LOWER PLAN	-	p	c	f
XX D-102	RO TANKS, CIP & PERMEATE TANKS UPPER PLAN	-	p	c	f
XX D-301	RO TANKS, CIP & PERMEATE TANKS SECTION I	-	p	c	f
XX D-001	RO REJECT & EVAP PONDS PLAN (ASSUMES 1 TYPICAL PLAN FOR ALL)	-	p	c	f
XX D-002	RO REJECT & EVAP PONDS SECTION (ASSUMES 1 TYPICAL SECTION FOR ALL PONDS)	-	p	c	f

BANNING WWTP DRAWING LIST
Estimated Level of Detail for Each Percent (%) Submittal
p - partial, c - complete, f - final

NO.	DRAWING TITLE	30% DESIGN	60% DESIGN	90% DESIGN	100% DESIGN
HVAC					
00 H-001	LEGENDS, SYMBOLS, NOTES AND ABBREVIATIONS	p	c	f	f
00 H-002	SCHEDULE I	p	c	f	f
~~00 H-003~~	~~SCHEDULE II~~				
05 H-100	SEQUENCE OF OPERATION AND CONTROL	-	p	c	f
05 H-101	FLOOR PLANS	p	c	f	f
05 H-102	ROOF PLAN	p	c	f	f
05 H-201	ELEVATION I	-	c	f	f
05 H-202	ELEVATION II	-	c	f	f
99 H-001	INSTALLATION DETAILS	-	c	f	f
Plumbing					
00 P-001	LEGEND, NOTES AND ABBREVATIONS	p	c	f	f
00 P-002	SCHEDULE I	p	c	f	f
~~00 P-003~~	~~SCHEDULE II~~				
05 P-100	UNDEGROUND SANITARY DRAIN	-	p	c	f
05 P-101	GROUND FLOOR PLAN SANITARY DRAIN/VENT	p	c	f	f
05 P-102	GROUND FLOOR WATER AND NATURAL GAS	p	c	f	f
05 P-201	PARTIAL FLOOR-BATHROOM UNDERGROUND	p	c	f	f
99 P-001	DETAILS I	-	p	c	f
99 P-002	DETAILS II	-	p	c	f
Fire Protection					
00 FP-001	LEGEND, NOTES AND ABBREVATIONS	p	c	f	f
05 FP-001	PIPING RISERS AND MAINS	p	c	f	f
99 FP-001	INSTALLATION DETAILS	-	p	c	f
Instrumentation & Control					
00 I-001	SYMBOLS, LEGEND AND GENERAL NOTES	p	c	f	f
00 I-002	NETWORK DIAGRAM I	p	c	f	f
00 I-003	NETWORK DIAGRAM II	-	p	c	f
01 I-001	HEADWORKS AND FINE SCREENS I	p	c	f	f
01 I-002	HEADWORKS AND FINE SCREENS II	-	p	c	f
02 I-001	AERATION TANKS I, II, III	p	c	f	f
03 I-001	MEMBRANE TANKS I, II, III	p	c	f	f
04 I-001	PERMEATE AND BACKWASH PUMPS	p	c	f	f
05 I-001	AERATION BLOWERS	p	c	f	f
05 I-002	MBR AIR SCOUR BLOWERS	p	c	f	f
06 I-001	UV SYSTEM	p	c	f	f
06 I-002	PLANT WATER PUMPS	-	p	c	f
07 I-001	SODIUM HYPO	p	c	f	f
07 I-002	POLYMER	p	c	f	f
07 I-003	CITRIC ACID	p	c	f	f
07 I-001	MICRO C	p	c	f	f
08 I-002	RDT I	p	c	f	f
09 I-001	DIGESTERS I	p	c	f	f
09 I-002	DIGESTERS II	-	p	c	f
99 I-001	MISC. I/O I	-	-	c	f
99 I-002	MISC. I/O II	-	-	c	f
XX I-001	RO P&D I	p	c	f	f
XX I-002	RO P&D II	p	c	f	f
XX I-003	EVAPORATION PONDS P&ID I	p	c	f	f
XX I-004	EVAPORATION PONDS P&ID II	p	c	f	f
XX I-005	MISCELLANEOUS DETAILS	p	c	f	f
XX I-006	PH ADJUSTING CHEMICALS P&ID	p	c	f	f
Electrical					
00 E-001	ELECTRICAL LEGEND, SYMBOLS AND ABBREVIATIONS	p	c	f	f
00 E-002	ELECTRICAL SITE PLAN I - POWER	p	c	f	f
00 E-003	ELECTRICAL SITE PLAN II - SYSTEMS	-	p	c	f
00 E-004	SINGLE LINE DIAGRAM I - EXST. SWBD-MS - DEMOLITION	-	p	c	f
00 E-005	SINGLE LINE DIAGRAM II - EXST. MCC-1 - DEMOLITION	-	p	c	f
00 E-006	SINGLE LINE DIAGRAM II - EXST. MCC-3M - DEMOLITION	-	p	c	f
00 E-007	SINGLE LINE DIAGRAM III - EXST. SWBD-MS - MODIFICATIONS	p	c	f	f
00 E-601	ELECTRICAL SCHEDULES I - AREA CLASSIFICATITON	-	p	c	f
00 E-602	ELECTRICAL SCHEDULES II - CONDUIT AND WIRE, LUMINAIRE	-	p	c	f
00 E-603	ELECTRICAL SCHEDULES III - GROUNDING, TABLE OF RESPON.	-	p	c	f
00 E-604	SCADA SYSTEM NETWORK DIAGRAM	-	p	c	f
00 E-605	DATA AND PHONE SYSTEM NETWORK DIAGRAM	-	p	c	f
00 E-606	FIRE ALARM SYSTEM NETWORK DIAGRAM	-	p	c	f
01 E-101	FINE SCREENS - POWER PLAN	-	p	c	f
01 E-201	FINE SCREENS - SYSTEMS PLAN	-	p	c	f
01 E-601	FINE SCREENS - RISER DIAGRAMS	-	-	c	f
02 E-101	AERATION TANKS - POWER PLAN I	-	p	c	f
02-E-102	AERATION TANKS - POWER PLAN II	-	p	c	f
02-E-201	AERATION TANKS - SYSTEMS PLAN	-	p	c	f
02 E-601	AERATION TANKS - RISER DIAGRAMS	-	-	c	f
03 E-101	MEMBRANE TANKS - POWER PLAN I	-	p	c	f
03 E-102	MEMBRANE TANKS - POWER PLAN II	-	p	c	f
03 E-201	MEMBRANE TANKS - SYSTEMS PLAN I	-	p	c	f
03 E-202	MEMBRANE TANKS - SYSTEMS PLAN II	-	p	c	f
03 E-601	MEMBRANE TANKS - RISERS	-	-	c	f

BANNING WWTP DRAWING LIST
Estimated Level of Detail for Each Percent (%) Submittal
p - partial, c - complete, f - final

NO.	DRAWING TITLE	30% DESIGN	60% DESIGN	90% DESIGN	100% DESIGN
04 E-101	PERMEATE & BACKWASH PUMPS - POWER PLAN	-	p	c	f
04 E-601	PERMEATE & BACKWASH PUMPS - RISER DIAGRAMS	-	p	c	f
04 E-602	PERMEATE & BACKWASH PUMPS - WIRING SCHEMATICS	-	p	c	f
05 E-001	PROCESS BUILDING - SINGLE LINE DIAGRAM I - SWBD-1	-	p	c	f
05 E-002	PROCESS BUILDING - SINGLE LINE DIAGRAM II - MCC-1	-	p	c	f
05 E-003	PROCESS BUILDING - SINGLE LINE DIAGRAM III - MCC-2	-	p	c	f
05 E-004	PROCESS BULIDING - PANELBOARD SCHEDULES I	-	p	c	f
05 E-005	PROCESS BUILDING - PANELBOARD SCHEDULES II	-	p	c	f
05 E-006	PROCESS BUILDING - PANELBOARD SCHEDULES III	-	p	c	f
05 E-101	PROCESS BUILDING - POWER PLAN I - GRADE LEVEL	-	p	c	f
05 E-102	PROCESS BUILDING - POWER PLAN II - GRADE LEVEL	-	p	c	f
05 E-105	PROCESS BUILDING - POWER PLAN V - ROOF LEVEL	-	p	c	f
05 E-201	PROCESS BUILDING - SYSTEMS PLAN I - GRADE LEVEL	-	p	c	f
05 E-202	PROCESS BUILDING - SYSTEMS PLAN II - GRADE LEVEL	-	p	c	f
05 E-601	PROCESS BULIDING - WIRING SCHEMATICS I	-	p	c	f
05 E-602	PROCESS BUILDING - WIRING SCHEMATICS II	-	p	c	f
05 E-603	PROCESS BUILDING - WIRING SCHEMATICS III	-	p	c	f
05 E-604	PROCESS BUILDING - RISER DIAGRAMS I	-	-	c	f
05 E-605	PROCESS BULIDING - RISER DIAGRAMS II	-	-	c	f
05 E-606	PROCESS BULIDING - RISER DIAGRAMS III	-	-	c	f
06 E-101	UV - POWER PLAN I	-	p	c	f
06 E-201	UV - SYSTEMS PLAN I	-	p	c	f
06 E-601	UV - RISER DIAGRAMS	-	-	c	f
07 E-101	HYPO/CITRIC/MICRO C - POWER PLAN I	-	p	c	f
07 E-102	HYPO/CITRIC/MICRO C - POWER PLAN II	-	p	c	f
07 E-201	HYPO/CITRIC/MICRO C - SYSTEMS PLAN I	-	p	c	f
07 E-202	HYPO/CITRIC/MICRO C - SYSTEMS PLAN II	-	p	c	f
07 E-601	HYPO/CITRIC/MICRO C - RISER DIAGRAMS	-	-	c	f
08 E-101	RDT - POWER PLAN I - GRADE LEVEL	-	p	c	f
08 E-102	RDT - POWER PLAN II - PLATFORM/UPPER LEVEL	-	p	c	f
08 E-201	RDT - SYSTEMS PLAN	-	p	c	f
08 E-601	RDT - RISER DIAGRAMS	-	-	c	f
09 ED-101	DIGESTER - ELECTRICAL DEMO PLAN I	-	p	c	f
09 ED-102	DIGESTER - ELECTRICAL DEMO PLAN II	-	p	c	f
09 E-101	DIGESTER - POWER PLAN I	-	p	c	f
09 E-102	DIGESTER - POWER PLAN II	-	p	c	f
09 E-201	DIGESTER - SYSTEMS PLAN II	-	p	c	f
09 E-202	DIGESTER - SYSTEMS PLAN II	-	p	c	f
09 E-601	DIGeSTER - RISER DIAGRAMS	-	-	c	f
99 E-501	ELECTRICAL DETAILS I	-	-	f	f
99 E-502	ELECTRICAL DETAILS II	-	-	f	f
99 E-503	ELECTRICAL DETAILS III	-	-	f	f
XX-E-001	MODS TO SITE PLAN	-	p	c	f
XX-E-002	RO SINGLE LINE DIAGRAM	-	p	c	f
XX-E-003	RO AND PONDS AREA SINGLE LINE DIAGRAM	-	p	c	f
XX-E-101	RO AREA POWER PLAN I	-	p	c	f
XX-E-102	RO AREA POWER PLAN II	-	p	c	f
XX-E-103	PONDS POWER PLAN I	-	p	c	f
XX-E-104	PONDS POWER PLAN II	-	p	c	f
XX-E-201	RO AREA SYSTEMS PLAN	-	p	c	f
XX-E-202	PONDS AREA SYSTEMS PLAN	-	p	c	f
XX-E-601	PANEL SCHEDULES I	-	p	c	f
XX-E-602	PANEL SCHEDUELS II	-	p	c	f
XX-E-603	RISER DIAGRAMS I	-	p	c	f
XX-E-604	RISER DIAGRAMS II	-	p	c	f
XX-E-605	WIRING SCHEMATICS I	-	p	c	f
XX-E-606	WIRING SCHEMATICS II	-	p	c	f
TOTAL		**102**	**252**	**269**	**269**

BANNING WWTP - SPECIFICATIONS LIST
Estimated Level of Detail for Each Percent (%) Submittal
p - partial, c - complete, f - final

NO.	SPECIFICATION SECTION TITLE	30% DESIGN	60% DESIGN	90% DESIGN	100% DESIGN
Division 1					
01045	Cutting, Coring and Patching	-	c	c	f
01065	Structural Tests and Inspections	-	-	c	f
01568	Erosion Control	-	-	c	f
01900	Seismic and Wind Requirements	-	c	c	f
Division 2					
02018	Vibration Monitoring	-	-	c	f
02050	Demolition and Alterations	-	-	c	f
02100	Site Preparation	-	-	c	f
02160	Temporary Excavation Support Systems	-	-	c	f
02210	Earth Excavation, Backfill and Grading	p	c	c	f
02223	Screened Gravel	-	c	c	f
02224	Bank-Run Gravel	-	c	c	f
02741	Select Borrow	-	c	c	f
02271	Geotextile Fabric	-	c	c	f
02431	Catchbasins	-	c	c	f
02435	Crushed Stone	-	c	c	f
02444	Chain-Link Fences and Gates	-	c	c	f
02560	Manholes	-	c	c	f
02615	Ductile-Iron Piping and Fittings	p	c	c	f
02620	PVC Gravity Sewer Pipe	p	c	c	f
02625	Corrugated HDPE Pipe	-	c	c	f
02630	PVC Pressure Pipe	p	c	c	f
02740	Bituminous Pavement and Appurtenances	-	c	c	f
02760	Portland Cement Concrete Pavement	-	c	c	f
02770	Concrete Sidewalks, Curbs and Gutters	-	c	c	f
02776	Parking Bumpers and Guardrails	-	-	c	f
XXXXX	HDPE Geomembranes	p	c	c	f
XXXXX	Geosynthetic Clay Liners	p	c	c	f
XXXXX	Geocomposite Drains	p	c	c	f
Division 3					
03100	Concrete Formwork	-	c	c	f
03200	Concrete Reinforcement	-	c	c	f
03250	Construction and Expansion Joints	-	c	c	f
03255	Polyvinyl Chloride Waterstops	-	c	c	f
03256	Hydrophilic Rubber Waterstops	-	c	c	f
03300	Cast-In-Place Concrete	-	c	c	f
03345	Concrete Floor Treatment	-	c	c	f
03350	Controlled Low Strength Material (CLSM)	-	c	c	f
03420	Precast Reinforced Concrete Vaults	-	c	c	f
03600	Grout	-	c	c	f
03730	Concrete Repair Work	-	c	c	f
03800	Leakage Testing of Containment Structures	-	c	c	f
Division 5					
05120	Structural Steel	-	c	c	f
05500	Miscellaneous Metal	-	c	c	f
05510	Aluminum Stairs, Ladders and Platforms	-	c	c	f
05540	Aluminum Plate Covers and Frames	-	c	c	f
Division 6					
06129	Fiberglass Baffles, Weirs, and Filter Washwater Troughs	-	c	c	f
06600	Fiberglass Reinforced Plastic Grating and Structural Fabrications	-	c	c	f
Division 7					
07840	Firestopping	-	c	c	f
07900	Joint Sealants	-	c	c	f
Division 8					
08100	Metal Doors and Frames	-	c	c	f
08331	Insulated Overhead Coiling Doors	-	c	c	f
08500	Windows	-	c	c	f
08710	Finish Hardware	-	c	c	f
08810	Glass and Glazing	-	c	c	f
08920	Translucent Wall Panels	-	c	c	f
Division 9					
09250	Drywall Construction	-	c	c	f
09300	Tile Work	-	c	c	f
09500	Acoustical Treatment	-	c	c	f
09940	Shop Painting	-	-	c	f
09941	Field Painting	-	-	c	f
Division 10					
10162	Metal Toilet Partitions	-	c	c	f
10200	Louvers	-	c	c	f
10525	Safety, First Aid, and Fire Fighting Equipment	-	-	c	f
10801	Toilet and Bath Accessories	-	c	c	f
Division 11					
11306	Submersible Solids Handling Pumps & Appurtenances	p	c	c	f
11316	Process Pumps and Appurtenances	p	c	c	f
11323	Chemical Diaphragm Metering Pumps and Appurtenances	p	c	c	f
11326	Mechanically Cleaned Fine Screen (In-Channel Rotary Type)	p	c	c	f
11332	Screenings Washpress & Appurtenances	p	c	c	f
11340	MBR Package	c	c	c	f
11341	RO Package	c	c	c	f

BANNING WWTP - SPECIFICATIONS LIST
Estimated Level of Detail for Each Percent (%) Submittal
p - partial, c - complete, f - final

NO.	SPECIFICATION SECTION TITLE	30% DESIGN	60% DESIGN	90% DESIGN	100% DESIGN
11347	Ultraviolet (UV) Disinfection	p	c	c	f
11350	Polymer Blend Feed Equipment and Appurtenances	p	c	c	f
11365	Rotary Drum Thickeners and Appurtenances	p	c	c	f
11377	Rotary Positive Displacement Blowers & Appurtenances	p	c	c	f
11383	Digester Equipment Specialties	p	c	c	f
11386	Spiral Heat Exchangers	p	c	c	f
11398	Diesel Generators	p	c	c	f
XXXXX	Mechanical Evaporators	p	c	c	f
Division 12					
12500	Furniture	-	-	c	f
12641	Laboratory Furniture	-	-	c	f
Division 13					
13120	Metal Building Systems	-	c	c	f
13121	Pre-Engineered Metal Building Systems	-	c	c	f
13141	Epoxy Coated, Bolted Steel Water Tank	-	c	c	f
13202	Polyethylene Chemical Storage Tanks & Appurtenances	-	c	c	f
13300	Instrumentation and Control System (General)	-	p	c	f
Division 14					
14300	Hoisting Equipment	-	c	c	f
14370	Bridge Cranes and Appurtenances	-	c	c	f
14549	Sludge Conveying Equipment (Shaftless Screw Type)	-	c	c	f
Division 15					
15056	Pipe Supports	-	c	c	f
15066	Stainless Steel Pipe and Fittings	-	c	c	f
15101	Process Valves and Appurtenances	-	c	c	f
15103	Stainless Steel Slide Gate and Appurtenances	-	c	c	f
15108	Stop Logs and Appurtenances	-	c	c	f
15109	Electric Motor Actuators and Appurtenances	-	c	c	f
15113	Short Body Tilting Disc Check Valves and Appurtenances	-	c	c	f
15114	Knife Gate Valves and Appurtenances (Bonneted Type)	-	c	c	f
15115	Combined Function Check Valves and Appurtenances	-	c	c	f
15177	Bladder Type Surge Tanks and Appurtenances	-	c	c	f
15270	Membrane Bioreactors (MBR)	-	c	c	f
15370	Process Piping and Appurtenances	-	c	c	f
15817	Fine Bubble Air Diffusers	-	c	c	f
15819	Air Diffuser Assemblies (Course Bubble Air Diffusers)	-	c	c	f
15820	Large Bubble Channel Mixing Systems and Appurtenances	-	c	c	f
15821	Large Bubble Anaerobic-Anoxic Tank Mixing Systems & Appurtenances	-	c	c	f
15855	Fiberglass Reinforced Plastic Duct, Dampers and Appurtenances	-	c	c	f
15856	Odor Control System	-	c	c	f
15806	Heating, Ventilating and Air Conditioning Systems	-	c	c	f
15052	Building Services Materials and Methods	-	c	c	f
15195	Natural Gas and Liquified Petroleum Gas (LPG) Piping Systems	-	c	c	f
15410	Plumbing Systems	-	c	c	f
15171	Motors	-	c	c	f
Division 16					
16050	General Electrical	-	c	c	f
16051	Electrical Demolition	-	c	c	f
16075	Disconnection of Service	-	c	c	f
16110	Raceways	-	c	c	f
16112	Busway	-	c	c	f
16113	Cablebus	-	c	c	f
16120	Conductors	-	c	c	f
16121	MV Cable	-	c	c	f
16140	Wiring Devices	-	c	c	f
16147	MV VFD	-	c	c	f
16151	Medium Voltage Electric Motors	-	c	c	f
16160	Panelboards	-	c	c	f
16161	Transformer-Panelboard Assembiles	-	c	c	f
16260	Low Voltage VFDs	-	c	c	f
16320	Dry Type Transformers	-	c	c	f
16321	Padmount Transformer and Fused Load Interrupter	-	c	c	f
16322	Primary Substation Transformers	-	c	c	f
16355	Unit Substations	-	c	c	f
16359	Electrical System Studies	-	c	c	f
16360	Closed Transition ATS	-	c	c	f
16361	LV Switchgear	-	c	c	f
16362	MV Switchgear	-	c	c	f
16366	LV Switchboards	-	c	c	f
16368	Power Monitoring	-	c	c	f
16400	Surge Protection Devices	-	c	c	f
16402	Underground Distribution System	-	c	c	f
16450	Grounding	-	c	c	f
16500	Lighting	-	c	c	f
16521	Exterior Lighting	-	c	c	f
16721	Fire Alarm	-	c	c	f
16900	Controls and Misc Equipment	-	c	c	f
16920	LV MCCs	-	c	c	f
16921	MV MCCs	-	c	c	f
16998	Field Inspection	-	-	c	f
16999	Field Acceptance Test	-	-	c	f
TOTAL		**22**	**132**	**146**	**146**

Exhibit C

Supporting Pricing Information

Task	Description	Cost of Work
Task 1	Design	
Task 1.1	Preliminary Design Report (PDR)	$ 352,948
Task 1.2	30% Preliminary Design	$ 691,617
Task 1.3	60% Design Phase	$ 915,033
Task 1.4	Hydraulic Analysis/ Hydraulic Profile	$ 54,452
Task 1.5	90% Design Phase	$ -
Task 1.6	Final Design Phase	$ 1,054,067
Task 2	Cost Estimating	
Task 2.1	Initial Baseline Cost Model and Updates (5)	$ 162,598
Task 2.2	GMP Development	$ 105,754
Task 3	Meetings & Reports	
Task 3.1	Kick-off Meeting/Workshop (1)	$ 42,934
Task 3.2	Progress Meetings and Reports (16)	$ 123,563
Task 3.3	Project Status Reports (Monthly with Invoice)	$ 47,709
Task 3.4	Risk Management Workshop (1)	$ 18,766
Task 3.5	Constructability Review Workshops (2)	$ 47,591
Task 3.6	SCADA Development and Scoping Workshops (4)	$ 55,966
Task 4	Investigation / Support	
Task 4.1	Potholing and Cultural Monitoring	$ 24,577
Task 4.2	Topographic Survey	$ 29,954
Task 4.3	Environmental Support ($30,000 allowance)	$ 27,444
Task 4.4	Geotechnical Investigation	$ 121,809
Task 4.5	Permitting Support and Title 22 and Title 27 (if needed) Eng Reports	$ 96,836
Task 4.6	Energy Tax Credits / Incentives	$ 25,009
Total		**$ 3,998,627**

	Personnel Title/Classification (Including Subconsultants)	Design Manager (Perigault)	Process Design Lead (Lena)	Water Process Lead (Franchi)	Process Design Lead II (Bowden)	Project Engineer (Hayroyan)	Project Controls (Minelli)	Air Quality Specialist (Various)	Permitting (Bartholomae)	Design Support (Various)	Safety (TBD)	Est/Proc/ Change Mgmt (Various)	Geotech (Various)	BIM Coordinator (TBD)	QRM (Harris)	O&M Lead ()	*AECOM Design Production	Hydraulic Engineer	DB Project Manager (Lawrence)	Pre-Construction Manager (Guillama)	Construction Manager (Reyes)	Estimator/Cost Controls	Estimator(s)	Scheduler	Commisioning Lea	Safety Director	Construction Superintendent	Operations Administrator	Summary
Task	**Description**	**Hours**	**Hours**	**Hours**	**Hours**	**Hours**	**Hours**	**Hours**	**Hours**	**Hours**	**Hours**	**Hours**	**Hours**	**Hours**	**Hours**	**Hours**	**Hours**	**Hours**	**Hours**	**Hours**	**Hours**	**Hours**	**Hours**	**Hours**	**Hours**	**Hours**	**Hours**	**Hours**	**Total Hours**
Task 1	Design																												
Task 1.1	Preliminary Design Report (PDR)	180	141	75	123	70	0	0	0	16	0	0	0	0	8	0	671	9	76	80	0	0	0	0	4	0	0	0	1452
Task 1.2	30% Preliminary Design	131	127	66	53	176	0	0	0	11	0	0	0	0	8	0	2698	9	85	81	0	0	0	0	8	0	0	0	3452
Task 1.3	60% Design Phase	110	127	75	35	220	0	88	0	7	0	99	19	0	8	0	3818	0	80	80	0	0	0	0	8	0	0	0	4774
Task 1.4	Hydraulic Analysis/ Hydraulic Profile	16	49	9	7	18	0	0	0	13	0	0	0	0	2	0	33	53	3	3	0	0	0	0	0	0	0	0	206
Task 1.5	90% Design Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Task 1.6	Final Design Phase	163	141	57	39	264	0	0	0	13	0	0	0	0	17	0	4465	0	120	120	0	0	0	0	32	0	0	0	5431
Task 2	Cost Estimating																												
Task 2.1	Initial Baseline Cost Model and Updates (5)	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	80	24	240	240	120	0	0	0	0	744
Task 2.2	GMP Development	16	14	9	0	0	0	0	0	0	0	0	0	0	0	0	110	0	24	40	8	80	160	40	0	0	0	0	502
Task 3	Meetings & Reports																												
Task 3.1	Kick-off Meeting/Workshop (1)	41	35	0	0	0	0	0	28	0	0	0	0	0	0	0	0	9	8	8	4	4	0	4	4	4	0	4	152
Task 3.2	Progress Meetings and Reports (16)	41	35	88	70	44	0	0	55	0	0	0	0	0	0	0	0	9	32	32	0	0	0	0	0	0	0	32	438
Task 3.3	Project Status Reports (Monthly with Invoice)	0	0	0	0	0	176	0	0	0	0	0	0	0	0	0	0	0	13	13	0	13	0	13	0	0	0	26	254
Task 3.4	Risk Management Workshop (1)	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	16	4	4	0	0	4	4	0	4	64
Task 3.5	Constructability Review Workshops (2)	16	14	9	7	0	0	0	0	7	0	13	0	0	0	0	22	0	16	16	16	16	0	8	0	8	16	8	192
Task 3.6	SCADA Development and Scoping Workshops (4)	41	21	9	18	0	0	0	0	7	0	0	0	0	0	0	55	0	16	16	0	0	0	0	16	0	0	16	214
Task 4	Investigation / Support																												
Task 4.1	Potholing and Cultural Monitoring	0	0	0	0	26	0	0	0	0	8	7	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	45
Task 4.2	Topographic Survey	0	0	0	0	18	0	0	0	0	8	7	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	36
Task 4.3	Environmental Support ($30,000 allowance)	20	0	0	0	18	0	0	83	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	125
Task 4.4	Geotechnical Investigation	2	0	0	0	18	0	0	0	0	24	7	221	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	275
Task 4.5	Permitting Support and Title 22 and Title 27 (if needed) Eng Reports	8	0	44	0	9	0	0	385	0	0	0	0	0	0	0	0	0	4	8	0	0	0	0	0	0	0	0	458
Task 4.6	Energy Tax Credits / Incentives	2	0	0	0	0	0	0	0	59	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	69
Total		**816**	**704**	**440**	**352**	**880**	**176**	**88**	**550**	**132**	**40**	**132**	**240**	**0**	**44**	**0**	**11,872**	**88**	**517**	**613**	**56**	**361**	**400**	**185**	**76**	**16**	**16**	**90**	**18,884**

Exhibit D

List of Reference Documents

N2W ENGINEERING, INC.
3240 El Camino Real. Suite 150
Irvine, CA 92602
WWW.N2WENG.COM

REV.	DATE	DESCRIPTION

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

PLOT DATE: 2/27/2024 11:24 AM

STATUS: PRELIMINARY

CLIENT:
CITY OF BANNING
789 N. SAN GORGONIO AVENUE
BANNING, CA 92220

PROJECT:
BANNING WWTP
2242 CHARLES STREET
BANNING, CA 92220

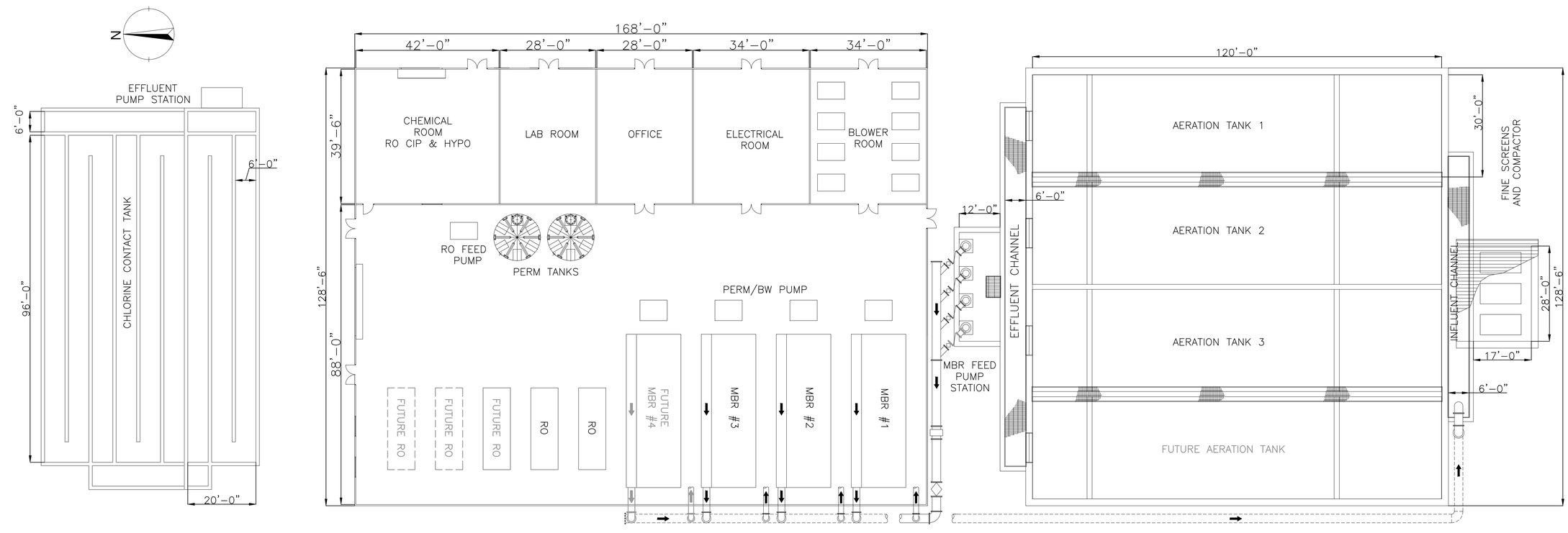
TITLE:
PROCESS FLOW DIAGRAM

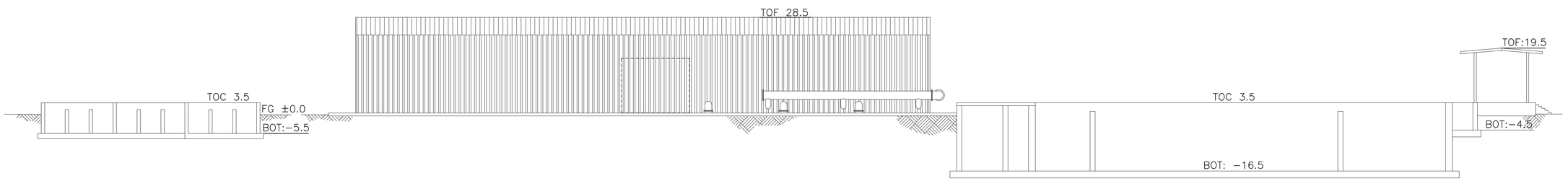
PROJECT NO.
105-0002

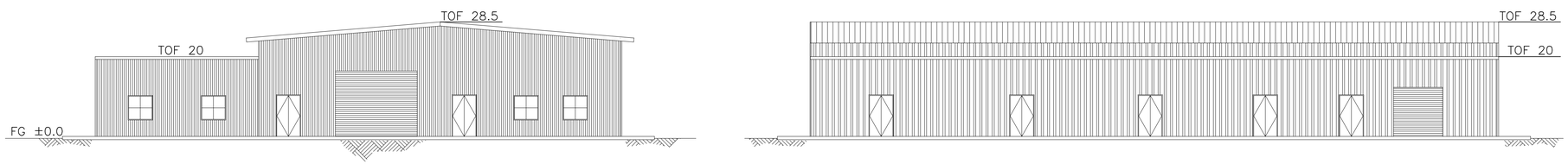
ORIGINAL SHEET SIZE
ANSI-D

SHEET:
G-101

FILE: C:\USERS\JAMES WANG\N2W ENGINEERING\N2W - SERVER\PROJECTS\105-CITY OF BANNING\105-0002 OWNER ADVISOR W&WWTP\6. PROJECT ENGINEERING AND DESIGN\06.01_PRELIMINARY DESIGN\DESIGN DRAWING\MBR PFD 11 04 2023.DWG







MECHANICAL PLAN AND SECTION
SCALE: 1/16"=1'–0"

N2W ENGINEERING, INC.
3240 El Camino Real. Suite 150
Irvine, CA 92602
WWW.N2WENG.COM

REV.	DATE	DESCRIPTION

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

PLOT DATE: 2/27/2024 11:14 AM

STATUS: PRELIMINARY

CLIENT:
CITY OF BANNING
789 N. SAN GORGONIO AVENUE
BANNING, CA 92220

PROJECT:
BANNING WWTP
2242 CHARLES STREET
BANNING, CA 92220

TITLE:
MECAHNICAL PLAN AND SECTION

PROJECT NO.
105-0002

ORIGINAL SHEET SIZE
ANSI-D

SHEET:
M-101

FILE: C:\USERS\JAMES WANG\N2W ENGINEERING\N2W - SERVER\PROJECTS\105-CITY OF BANNING\105-0002 OWNER ADVISOR W&WWTP\6. PROJECT ENGINEERING AND DESIGN\06.01_PRELIMINARY\ DESIGN\DESIGN DRAWING\MBR SITE PLAN JAMES WANG 02.12.2024.DWG

1175

24" BACKBONE PIPELINE

NP-1 BOOSTER STATION

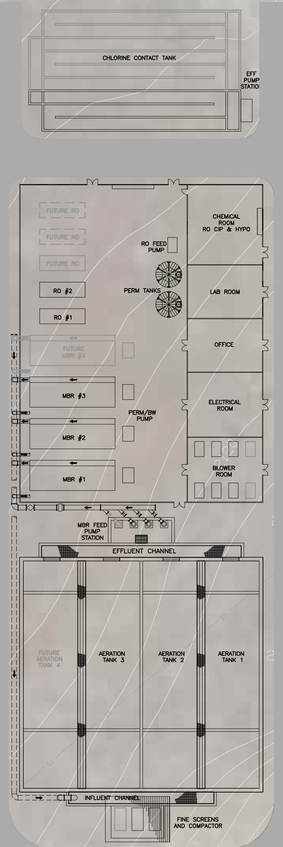
NP-1 RESERVOIR

268'-2"

NP-1 RESERVOIR AND BOOSTER

280'-4"

FUTURE WWTP EXPANSION



BENCH MARK

PRIMARY CLARIFIER #3

FERRIC SULFATE TANK

MECHANICAL THICKENER

EQ BASIN AND PUMP STATION

CONVERT EXISTING SECONDARY DIGESTER TO PRIMARY DIGESTER

CIVIL SITE LAYOUT
SCALE: 1"=40'-0"

N2W ENGINEERING, INC.
3240 El Camino Real. Suite 150
Irvine, CA 92602
WWW.N2WENG.COM

REV.	DATE	DESCRIPTION

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

PLOT DATE: 2/27/2024 11:13 AM

STATUS: PRELIMINARY

CLIENT:
CITY OF BANNING
789 N. SAN GORGONIO AVENUE
BANNING, CA 92220

PROJECT:
BANNING WWTP
2242 CHARLES STREET
BANNING, CA 92220

TITLE: CIVIL SITE PLAN

PROJECT NO. 105-0002

ORIGINAL SHEET SIZE ANSI-D

SHEET: C-101

FILE: C:\USERS\JAMES WANG\N2W ENGINEERING\N2W - SERVER\PROJECTS\105-CITY OF BANNING\105-0002 OWNER ADVISOR W&WWTP\6. PROJECT ENGINEERING AND DESIGN\06.01_PRELIMINARY\ DESIGN\DESIGN DRAWING\MBR SITE PLAN JAMES WANG 02.12.2024.DWG

CITY OF BANNING
WATER/WASTEWATER UTILITIES DEPARTMENT



INTIAL STUDY/
MITIGATED NEGATIVE DECLARATION

WASTEWATER TREATMENT PLANT EXPANSION AND PHASE I RECYCLED WATER SYSTEM

October 2007



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1179

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

CITY OF BANNING WASTEWATER TREATMENT PLANT EXPANSION AND PHASE I RECYCLED WATER SYSTEM

The City of Banning Public Utilities Department proposes to construct and operate the first phase of its recycled water system in Banning. The Proposed Project would include expansion of the existing 3.6 million gallons per day (mgd) wastewater treatment plant (WWTP), new pipelines to transport recycled water, a pump station, and a storage reservoir for recycled water.

The California Environmental Quality Act (CEQA), as established by the statute (Public Resources Code §§ 21000 *et seq.)*, requires that the environmental implications of an action by a local agency be estimated and evaluated before project approval. This Initial Study has been prepared in accordance with Section 15365 of CEQA Guidelines (14 Cal. Code Reg. 1500 *et seq.*). This Initial Study provides the assessment for a determination of whether the project may have a significant effect on the environment.

SECTION 1. PROJECT INFORMATION

1.1	**Project Title**	Wastewater Treatment Plant Expansion and Phase I Recycled Water System
1.2	**Lead Agency Name and Address**	City of Banning Water/Wastewater Utilities Department 176 E. Lincoln Street Banning, California 92220
1.3	**Contact Person and Phone Number**	Mr. Paul Toor, Director (951) 922-3283
1.4	**Project Location**	The City of Banning is located in Riverside County approximately 20 miles west of Palm Springs along the Interstate 10 (I-10) corridor. The City of Banning wastewater treatment plant (WWTP) is located at 2242 East Charles Street, south of the I-10 and south of the Banning Municipal Airport (Figure 1). The existing Banning WWTP is located on approximately 126 acres and includes treatment plant process units, an operations building, percolation ponds, sludge drying beds, and a vacant field west of the process units. Approximately 16 of these acres are vacant, and would be used for the proposed WWTP expansion. Adjacent land uses are rural residential and industrial. The City's animal shelter and Smith Creek are located south of the Banning WWTP. The proposed recycled water pipeline would be constructed from the Banning WWTP west along Charles Street, north on Hathaway Street, continuing west on Lincoln Street to South Sunset Avenue where it turns south on Sunset Avenue to the unpaved City access road (extension of Westward Avenue) that crosses unimproved land terminating at the Sun Lakes housing development on the west.
1.5	**Project Sponsor's Name and Address**	City of Banning Water/Wastewater Utilities Department 176 E. Lincoln Street Banning, California 92220



Figure 1. Location of the Proposed Project

1.6 General Plan Designation

The City of Banning General Plan designation for the Banning WWTP is Public Facilities and Industrial. Although the proposed recycled water pipeline would be placed primarily in existing or planned streets and the city of Banning rights-of-way, the alignment would cross over the following General Plan designations: Industrial, Airport Industrial, Public Facilities, General Commercial, Business Park, Very Low Density Residential, Low Density Residential, Medium Density Residential, Open Space Park, and Open Space Resources (City of Banning, 2007a).

1.7 Zoning

The location of the proposed project is zoned consistent with the Banning General Plan. The Banning WWTP is zoned Industrial. The proposed corridor for the recycled water pipeline is zoned for industrial, commercial and residential uses.

1.8 Description of the Proposed Project

The City of Banning proposes to expand its 3.6 mgd wastewater treatment plant and construct facilities to support its planned recycled water storage and distribution capability in accordance with the Banning Recycled Water Master Plan. The capacity of the existing WWTP, on approximately 126 acres of land, would expand from 3.6 mgd to 5.1 mgd. The additional 1.5 mgd capacity would include an advanced treatment process using a Membrane Bioreactor (MBR) to produce recycled water. The MBR treatment process would satisfy State of California Department of Health Services (DHS) Title 22 water quality requirements without filtration.

Construction of the proposed recycled water system will provide needed recycled water to the Sun Lakes housing development in

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southwest Banning. Recycled water would also be used for irrigation of parks, golf courses, street medians and greenbelts in the Phase I service area as shown on Figure 2. As shown on Figure 2, the Proposed Project would require construction at three locations:

- Approximately 16 of the 126 total acres of property at the Banning WWTP are undeveloped land, and would be used for the proposed WWTP expansion. This undeveloped land is west of the existing WWTP and south of Charles Street. This 16-acre site does not have any structures and is currently not in use. This undeveloped land would be used for the proposed WWTP expansion; a new controls building and laboratory, a 100-ft diameter water storage reservoir tank, chlorine contact basins, fine screening facility, recycled water pad and sump, and the MBR bioreactors would be constructed on the 16-acre site (Figure 3).
- Existing Well R1, east of the WWTP and its percolation ponds, would be retrofitted in order to extract and convey groundwater into the treatment process. Approximately 3,500 feet of buried pipeline would be constructed from the wellhead to the access road and along Charles Street to the WWTP expansion site.
- Approximately 5 miles of recycled water pipeline would be constructed from the existing WWTP to the Sun Lakes housing development to the west. The pipeline alignment would be primarily along existing roadways and within the City's right-of-way. The pipeline would run from the WWTP along Charles Street, north on Hathaway Street, continuing west on Lincoln Street to Sunset Avenue where it would turn south on Sunset Avenue to the unpaved City access road that crosses unimproved land to the Sun Lakes housing development on the west side (the unpaved access road is an extension of Westward Avenue). The recycled water line would continue west on this access road along with the existing water, sewer and gas line to reach the Sun Lakes housing development.

1.9 Background

The City of Banning Water/Wastewater Utilities Department is responsible for providing water and for the collection of wastewater from homes and businesses, including approximately 12,800 dwellings. The City has been providing high quality drinking water to the residents since 1967. More than 30,000 residents in Banning depend on the Department to provide water service to their homes and businesses. By supplying local groundwater pumped from City-owned wells, the Department is able to meet the daily demands of its customers.

The Banning WWTP was originally constructed in 1968. The plant is operated and maintained by United Water Service, a public-private partnership. Recent upgrades have resulted in an increase of secondary treatment capacity to 3.6 mgd. The headworks, completed in 1999, were designed for an ultimate capacity of 7.8 mgd. As of January 2005, the plant received an average flow of approximately 2.4 mgd (City of Banning, 2005). The WWTP is designed for an influent biological oxygen demand (BOD) of 250 milligrams per liter (mg/L). The WWTP is currently receiving flow with an average BOD concentration of 300 mg/L.

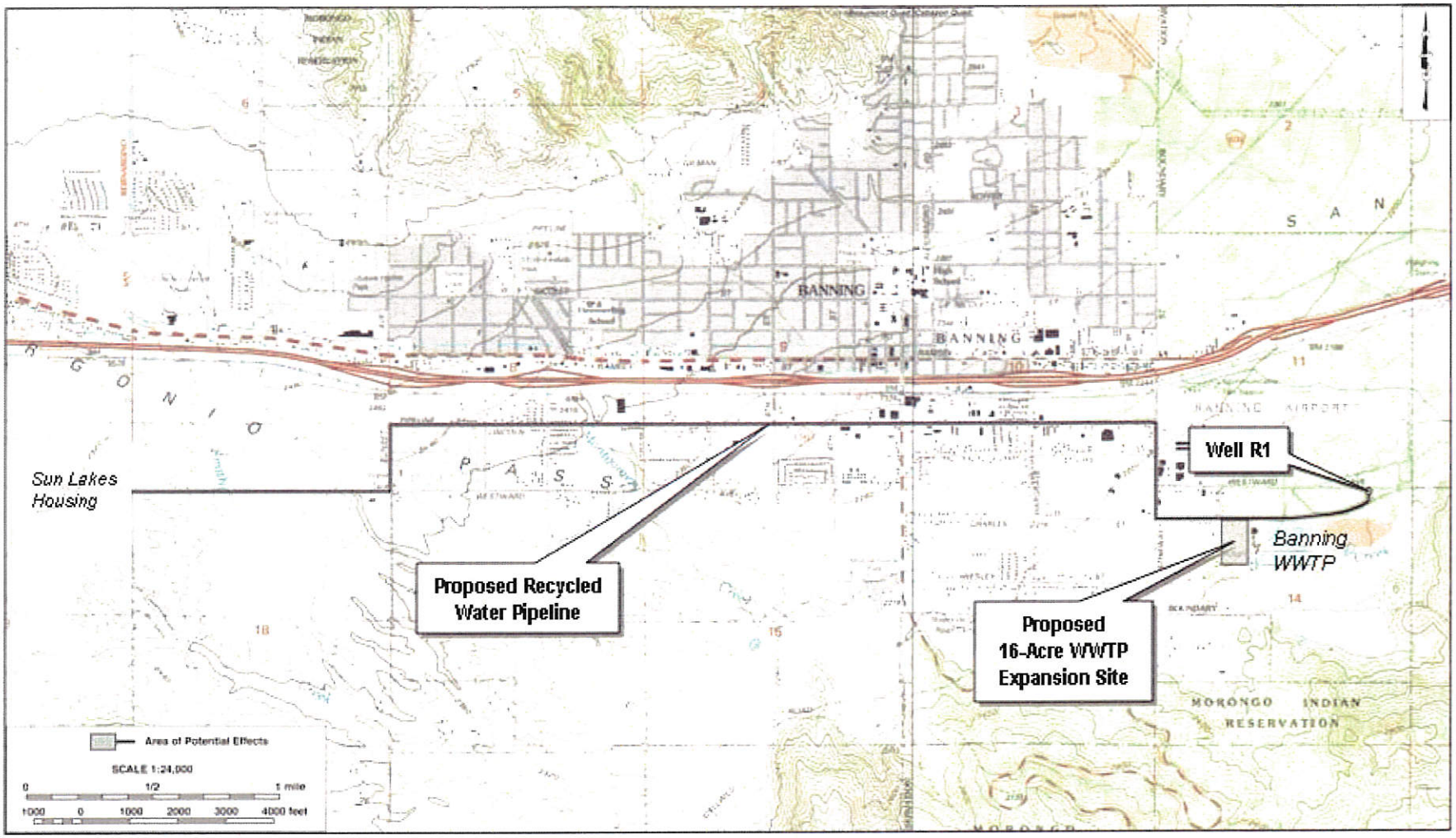

Figure 2. Proposed Expansion of the Banning WWTP and Phase I Recycled Water Distribution System

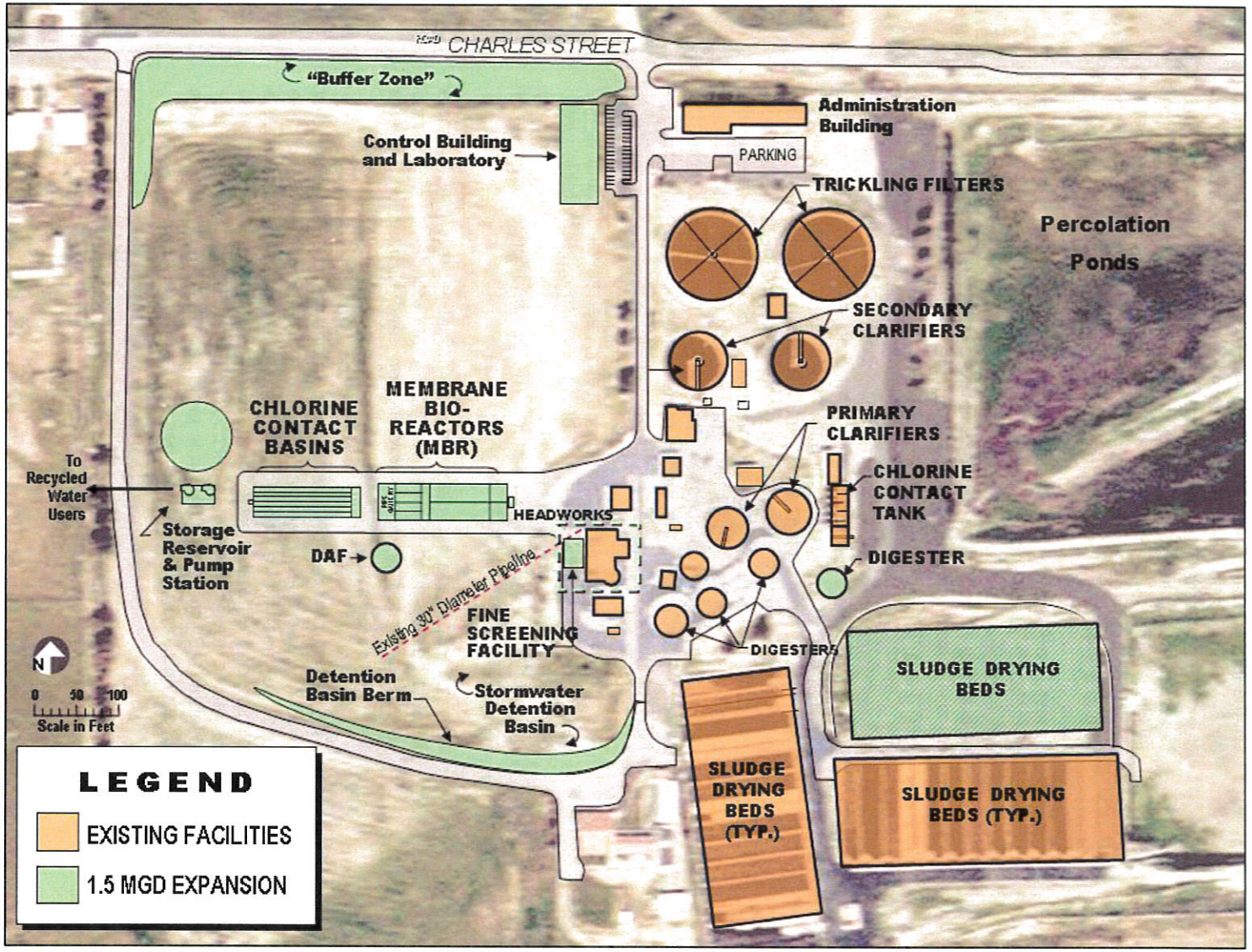

Figure 3. Proposed Expansion of the Banning WWTP on 16-Acre Site

Sewer services are provided to the entire city limits and to the unincorporated areas of Riverside County that surround the southeast section of the City. Collected wastewater is transported by 8-, 10-, 15- and 18-inch diameter sewer main lines connected to trunk lines. Wastewater received at the Banning WWTP undergoes treatment consisting of screening, grit removal, primary clarification, trickling filters, and secondary clarifiers. Anaerobic digesters and sludge drying beds are used for sludge stabilization and dewatering. The existing WWTP does not meet Title 22 treatment requirements[1].

Treated effluent from the existing WWTP is discharged to percolation ponds located west and northeast of the WWTP. This effluent subsequently recharges the East Banning storage unit (City of Banning, 2005). The City has future plans to evaluate the effect of the current effluent discharge on the groundwater quality and develop a mitigation plan, if necessary. As part of the evaluation, the City intends to submit the monitoring plan within three years following the approval of the Waste Discharge Permit for the existing 3.6 mgd WWTP and 1.5 mgd Water Reclamation Facility by the Regional Board. Once the monitoring plan is approved, the City will then install monitoring wells to establish a baseline for the groundwater quality. Depending on the outcome of the evaluation, the City will adopt a mitigation plan which could include, lining the percolation ponds, retrofitting the existing WWTP with nutrient removal treatment processes, or diluting the effluent from the existing WWTP with the higher quality effluent from the proposed MBR plant.

The City of Banning does not produce or use recycled water at this time. Treated wastewater is not being used to offset potable water demands. Golf courses, parks and other medians are currently being irrigated with potable water. The demand for recycled water continues to grow in the area.

In order to provide recycled water for irrigation, the WWTP would have to be upgraded to meet Title 22 tertiary standards. This would require activated sludge, microfiltration, and disinfection (City of Banning, 2005).

The demand for recycled water in the Banning area is projected at over 2,600 acre-feet per year (see Figure 4). Recycled water can be used to meet future irrigation demand and, subsequently, offset a portion of the potable water demand. Recycled water production is projected to increase at a much higher rate than recycled water demand. By the year 2030, it is projected that the City would have approximately 7,500 acre-feet per year of surplus recycled water.

[1] Title 22 is the State of California's code for health and safety standards for drinking water. Division 4 of this code requires an adequately oxidized, coagulated, clarified, filtered, and disinfected wastewater.

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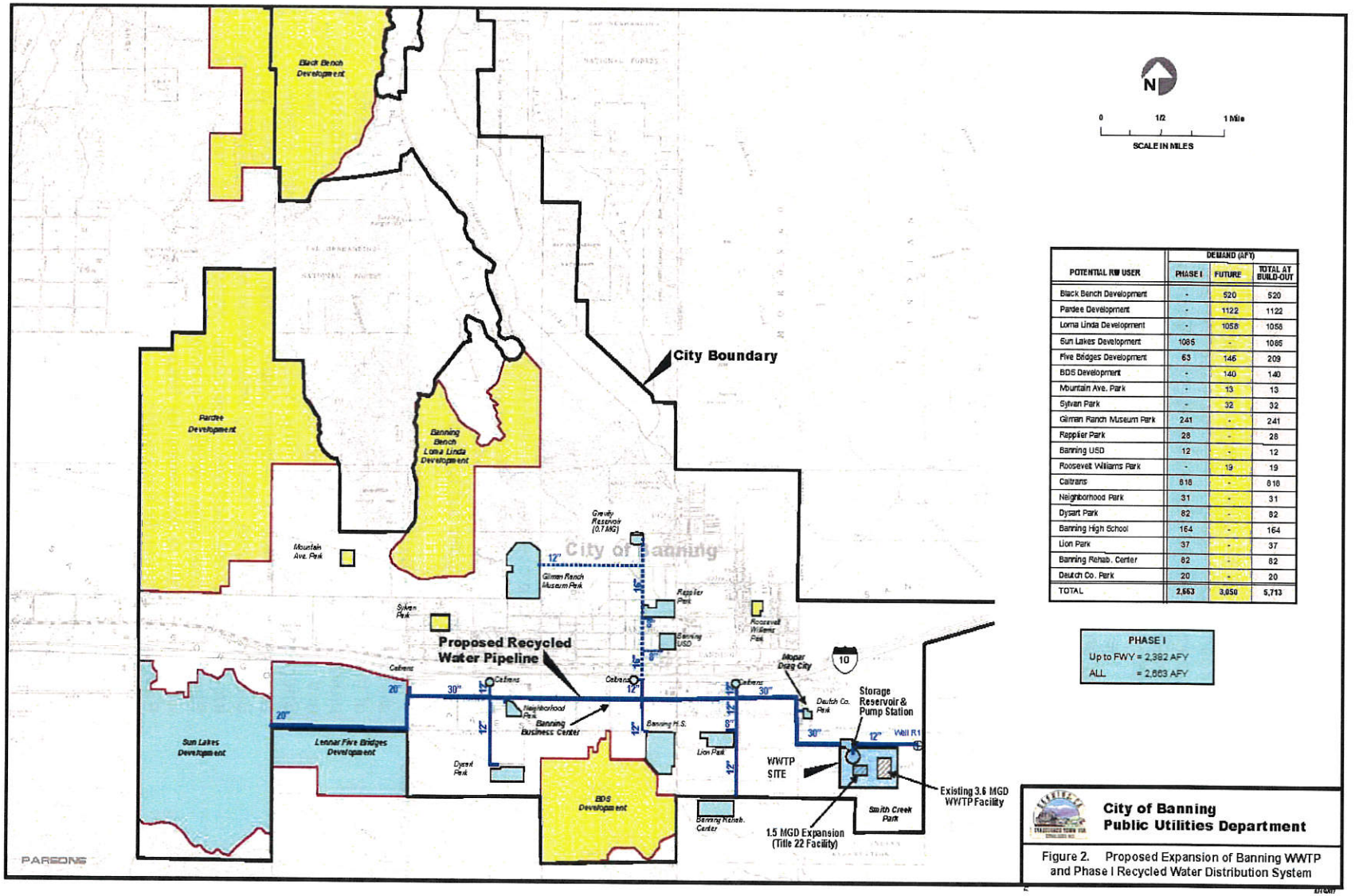

POTENTIAL RW USER	DEMAND (AFY) PHASE I	FUTURE	TOTAL AT BUILD-OUT
Black Bench Development	-	520	520
Pardee Development	-	1122	1122
Loma Linda Development	-	1058	1058
Sun Lakes Development	1085	-	1085
Five Bridges Development	63	146	209
BDS Development	-	140	140
Mountain Ave. Park	-	13	13
Sylvan Park	-	32	32
Gilman Ranch Museum Park	241	-	241
Rappler Park	28	-	28
Banning USD	12	-	12
Roosevelt Williams Park	-	19	19
Caltrans	816	-	816
Neighborhood Park	31	-	31
Dysart Park	82	-	82
Banning High School	164	-	164
Lion Park	37	-	37
Banning Rehab. Center	82	-	82
Deutch Co. Park	20	-	20
TOTAL	2,663	3,050	5,713

PHASE I
Up to FWY = 2,382 AFY
ALL = 2,663 AFY

Figure 2. Proposed Expansion of Banning WWTP and Phase I Recycled Water Distribution System

Figure 4. Projected Demand for Recycled Water in the Banning Area

The City of Banning will be submitting an application for a State Revolving Fund (SRF) loan to the State Water Resources Control Board. The SRF Loan Program is partially funded by the U.S. Environmental Protection Agency (USEPA) and subject to federal environmental regulations including the Endangered Species Act, the National Historic Preservation Act (NHPA) and the General Conformity Rule for the Clean Air Act. The USEPA has chosen to use the California Environmental Quality Act (CEQA) as the compliance base for California's SRF Loan Program, in addition to compliance with the ESA, NHPA and CAA. Collectively, the State Water Resources Control Board calls these requirements CEQA-Plus.

The State Water Resources Control Board, Division of Financial Assistance, is a Responsible Agency that will act on behalf of the USEPA to review and consider the CEQA document before approving the project's funding. The Board will make findings as to the adequacy of the CEQA document and distribute the applicant's CEQA document to selected federal agencies for review and comments before making a determination on adequacy. The CEQA document is also transmitted to the State Clearinghouse for state agency review as part of the CEQA process.

Additional environmental analyses are required for federal compliance associated with the CEQA-Plus process for the SRF loan application for the proposed Banning wastewater treatment plant expansion and Phase I recycling water system: Endangered Species Act; General Conformity Rule of the Clean Air Act; National Historic Preservation Act; Sections 401 and 404 of the Clean Water Act (Wetland Protection); Coastal Zone Management Act; Farmland Protection Policy Act; Floodplain Management; and, Wild and Scenic Rivers Act. The environmental analyses for applicable federal consultation processes are underway and will be included in the CEQA-Plus documentation that will accompany the SRF loan application. Supporting information for federal requirements is included in, or appended to, this Initial Study.

1.10 Purpose of the Project

The purpose of the project is to provide the existing Banning WWTP with capability to produce recycled water in accordance with Title 22 of the California Code of Regulations. The proposed project would provide a recycled water distribution system to meet the ongoing and projected water supply needs for the Sun Lakes and Five Bridges housing areas. The proposed project would enable availability and use of recycled water, which is not available in Banning at this time. Recycled water would be used primarily for irrigation of street medians, greenbelts, parks and golf courses. Surplus recycled water available during certain times of the year would be stored in reservoirs for future use or percolated into the East Banning groundwater aquifer.

1.11 Construction

Pipeline construction would typically include trenching to a depth of approximately five feet in a corridor approximately five feet wide, placing of bedding material, laying of pipe, backfilling the trench and repaving the street or restoring landscaping. While construction of up to a 2,000-foot segment of pipeline would be anticipated at any

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one time, approximately 1,000 linear feet of open trench is expected to occur at any time. While some temporary lane closures may be required, closures of entire roads would not be expected during the construction period. Construction vehicles and equipment would be staged onsite and would not require street closures. Installation of the recycled water pipeline would be required to be separated from the potable water pipeline by a distance of 10 feet, as required by the California Department of Health Services (DHS), unless special materials and construction methods are used.

Construction of the tanks would require site clearing grading and excavation. No demolition of any structures is anticipated. Construction of the water storage tank would require excavation of up to approximately ten feet of earth from the surface to construct the foundation and prepare the subsurface soil for the new facilities. An 1,800-gallon sodium hypochlorite tank would be constructed. Although temporary road closures would not be expected during the construction period, temporary lane closures may be required for pipeline installation. Construction vehicles and equipment would be staged onsite and would not require street closures.

The construction period for the Proposed Project would be approximately two years. Expansion of the Banning WWTP would require approximately eight months, and may occur concurrently with pipeline construction.

1.12 Operation

As shown on Figure 5, the treatment train for the MBR process includes liquid and solids as follows:

- Liquid handling units would incorporate headworks, fine screens, anoxic and aerobic tanks, chlorine contact tank and percolation ponds.
- The solids handling units are dissolved air flotation (DAF), anaerobic digesters and sludge drying beds.

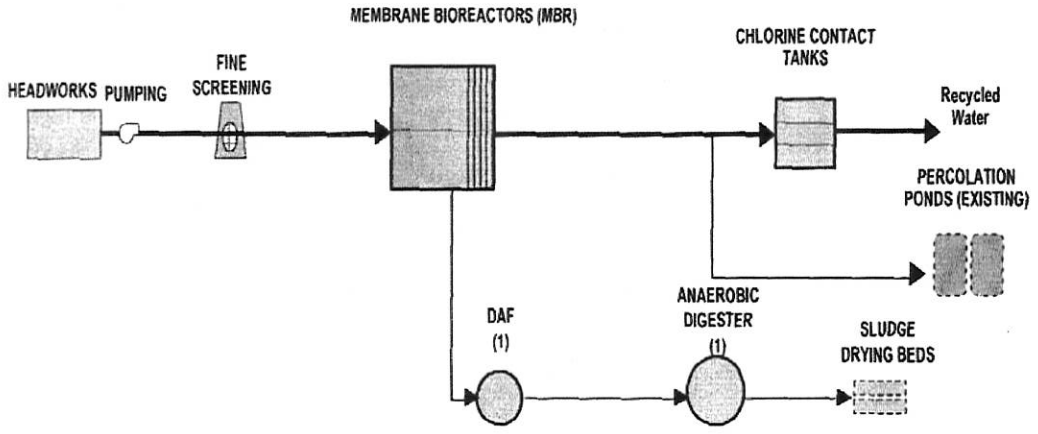

Figure 5. MBR Process Train

The influent pump, DAF circulation, sludge pumps and skimmer and digester mixing, and sludge circulation pumps would operate 24 hours per day. Operation of the expanded Banning WWTP and the proposed recycled water pipelines and reservoirs would be managed by the City of Banning Public Utilities Department.

1.13 Related Projects

A variety of housing, institutional and retail development projects are ongoing and planned in the vicinity of the Proposed Project. Table 1 identifies related projects that are planned, approved, or under construction in the project area. Figure 4 shows the locations of related projects in the area of the Proposed Project.

Table 1. Related Projects in the Vicinity of the Proposed Project

Property Owner	Dwelling Units (du)	Acre(s)	Year of Construction
Pardee Homes Butterfield	5,400	1,522	TBD
Black Bench Ranch	1,500	1,488	TBD
Lennar Five Bridges	2,160	548	2008
Banning Bench Loma Linda	944	600	TBD
Mopar Drag City	--	60	2008
Sun Lakes (Commercial)	--	47	2008
Banning Business Center	--	9	2006
Smith Creek Park	--	150	TBD

TBD to be determined

The Proposed Project is designed to provide recycled water storage and transmission piping to accommodate future growth in the Banning area. Several housing development projects in the area (i.e., Sun Lakes and Five Bridges) have been identified as potential beneficiaries of the Proposed Project.

The City of Banning is in various stages of approving four specific plans for new residential communities that will add almost 10,000 new dwelling units to the City. These new subdivisions also incorporate land for parks and open space, golf courses, medical offices, schools, commercial centers, and quasi-public uses such as churches and fire stations. In addition to these four major development discussed below, a number of small subdivisions ranging in size from 10 lots to 484 lots are in various stages of planning approval and/or construction.

Pardee Homes Butterfield Development

Pardee Homes has an approved specific plan, development agreement, and environmental impact report to build a major new community within the City of Banning on 1,552 acres of land east of Highland Springs Road and north of Wilson Avenue. This approved development includes 5,400 dwelling units. However, Pardee Homes is currently reexamining this plan and considering revisions that will change all housing within the development to single-family dwellings. The new community is approved for a 193-acre golf course, 20 acres of commercial development, 5 acres of medical offices, 75 acres of park land, a new school, and fire station.

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Black Bench Ranch Development

A specific plan for the development of Black Bench Ranch has been approved along with the environmental impact report for the development. That EIR is currently under legal challenge. As designed, the ranch's 1,488 acres will be developed with a maximum of 1,500 homes at a density of about 3 units per acre. The remainder of the ranch will include a new school site, 81 acres of parks and trails, and 869 acres of open space. A new roadway system will provide access and circulation for the ranch located on the mountain bench at Banning's northern boundary.

Lennar Five Bridges Development

Lennar has proposed a new community on 548 acres of land located west of Sunset Avenue south of the Interstate 10 and the Union Pacific Railroad right-of-way. The draft specific plan and draft EIR are under public review. Included in the development are 2,160 residences, mostly comprised of single-family dwellings with densities ranging from 3 units an acre to 8 units per acre. There are about 95 patio homes and 273 townhouses at a higher density, along with 51.6 acres of commercial retail space, 106.2 acres of parks and open space, and a site for a new fire station. A major improvement included as part of this development is the construction of a grade separation between the Union Pacific Railroad tracks and Sunset Avenue. The grade separation is being designed and is scheduled to begin construction in 2008.

Banning Bench Loma Linda Property Development

Approximately 600 acres of land on the north mountain bench east of Sunset Avenue has been approved for construction of 844 single-family homes and 100 cluster homes, a 16.2-acre village center with commercial and quasi-public uses, and 325 acres of recreation and open space, including a new golf course with clubhouse and driving range.

Mopar Drag City

Drag City, under construction just south of the Banning Municipal Airport runway, will be Southern California's first professional drag strip to be built in over 40 years. This venue will include a track surface, lights for night racing, and a depressed design to limit the impact of noise on adjacent areas. Drag City will include a quarter-mile regulation drag strip and bleacher seating for up to 10,000 people on about 60 acres.

Sun Lakes Commercial Project

The Sun Lakes Specific Plan includes 47 acres of vacant land north of the Sun Lakes residential subdivision and south of Interstate 10. This acreage, east of the Albertson's/K-Mart Shopping Plaza on Highland Springs Avenue, would be developed for commercial uses. Plans for this acreage would include an auto mall along the freeway and medical offices along Sun Lakes Boulevard.

Banning Business Center

The Banning Business Center is a new business park that will offer condominium space to office, light manufacturing and service retail users. Located on 9 acres at the northwest corner of 4th Street and Lincoln Street, the business park has access to Interstate 10 from the 8th Street exit, which is grade-separated from the Union Pacific Railroad tracks (City of Banning, 2007c).

Smith Creek Park

The City of Banning has developed a Master Plan for passive and active space at the 150-acre Smith Creek Park site located at the eastern terminus of Porter Road, north and south of Smith Creek southeast of the Banning WWTP. The regional park would include equestrian facilities, trails, stables, trailer parking, a grandstand, a riding ring, storage pen, locker facilities, fishing lake, dock, community center, picnic and recreational vehicle camping facilities, amphitheater, tennis and basketball courts, driving range, swimming pool, commercial retail center, restaurants and a hotel. A schedule for this development has not been established (City of Banning, 2007a).

1.14	**Surrounding Land Uses and Setting**	Airport, rural residential, vacant land, and mixed industrial, institutional, commercial uses.
1.15	**Other agencies whose approval is required**	State Water Resources Control Board, County of Riverside Transportation and Land Management Agency and Planning Department, Riverside County Flood Control and Water Conservation District, City of Banning.

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Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following page.

☐ Aesthetics	☐ Agricultural Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology /Soils
☐ Hazards & Hazardous Materials	☐ Hydrology /Water Quality	☐ Land Use /Planning
☐ Mineral Resources	☐ Noise	☐ Population /Housing
☐ Public Services	☐ Recreation	☐ Transportation /Traffic
☐ Utilities /Service Systems	☐ Mandatory Findings of Significance	

Determination: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☑ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature _____ Date 10/11/07

Paul Toor
Printed Name

City of Banning
Water/Wastewater Utilities Dept.
For

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
   a) Earlier Analysis Used. Identify and state where they are available for review.
   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:
   a) the significance criteria or threshold, if any, used to evaluate each question; and
   b) the mitigation measure identified, if any, to reduce the impact to less than significance

SECTION 2. CEQA ENVIRONMENTAL CHECKLIST

The Environmental Checklist and discussion of potential environmental effects were completed in accordance with Section 15063(d)3 of the California Environmental Quality Act Guidelines, 1998, to determine if the proposed project may have any significant impacts on the environment.

A brief explanation is provided for all determinations. A "No Impact" or "Less Than Significant Impact" determination is made when the project would not have any impact or would not have a significant effect on the environment for that issue area, respectively, based on a project-specific analysis

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics. Would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	
While the City of Banning General Plan does not evaluate aesthetics as a planning element, the City's land use policies encourage the preservation of ridgelines, watercourses, washes and greenbelts. Implementation of the General Plan, Zoning Ordinance and other regulatory mechanisms will help to promote conservation within the City of Banning. There are no designated scenic vistas in the City of Banning. The Proposed Project area south of the I-10 freeway is relatively flat, with the San Bernardino Mountains serving as a scenic backdrop. The project setting is generally industrial with rural residential and agricultural uses. There are no scenic vistas in the project area. The proposed expansion of the Banning WWTP and construction of recycled water pipelines would not obstruct general views of the mountains or other scenic aspects of the area. All recycled water pipelines would be located underground and would not adversely affect any scenic views. The effect of the Proposed Project on scenic vistas would be considered less than significant.				
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
There are no State- or County-designated scenic highways within the project area. Although expansion of the Banning WWTP will be visible to some degree in the local area, this visual impact would not be considered a substantial degradation of the visual quality of the area. Therefore, impacts to scenic resources from the Proposed Project would be considered less than significant.				
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
The project setting within the City of Banning is primarily industrial with rural residential and agricultural land uses in the vicinity. The proposed expansion of the Banning WWTP would be visible in the local area, but would not result in a substantial degradation of the visual quality of the area. All pipelines would be purple (painted purple, constructed of purple pipe or with purple bagging), located underground and would not adversely affect the existing visual quality of the project area. Construction of the recycled water pipeline may degrade the visual quality of the project area during construction activities, but this situation would be temporary and considered less than significant.				

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
The Proposed Project would not result in any conflicts with plans and policies for preservation of open space, and would not adversely impact the visual character and quality of the project area. The Proposed Project would not substantially degrade the visual character of the site and its surroundings.				
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?			X	
The developed portions of Banning exhibit typical urban sources of light and glare. Construction activities would occur primarily during daylight hours; therefore, no new sources of artificial lighting would be necessary during construction at the WWTP or along the pipeline route. The proposed WWTP expansion area would be equipped with artificial lighting for security purposes. This new lighting would be directed inward and not adversely affect day or nighttime views in the area. Therefore, impacts from light and glare would be considered less than significant.				
II. Agriculture Resources. In determining whether impacts to agriculture resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?			X	
The State of California Department of Conservation Division of Land Resources has surveyed land as part of its Farmland Mapping and Monitoring Program. Most of the City of Banning south of the I-10 is classified as Developed or Built-up Land. The proposed recycled water line would cross land that is classified as Williamson Act – Non-Prime Agricultural Land from Sunset Avenue to Sun Lakes housing. Other areas of the Proposed Project are not in the Williamson Act Program. The Proposed Project would not result in conversion of farmland. Impacts to farmland would be considered less than significant.				
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
There are no Williamson Act contracts in place for the affected project area. Therefore, the Proposed Project would not result in any conflicts to existing zoning or Williamson Act contracts.				
c) Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				X
The Proposed Project would not result in the conversion of farmland into non-agricultural uses. The impact of the Proposed Project on farmland would be considered less than significant.				
III. Air Quality: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				

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Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	

The Proposed Project would result in temporary air pollutant emissions during construction of the expanded WWTP and pipelines, as shown on Table 2. The construction-related air pollutant emissions would not result in any conflict or obstruction with the objectives or implementation of the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan. Impacts to air quality are considered less than significant.

Table 2. Estimated Air Pollutant Emissions from the Proposed Expansion of the Banning WWTP and Construction of Phase I Recycled Water Pipelines

Source	Emissions (lb/day)				
	CO	ROG	NOX	SOX	PM10
Expansion of Banning WWTP	5.74	1.13	14.00	1.48	31.65
Installation of Pipeline from Well R1	0.00	0.00	0.09	0.00	4.87
Installation of Pipeline to Sun Lakes	0.09	0.00	0.17	0.00	72.78
Total	**5.83**	**1.13**	**14.26**	**1.48**	**109.30**
SCAQMD Threshold (lb/day)	550	75	100	150	150

CO = carbon monoxide
ROG = reactive organic gases
NOX = nitrogen oxides
SOX = sulfur oxides
PM10 = particulate matter less than or equal to 10 microns in diameter

Particulate matter emissions shown on Table 2 do not reflect watering for dust control. Although impacts to air quality are considered less than significant, emissions of particulate matter can be reduced by approximately 50 percent with watering for dust control (a standard construction practice).

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	

The Proposed Project would result in the generation of air contaminant emissions that would result from the use of construction equipment and construction worker vehicles (Table 2). These emissions would not exceed SCAQMD significance thresholds. Construction activities would be temporary and would not be expected to result in any adverse, long-term effects on air quality because the generation of air pollutants primarily associated with temporary construction activities would be limited to pipeline installation. Impacts to air quality from construction of the Proposed Project would be considered less than significant. Once the project has been completed, it is estimated that there would be no net change in operational vehicles that would travel within the service area. The impacts to air quality from exhaust emissions from these vehicles would be considered less than significant.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?			X	

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
The project area is located in Salton Sea Air Basin and managed by the South Coast Air Quality Management District. The nearest monitoring station is the Banning Air Quality Monitoring Station. The area is classified as a non-attainment area for ozone precursors (reactive organic compounds and nitrogen oxides) and particulate matter. The net increase in emissions of these pollutants that would be attributed to construction of the Proposed Project would not be expected to exceed federal or state standards, nor would they be considered cumulatively considerable.				
d) Expose sensitive receptors to substantial pollutant concentrations?			X	
The nearest sensitive receptors to the site are rural residences immediately west of the 16-acre expansion site west of the Banning WWTP (there are no schools or hospitals within 0.5 mile of the WWTP). None of the residents are expected to be exposed to substantial construction-related pollutants as a result of the Proposed Project. Impacts to sensitive receptors would be considered less than significant.				
e) Create objectionable odors affecting a substantial number of people?				X
No activities would occur, and no materials or chemicals would be stored on-site, that would have the potential to cause odor impacts during project activities at the site. Sodium hypochlorite would be stored on site for use in the treatment process. This material would be stored in a closed system and would not be expected to cause odors. Therefore, adverse odor impacts affecting a substantial number of people would not be expected to occur.				
IV. Biological Resources. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
The project area within the Banning city limits is characterized by industrial and rural residential uses. The project area was surveyed by a qualified biologist in April 2007. The Proposed Project would include construction (e.g., ground disturbance) at four locations, as described herein. • The Well R1 site and its associated pipeline to the 16-acre expansion site are inside the Banning WWTP property fenceline and have been partially cleared. An existing dirt road provides access to the percolation ponds and Well R1, which is located upon flat ground. Although the dirt road is heavily traveled, this area is characterized by presence of buckwheat (*Eriogonom fasciculatum*), filaree (*Erodium* sp.) and mustard (*Brassica* sp.). Lark sparrow (*Chondestes grammacus*), western kingbird (*Tyrannus verticalis*), killdeer (*Charadrius vociferous*) and jack rabbit (*Lepus californicus*) were observed on April 4, 2007. Small burrows west of the well may be used by pocket mouse species. The area may potentially serve as habitat for four species considered sensitive by the California Natural Diversity Data Base (CNDDB): San Diego black-tailed jack rabbit (*Lepus californicus bennettii*); pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*); Los Angeles pocket mouse (*Perognathus longimembris brevinasus*); and, coast San Diego horned lizard (*Phrynosoma coronatum blainvillei*). None of these four California Species of Special Concern (CSC) were observed on April 4, 2007.				

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Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

- The 16-acre expansion site west of the existing Banning WWTP is generally flat with domestic olive trees (*Olea europaea*) that have been planted along two sides of the field as hedgerows. The property is mowed twice yearly. Vehicular traffic along a perimeter road into the Banning Animal Shelter crosses the parcel near its southern boundary. Plants found on the site include California croton (*Croton californicus*), mustard, yellow fiddleneck (*Amsinckia* sp.), sun cup (*Camissonia* sp.) and annual grasses. Common raven (*Corvus corax*), American crow (*Corvus brachyrhynchos*) and burrows of California ground squirrel (*Spermophilus beecheyi*) were observed on the site on April 4, 2007. No burrowing owls (*Athene cunicularia*) were seen flying or posting on dirt mounds on April 4, 2007, and no ground squirrel burrow had indirect evidence of burrowing owls inhabiting this site.
- The proposed recycled water pipeline corridor from the Banning WWTP to Sunset Avenue would be constructed entirely on paved surfaces, primarily in residential areas. A natural gas pipeline and water supply line are located beneath Lincoln Street (and other streets along this route). Biological resources are limited to annual, introduced species common to urban areas.
- The proposed recycled water pipeline corridor from Sunset Avenue to the Sun Lakes housing area would be constructed on a gravel surface comprising the extension of Westward Avenue. This access road experiences frequent vehicular traffic and bisects the proposed Five Bridges housing property. Although a corridor south of the roadway is fenced, this property is used for cattle grazing. Utility lines (gas and fiber optics) are located on the north side of Westward Avenue, with an aboveground, suspended sewage pipe crossing to the south side of the roadway near the wash of Smith Creek. A series of bridges provide the roadway over the large wash. Wildlife observed on April 4, 2007 included Say's phoebe (*Sayornis saya*), mourning dove (*Zenaida macroura*), European starling (*Sturnis vulgaris*), Brewer's blackbird (*Euphagus cyanocephalus*), crow, raven, and turkey vulture (*Cathartes aura*). Although evidence of pocket gopher (*Thomomys bottae*) was observed, the dirt shoulders of the road contain no biological resources of concern.

The USFWS identified 15 federally protected species known to inhabit locales in the general region of the City of Banning. With the exception of Stephen's kangaroo rat and mountain yellow-legged frog, none of these species occur any closer than 3 miles from the project site (most are known only from very considerably farther away than 3 miles from the project site).

- Stephen's kangaroo rat *(Dipodomys stephensi),* a federal-listed endangered and state-listed threatened species, generally occurs in annual and perennial grasslands, but has also been found to inhabit sparse coastal sage scrub or sagebrush plant assemblages. This small mammal requires areas with well-drained, gravelly or sandy soil for digging their burrows. Stephen's kangaroo rat has been recorded on the Five Bridges housing site. CNDDB records show one entry, from April 1939, representing one animal now in the collections at the Museum of Vertebrate Zoology at Berkeley. No further information about the location or burrows at this location was recorded in 1939. During the site reconnaissance conducted in April 2007, burrows were found which probably were dug by kangaroo rats. The location of each burrow is shown in Appendix D (Biological Resources Survey Report). None of the burrows are closer than 950 ft to the proposed alignment on Westward Avenue. These burrows are at a sufficient distance from the proposed trench on Westward Avenue and would not be affected by the Proposed Project. Suitable habitat for Stephens' kangaroo rat does not occur along the heavily utilized access roadway between Sunset Avenue and the Sun Lakes housing area. The Proposed Project would not result in loss of habitat for this species because the pipeline would be installed in existing roadways.

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
• Yellow-legged frog (*Rana mucosa*), a true frog (Family Ranidae) listed by the USFWS as endangered, but without formal listing by the State. This species always occurs very near water. A single occurrence of this species within 0.25 mile of the project site is from a collection made in 1925 at a vaguely described locale. The species possibly has been extirpated from this locale. The mapped occurrence (shown as 1.0 mile in radius) would intersect the project area only along Lincoln Street at about San Gorgonio Avenue. The Proposed Project would not result in loss of habitat for this species because the pipeline would be installed in existing roadways. No evidence of any special status species was observed along the proposed alignment of the pipeline (west on Lincoln Street to Sunset Avenue, south on Sunset to Westward Avenue, west on the north shoulder of Westward Avenue). The vibration from trenching does not propagate very far through alluvial sediments such as occur along Westward Avenue. Therefore, there would be no concern for kangaroo rats that may inhabit burrows several hundred meters north of Westward Avenue. Vibrations propagated through the ground would not influence birds. Noise generated by diesel engines of tracked excavators, front loaders, and other construction vehicles would likely drive birds away from the immediate vicinity, but not otherwise cause effects. The City would ensure that the following mitigation measures to avoid or minimize habitat disturbance would be incorporated into project design and planning: • *Pipeline design will be limited to the disturbed shoulders of the existing roadway along Westward Avenue. Placement of recycled water pipeline in any washes or creeks will be avoided.* • *A qualified biologist will be present during trenching to monitor ground disturbance to ensure that construction vehicles do not stray, or materials placed, north of Westward Avenue into grasslands of marginal quality but where kangaroo rat burrows might occur north of the project site.* • *Pipeline installation along Westward Avenue from Sunset Avenue to the Sun Lakes housing area would be conducted by minimizing the width of the trench corridor to less than 5 feet, wherever possible.* • *Construction laydown and staging areas would be sited along nearby paved road surfaces and would not be located upon any undisturbed, natural areas.* • *To avoid potential impacts, construction work limits would be clearly designated on construction plans and specifications.* • *To retain native plant material, any topsoil removed from the site would be stockpiled, covered and replaced on-site, as much as possible. During pipeline construction, any non-paved areas that are trenched would be returned to their original condition following pipeline installation.* Implementation of these mitigation measures would avoid impacts to listed species. With implementation of these mitigation measures, the proposed project would not adversely affect listed and sensitive species known to occur in the vicinity.				
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?			X	
The project sites do not contain riparian habitat. Pipelines would be constructed within existing roadways and not within drainage areas. Impacts to riparian habitat or other sensitive natural communities would be considered less than significant.				

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Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
A jurisdictional delineation of resources defined by Section 404 of the Clean Water Act was conducted in 2004. This delineation identified drainages associated with Pershing and Smith Creeks which run through the proposed Five Bridges property. The proposed recycled water pipeline corridor would be placed within the existing access road (Westward Avenue). None of the proposed pipeline segments or other proposed facilities would be sited within U.S. Army Corps of Engineers-defined wetlands. The Proposed Project would not result in physical modifications or placement of facilities in, or adjacent to, streams, flood control channels or wetlands.				
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		X		
The Proposed Project would not be expected to interfere with movement of small mammals. The proposed recycled water pipeline would be constructed within the existing roadways. With incorporation of the mitigation measures described in Section IV.a, impacts to wildlife movement would be considered less than significant.				
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
The Proposed Project would not result in the need to remove any trees that are subject to local policies or ordinances. The Proposed Project would not result in the removal of any coast live oak trees. No conflicts with local policies or ordinances would be expected.				
f) Conflict with the provision of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X
The Proposed Project is not located in a Cell, Cell Group, or Subunit of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). Developed by the Riverside County Transportation and Land Management Agency in order to map out potential reserve areas for habitat conservation, the MSHCP is a comprehensive, multi-jurisdictional effort that focuses on the conservation of 146 species. The MSHCP consists of a reserve system of approximately 500,000 acres of which approximately 347,000 acres are currently within public ownership and 153,000 acres are currently in private ownership. The MSHCP includes 250,000 acres of privately owned land proposed as potential criteria area, including the project site, and will ultimately be reduced to 157,000 acres designated as habitat conservation land.				

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
The Proposed Project would not significantly alter the existing setting, or remove any significant habitat or biological resources. At this time, the project area is not within an area designated for conservation or management under the MSHCP. The Five Bridges site is not considered to be an integral part of any regional or otherwise identified wildlife corridor (Impact Sciences, Inc., 2006). The proposed recycled water pipeline corridor is not located within habitat or fee area for any listed species. Therefore, the Proposed Project would not conflict with the MSHCP or any other existing conservation plan.				
V. Cultural Resources. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?				X
A cultural resources investigation was conducted for the project area (CRM Tech, 2007). This investigation included a records search to determine the extent of previous cultural resource investigations in the area. Archaeological site records, historic maps, listing of resources on the National Register of Historic Places (NRHP), California Register of Historic Resources (CRHR), California Points of Historical Interest, California Landmarks, and National Historic Landmarks were reviewed to determine whether any archaeological sites or architectural resources exist in the project area. Results of the records search revealed that no historic properties (resources listed on or determined eligible for listing on the NRHP or CRHR) are located within or adjacent to the project area. However, during the field survey, one previously unrecorded historic-period site, 33-16207 was identified within the APE. Site 33-16207 is located on land once owned by Walter Hathaway; however, some of the historic landscape features are likely to post-date Hathaway's association with the property. Therefore, Site 33-16207 does not qualify as a historic property. The Proposed Project would not result in any adverse change to historical resources.				
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?		X		
The cultural resources investigation conducted for the project area (CRM Tech, 2007) identified one previously unrecorded historic-period site with potential archaeological significance, Site 33-16208 (CA-Riv-8364), within the APE. Site 33-16208, a refuse deposit containing temporally and morphologically diagnostic consumer items from the 1920s-1930s, has the potential to yield important archaeological data. The proposed pipeline alignment would be located to avoid Site 33-16208. Two mitigation measures have been identified: • *The pipeline from Well R1 to the Banning WWTP would be aligned to avoid Site 33-16208. The City would ensure that a qualified archaeological monitor flags the boundaries of this site prior to any groundwork, and that the monitor is present during pipeline trenching at this location.* • *In the event any archaeological materials or subsurface deposits are unearthed during earthmoving activities, the construction contractor would cease activity in the affected area (e.g., redirect activities into another area) until the discovery can be evaluated by a qualified archaeologist or historic resources specialist, as required, and appropriate treatment measures implemented.* With incorporation of these mitigation measures into the project, impacts to archaeological resources would be considered less than significant.				

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Directly or indirectly destroy a unique paleontological resource or site of unique geologic feature?		X		

Based on previous and current investigations, no paleontological resources are known in the project area. No fossil vertebrate localities have been identified to date within or near the project area. Although no paleontological resources have been recorded, the proposed recycled water corridor along the extension of Westward Avenue (from Sunset Avenue to the Sun Lakes housing development) is located in Pleistocene older alluvium. Similar Pleistocene sediments located in the region have been found to have a high potential for paleontologic resources and, therefore, the paleontological sensitivity of the site is considered to be high. The occurrence of fossil sites in Pleistocene older alluvium suggests that there is a potential for additional similar, scientifically important fossil remains to be encountered in the project area. Excavations into older Pleistocene alluvium found near washes and flood control easements have previously encountered vertebrate fossils.

Earthmoving activities associated with project construction, as well as the unauthorized collection of fossil remains by construction personnel, could result in the loss of previously unrecorded fossil sites and the remains of extinct land mammal species. This loss would be a significant adverse environmental impact to paleontological resources. To avoid potential impacts to paleontological resources, the District would ensure that the mitigation measures described in Section IV.a are incorporated into project planning (these measures would restrict ground disturbance to specified work areas). In addition, the following mitigation would be implemented during construction:

- *In the event paleontological resources are encountered during earthwork, the construction contractor would cease activity in the affected area (e.g., redirect activities into another area) until a qualified paleontologist can evaluate the discovery, and implement appropriate treatment measures. The paleontologist would determine if the paleontological material should be salvaged, identified and permanently preserved. Curation of specimens into an accredited museum repository would be conducted by a qualified paleontologist, who would also prepare a report of findings for the City of Banning.*

With incorporation of this mitigation measure, impacts to nonrenewable paleontologic resources would be considered less than significant.

d) Disturb any human remains, including those interred outside of formal cemeteries?		X		

The Proposed Project is not expected to encounter any human remains as a result of earthmoving activities. A search of the Sacred Lands File by the NAHC did not indicate the presence of Native American cultural resources in or near the project area, and the project area is not otherwise known to be a previous cemetery or burial site. Therefore, the probability of encountering human remains during project construction is unlikely. To avoid potential impacts to human remains that may be buried beneath the surface in the work area, the City would ensure that the following mitigation measure is implemented:

- *In the event human remains are encountered during project construction, the Riverside County Coroner shall be contacted to determine whether or not investigation of the cause of death is required. In the event the remains are Native American in origin, the Native American Heritage Commission shall be contacted to determine necessary procedures for protection and preservation of remains, including reburial, as provided in the CEQA Guidelines, Section 15064.5(e).*

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
With incorporation of this mitigation measure, impacts to human remains would be considered less than significant.				
VI. Geology and Soils. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
There are no known active faults with evidence of surface rupture extending across the proposed site for the expansion of the Banning WWTP. Active faults with surface rupture in the region of the project site include the San Bernardino and Southern extensions of the San Andreas Fault located 9 kilometers from the site at its closest point. The project site is not located within a currently established Alquist-Priolo special studies zone (State of California Fault Rupture Hazard Zone) (Converse Consultants, 2007). Therefore, the potential for surface fault rupture occurring at the project site is considered to be low. The proposed WWTP expansion would be designed to resist damage from an earthquake conforming to the requirements of the 1997 Uniform Building Code of International Conference of Building Officials. The potential impact from rupture of an earthquake fault is considered less than significant.				
ii) Strong seismic ground shaking?			X	
Although no known active faults are found in the area, ground shaking from earthquakes associated with nearby and distant faults may occur during the lifetime of the project (Converse Consultants, 2007). Although no known active faults are found in the area, ground shaking from earthquakes associated with nearby and distant faults may occur during the lifetime of the project (Converse Consultants, 2007). Because earthquake-related hazards cannot be avoided in the southern California region, the project site could be subjected to seismic ground shaking. Therefore, the potential impact from seismic ground shaking would be considered less than significant.				
iii) Seismic-related ground failure, including liquefaction?			X	
The potential for seismic hazards due to the secondary effects of earthquakes, including liquefaction, in the project area is considered low (Converse Consultants, 2007). Therefore, the impact from seismic-related ground failure, including liquefaction, would be considered less than significant.				
iv) Landslides?			X	
The potential for seismic hazards due to the secondary effects of earthquakes, including landslides, in the project area is considered low (Converse Consultants, 2007). Therefore, the impact from seismic-related ground failure, including landslides, would be considered less than significant.				

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Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Result in substantial soil erosion or the loss of topsoil?			X	
The Proposed Project would result in limited removal of topsoil for construction of the expansion of the Banning WWTP and associated recycled water pipelines. Any topsoil removed from the site would be placed in the immediate area and used for re-compaction purposes. The Proposed Project would not result in development of any structures on sloped areas or within any area of potential slope failure. Therefore, slope stabilization would not be required. The potential for soil erosion and loss of topsoil would be considered minimal. Impacts from erosion and loss of topsoil would be considered less than significant.				
c) Be located on a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
The Proposed Project would be designed and constructed in accordance with the recommendations of the site-specific geotechnical investigation which requires that approval by the Geotechnical Engineer for placement and compaction of fill, backfilling of trenches and testing of soils. Based on the geotechnical investigation, it is not anticipated that project construction would result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. Impacts from unstable soils would be considered less than significant.				
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
The site is situated on Quaternary-age alluvium and alluvial fan deposits derived from the erosion of earth materials in the San Bernardino mountains to the north and transportation by streams and sheet flow to the site area. These alluvial deposits generally consist of various mixtures of sand, silt and gravel. The expansion potential for soils on the site is expected to be very low based on the soil classification (Converse Consultants, 2007). Therefore, impacts from expansive soils would be considered less than significant.				
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
The Proposed Project would not include the requirement to support the use of septic tanks or alternative wastewater disposal systems.				
VII. Hazards and Hazardous Materials. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
The Proposed Project would involve the transport, storage, use and disposal of sodium hypochlorite, a hazardous substance that is a highly reactive and has exposure effects from inhalation, ingestion and skin contact. Sodium hypochlorite would be used in the MBR treatment process and controlled under secondary containment structures. The expanded WWTP would require the storage of a two-week supply, or approximately 1,800 gallons, of sodium hypochlorite. Sodium hypochlorite would be transported, stored, used and disposed of in accordance with applicable USEPA, RCRA, OSHA and Uniform Fire Code regulations. Operation of the expanded wastewater treatment plant would not be expected to create a significant hazard to the public. The impact of the Proposed Project from hazardous materials would be considered less than significant.				
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
The Proposed Project would require the storage and use of sodium hypochlorite, a hazardous material. This material would be stored and used with secondary containment that would collect sodium hypochlorite in the event of an unforeseen upset or accident. The impact from release of sodium hypochlorite into the environment would be considered less than significant. The rupture of a recycled water pipeline could result in release of water either onto the street or in the subsurface. Recycled water in the pipeline would be treated to Title 22 standards and would not create a significant hazard to the public (Title 22 treated water is suitable for human contact). Development and operation of the Proposed Project would not result in a significant hazard to the public and no accidental explosion or release of toxic or hazardous substances would be expected to occur. Impacts from hazardous materials would be considered less than significant.				
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
There are no existing or proposed schools within one-quarter mile of the Banning WWTP. The Proposed Project would not use or store hazardous substances in quantities that could result in a significant hazard to the public. Disinfection of recycled water would be accomplished at the Banning WWTF. Disinfection of pipelines would not be conducted, all chlorine injection would be accomplished at the Banning WWTP only. Therefore, no accidental explosion or release of toxic or hazardous substances as a result of the Proposed Project would be expected to occur near an existing or proposed school.				
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
A search of available environmental records was conducted in December 2006 by Track Info Services, LLC, an independent database review company. The records search includes a review of available federal, state, and local environmental databases. These databases identify properties or locations that have had known releases of regulated substances, or which have had histories involving the use, storage, treatment, generation, disposal, or handling of hazardous substances. The records search meets search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-00. No listed facilities within one mile of the project site were present on the National Priority List (NPL), Corrective Action Reports, Treatment Storage and Disposal Facility List, or State Priority List. The site for the proposed WWTP expansion and recycled water pipelines would not create any significant hazard to the public or the environment.				
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
The project area is located approximately 0.4 miles south of the Banning Municipal Airport. The site is within the Banning Municipal Airport Master Plan area, and within the Zone E compatibility area for the airport. Zone E includes additional lands under important airspace around the airport. Aircraft overflight of these areas are typically at altitudes of less than 3,000 feet above the airport elevation. In portions of the area, tall structures are height limited. The proposed expansion of the Banning WWTP would not require construction of structures that would exceed approximately 30 feet in height (height limitations would not be exceeded). Therefore, there would be no airport safety related impacts.				
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
The project area is not located adjacent to any private airstrips. Therefore, there would be no airport safety related impacts.				
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
The Proposed Project would not result in any interference with existing emergency response or emergency evacuation plans for local, state or federal agencies. While temporary lane closures may occur, complete street closures would not be required during project construction. All emergency procedures would be implemented within local, state, and federal guidelines. Therefore, impacts to emergency response or evacuation plans would be considered less than significant.				
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
The project site is located in a "moderate" to "no fuel" Fire Threat Zone (City of Banning, 2007a). The construction and operation of the Proposed Project would not result in any increase in the fire hazard at or near the project site. The Proposed Project would not result in any increase in exposure of people or structures to risk from wildland fires. Therefore, impacts from wildland fires would be considered less than significant.				
VIII. Hydrology and Water Quality. Would the project:				
a) Violate any water quality standards or waste discharge requirements?				X
The development of project facilities would increase recycled water distribution within the City of Banning service area. Groundwater from Well R1 would be extracted and piped to the expanded WWTP for processing. No groundwater would be released. Impacts to water quality standards or waste discharge requirements would not be expected.				
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
The City of Banning WWTP is underlain by the East Banning Storage Unit, which encompasses approximately 4.4 square miles and serves the area at the base of the Banning Bench and the southern portion of the City. In 2004, depth to groundwater within this storage unit was 380 feet below ground surface (fbgs). The Proposed Project would not result in depletion of groundwater supplies because the volume of groundwater withdrawn at Well R1 would be exceeded by the amount being percolated in the series of ponds east of the WWTP. In addition, the production of recycled water would alleviate some of the water demand and provide beneficial uses. The City of Banning is experiencing a temporary surplus of water in the Beaumont Basin, and is allowed to pump sufficient water from this basin in order to meet its water demand (City of Banning, 2005). The earthwork associated with construction of the proposed WWTP expansion and recycled water pipelines would not interfere with any known aquifers. Therefore, impacts to groundwater supplies would be considered less than significant.				
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?			X	
Construction of the proposed recycled water pipeline would not require any alteration of drainage patterns or waterways. Erosion control measures would be implemented during construction to minimize the potential for sediment to be picked up and transported off-site, or by runoff. Construction equipment would not be rinsed off on-site in such a manner to affect nearby drainageways. Construction materials would be covered and stored in contained areas away from Smith Creek. Therefore, impacts to drainage patterns from the Proposed Project would be considered less than significant.				

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off- site?			X	

The Proposed Project would not result in any alteration of the existing drainages. Pipelines would be placed in existing roadways or within public right-of-ways along Charles Street, Hathaway Street, Lincoln Street, and Sunset Avenue. At the extension of Westward Avenue, the proposed recycled water line would be suspended on an existing pipe bridge similar to existing utilities (the pipeline would not be constructed in the washes associated with Pershing or Smith Creeks). This is the only location where the pipeline would be suspended. Design of pipelines at these crossings would include restraint joints to prevent joint separation and possible leakage.

The proposed pipelines would be placed underground and would not result in increased impervious surfaces. The resulting surface runoff would not be expected to change from existing conditions, or result in any increase in flooding. The Federal Emergency Management Agency (FEMA) has identified areas subject to 100-year flood hazards along the northern reaches of Smith Creek and the channels of Pershing Creek (Impact Sciences, Inc., 2006). Floodplains associated with Smith Creek are present south of the Banning WWTP and encompass a portion of the southern ponds at the facility. The proposed expansion of the Banning WWTP would not be located in any area designated as a floodplain. The proposed recycled water line along Lincoln Street would cross over several former (unnamed) washes that had originated on the Banning bench.

Erosion control measures would be implemented during construction of project facilities to minimize the potential for sediment to be picked up and transported off-site by runoff. Standard erosion control measures would include stockpiling and covering topsoil, as well as best management practices to prevent water quality impacts. These measures would be accomplished by the construction contractor and monitored by the City of Banning. Construction equipment would not be rinsed off on-site, or in such a manner as to adversely impact Smith Creek along the southern boundary of the project site. Construction materials would be covered and stored in contained areas away from any drainage areas. Standard erosion control measures would effectively prevent and minimize adverse impacts from runoff. Impacts to drainage would be considered less than significant.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	

The Proposed Project would contribute to storm runoff due to an increase in impervious surface area. While approximately 9.5 acres of land would be disturbed, only approximately one acre of land would become impervious. This equates to an increase in impervious land of approximately less than one percent of the total 126 acres of land on which the Banning WWTP is located. Expansion facilities would be designed with adequate site drainage. The capacity of the existing stormwater drainage system is expected to accommodate any increase from impervious areas. Significant adverse operational impacts to surface water quality are not expected to occur. Impacts to stormwater drainage systems would be considered less than significant.

f) Otherwise substantially degrade water quality?				X

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
The Proposed Project would not result in any other effects that could substantially degrade water quality. The Proposed Project would meet all applicable Title 22 requirements, and would not violate any water quality standards or waste discharge requirements. Any discharges would be conducted in accordance with the City's Waste Discharge Requirements (Order No. 01-022) which would be amended for processing of recycled water. The City plans to develop and implement a comprehensive water quality monitoring program to assess the average concentration of total dissolved solids, nitrates and chlorides in the Banning and Cabazon groundwater basins to ensure that percolation ponds are not significantly degrading groundwater quality. No significant impacts to water quality are expected to occur as a result of the Proposed Project.				
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
The Proposed Project would not result in the placement of housing in the 100-year flood hazard area.				
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?			X	
Both 100-year and 500-year floodplains have been mapped on the site and in the project area. Although the wash is no longer visible due to development, the historic 100-year floodplain west of the Banning WWTP originates from an unnamed creek originating on the Banning Bench at elevation 3,000 ft above sea level (this unnamed creek is not a tributary of the San Gorgonio River). The 100-year floodplain associated with Smith Creek south of the Banning WWTP extends over a portion of the aeration ponds at the plant. The Proposed Project would be located upon four flood zones designated by FEMA[1] as follows: the WWTP expansion site, Well R1 and the pipeline from Well R1 to the WWTP would be located on Zone C; the recycled water pipeline would be located primarily on Zones B and C; one segment of the pipeline along Lincoln Street at 4th Street would be within Zone A; and, one segment of the pipeline along West Lincoln Street east of Adams Avenue would be located in Zone A4. A portion of the proposed recycled water pipeline along Hathaway and Lincoln Streets, as well as along the unnamed City access road, would be located within the historic 100-year floodplain associated with Smith and Pershing Creeks, Highland Wash and two unnamed creeks originating in the mountains north of Banning. The pipeline would be buried underground at a depth of approximately 5 feet and would not be directly exposed to flood hazards. The Proposed Project would not impede or redirect flow within any creeks or drainage areas. Therefore, impacts to the 100-year flood hazard area would be considered less than significant.				

[1] FEMA has identified and mapped areas that are at risk due to periodic flooding. Flood Insurance Rating Maps (FIRM) includes flood zone designations for areas subject to flooding based on engineering and hydrologic studies. The following flood zone designations are found on the FIRM maps produced for the area of the Proposed Project:
Zones A and A4: Areas with a 1 percent annual chance of flooding over the life of a 30-year mortgage, and considered to be a high risk area (flood insurance is mandatory).
Zones B and C: Areas outside the 1-percent annual chance floodplain and considered to be a moderate to low risk area (flood insurance is not mandatory).

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
The Proposed Project would not expose people or property to flood-related hazards. The net drainage from the area would not be changed with the implementation of the Proposed Project. Therefore, no significant impacts would be expected to occur.				
j) Inundation by seiche, tsunami, or mudflow?				X
Flooding associated with seiches (wave-like oscillations of water in an enclosed basin caused by earthquakes, high winds or other atmospheric conditions) is not anticipated at the project site due to its distance from enclosed bodies of water. The project site is located approximately 50 miles northeast of the coast. The potential for inundation by a tsunami is expected to be a rare occurrence. The Proposed Project would not result in any increased risk for inundation by mudflow. Impacts from seiche, tsunami or mudflow would not be expected.				
IX. Land Use and Planning. Would the project:				
a) Physically divide an established community?				X
The Proposed Project would consist of construction of pipelines within existing or planned roadways. Nearby residential properties would not be adversely impacted by proposed facilities or operations. The Proposed Project would be located on land owned by the City or land that the City has utility easements. Construction of the project facilities would not result in any division of the community.				
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
The City of Banning designates land use for Banning WWTP as Public Facilities and Industrial. The proposed recycled water pipeline would be placed primarily in existing or planned streets and the city of Banning rights-of-way. The pipeline corridor would cross over the following General Plan designations: Industrial, Airport Industrial, Public Facilities, General Commercial, Business Park, Very Low Density Residential, Low Density Residential, Medium Density Residential, Open Space Park, and Open Space Resources (City of Banning, 2007a). Zoning designations in the City of Banning are consistent with the General Plan. **Coastal Zone Management Act.** The coastal zone for the State of California is defined as the land and water area of the state from the Oregon border to the border of the Republic of Mexico, extending seaward to the state's outer limit of jurisdiction, including all offshore islands, and extending inland generally 1000 yards from the mean high tide line of the sea. In significant coastal estuarine, habitat, and recreational areas it extends inland to the first major ridgeline paralleling the sea or five miles from the mean high tide line of the sea, whichever is less, and in developed urban areas the zone generally extends inland less than 1,000 yards. There have been some minor modifications to the boundary since the program was approved. Riverside County is not within the Coastal Zone. The proposed project is not located within the Coastal Zone.				

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Wild and Scenic Rivers. There are no designated Wild and Scenic Rivers that would be impacted by the proposed project. The closest river with this designation is Sespe Creek in Ventura County, which is approximately 120 miles from the City of Banning. Conflicts with land use designations and zoning ordinance would not be expected. Impacts to local land use and zoning would be considered less than significant.				
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?			X	
There are no conservation plans or natural community conservation plans that overlay the Proposed Project. The proposed expansion of the Banning WWTP and Phase I recycled water distribution line would be located in the developed urban portion of the City of Banning. Conservation areas of Western Riverside County are located south of the project area. The proposed project is not located within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) area. Therefore, there the Proposed Project would not conflict with the MSHCP or any other existing conservation plan.				
X. Mineral Resources. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
The project area is located in Mineral Resource Zone 3, an area where available geologic information indicates that mineral deposits are likely to exist, however, the significance of the deposit cannot be evaluated from available data. No loss of availability of known mineral resources would result from implementation of the Proposed Project. The impact of construction of the proposed project facilities at this location on mineral resources is considered to be less than significant.				
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?			X	
The Banning Quarry, operated by Robertson's Ready Mix, is the only aggregate producer in the City of Banning. The Banning Quarry is mined for rock, sand and base materials used for concrete and construction. This quarry is located north of I-10 in an MRZ-2 area. The Proposed Project would not be located on any locally important mineral resource recovery site, nor would it result in any interference with existing mining operations at the Banning Quarry. Therefore, impacts to mineral resources would be considered less than significant.				
XI. Noise. Would the project result in:				
a) Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	

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Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
The primary noise source in the City of Banning is motor vehicle traffic. In addition, the Banning Municipal Airport generates intermittent noise from daily takeoffs and landings. Noise impacts from project activities are a function of the noise generated by construction equipment, the location and sensitivity of nearby land uses, and the duration of the noise-generating activities. The construction of proposed pipelines would include pavement breaking and excavation. Construction equipment that could be used during expansion of the WWTP includes graders, bulldozers, dump trucks and front end loaders. Construction equipment that could be used during pipeline installation includes jackhammers, pavement breakers and trenching machines. During construction, single-family residences in the immediate area would be subjected to temporary increases in noise levels. Operation of construction equipment may generate intermittent noise levels up to 80 dBA at approximately 150 feet from the source. An average day-night sound level of 65 dBA is generally accepted as a standard for residential communities. Riverside County does not have a specific ordinance addressing noise limits for construction. The County restricts construction noise limits on a nuisance basis. The Building and Safety Department of Riverside County limits construction hours to between the hours of 7 AM to 6 PM. The City of Banning has adopted noise control and abatement ordinances (Nos. 1138 and 1243) in accordance with Section 46026 of the Health and Safety Code (Model Community Noise Ordinance). While temporary increases in noise in the surrounding area may result in annoyance to local residents, adverse effects such as speech interference, sleep disturbance, and hearing loss would not be expected to result. Construction activities for the proposed project would not be expected to exceed the average day-night sound level of 65 dBA. Construction activities would be limited to daytime hours. No post construction noise-generating activities would result from the Proposed Project. The principal source of noise during operations would be from limited vehicular noise from maintenance personnel working at the site. The Proposed Project would not result in any change to the number of personnel. Therefore, impacts to noise from operations would be considered less than significant.				
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
Construction activities may result in vibration from compacting and grading equipment, including pavement breakers, jack hammers, and a trench machine. Groundborne vibration is measured using the typical annoyance threshold of 72 VdBA (vibrational A-weighted decibel level). Excessive amounts of groundborne vibration or noise levels would not be expected from construction equipment to be used. For these reasons, impacts from groundborne vibration would be considered less than significant.				
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
No post construction noise-generating activities would result from the Proposed Project. The Proposed Project would result in short-term increases in noise levels during construction, but would not result in any permanent change to the existing ambient noise level once construction of the WWTP expansion and pipelines are complete. Impacts to ambient noise levels in the project vicinity would be considered less than significant.				

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
The Proposed Project would result in a temporary increase in ambient noise levels during construction activities. The impact of the temporary increase in noise would be considered less than significant.				
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?			X	
The Proposed Project is located within the Banning Municipal Airport Master Plan area, but would not expose people who reside or work in the area to excessive noise levels. The expected noise level from the Proposed Project would not differ substantially from the existing noise environment at the Banning WWTP. Impacts to noise would be considered less than significant.				
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X
The Proposed Project is not located in the vicinity of any private airstrips.				
XII. Population and Housing. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
The Proposed Project would not have direct growth inducing effects, although it would support the ongoing and planned development in the Banning wastewater treatment service area. The Proposed Project would not result in the need for additional infrastructure. Impacts to population growth would be considered less than significant.				
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
The Proposed Project would not displace any housing. All proposed project facilities would be constructed within existing streets and right-of-ways. Therefore, the project would not result in any impacts to housing.				
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
The Proposed Project would not displace any people, or result in the need for replacement housing elsewhere. Therefore, the Proposed Project would not result in any impacts to housing.				

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Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. Public Services. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?				X
The Riverside County Fire Department, in cooperation with the California Department of Forestry and Fire Protection, provides fire protection services to the project area. The Proposed Project would not result in any increase in the demand for fire protection services. The Proposed Project would not generate a need for new fire stations in the area or cause any significant impacts to existing fire protection services. Therefore, impacts to fire protection services are not expected.				
b) Police protection?				X
The Banning Police Department and the Riverside County Sheriff's Department provide police protection in the project area. The Proposed Project would allow adequate circulation for pedestrians, vehicles, and police patrols. It is not anticipated that the Proposed Project would result in the need for new police stations in the area, or otherwise impact existing police services.				
c) Schools?				X
The Proposed Project would not generate any additional population in the area, and therefore would not impact local school enrollments. The Proposed Project would not otherwise adversely impact existing and planned schools in the area. Therefore, no adverse impacts to schools would result from the Proposed Project.				
d) Parks?				X
The proposed project facilities would not result in any impacts to local parks. There would be no change to the planned 150-acre Smith Creek Park that would be developed south of the Banning WWTP. The Proposed Project would not result in adverse impacts to existing or planned parks in the region.				
e) Other public facilities?				X
The proposed project facilities would be operated and maintained by the City of Banning or its designated operator, and would not result in any impacts to other public facilities.				
XIV. Recreation				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	
The Proposed Project would not result in any increase in use of any parks or other recreational facilities. Therefore, impacts to existing or planned neighborhood and regional parks would be less than significant.				

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?				X
The Proposed Project would not include any recreational facilities. No impacts to the environment from expansion of recreational facilities would be expected to occur.				
XV. Transportation/Traffic. Would the project:				
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?			X	
During the construction period, construction workers would access the WWTP expansion site on a daily basis. Assuming that all the workers travel in single occupant vehicles, this would result in additional inbound and outbound vehicle trips. These trips would occur before morning and evening peak hour traffic. Movement of the construction vehicles would not be expected to result in any change to the volume-to-capacity ratio of roadways or congestion at intersections in the local area. Construction-related traffic would be a temporary, short-term condition and is not expected to result in any substantial effects on traffic. Operation of the Proposed Project is estimated to result in no net change in the number of personnel vehicles. For these reasons, impacts to traffic would be considered less than significant.				
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?			X	
Vehicular traffic would be expected to increase temporarily during the construction period as a result of the daily project-related vehicle trips. Traffic may be temporarily delayed during the installation of recycled water pipelines along existing streets (Charles Street, Hathaway Street, Lincoln Street and Sunset Avenue). Temporary lane closures may be required, however, closure of complete roads is not expected. These temporary and localized impacts would not be expected to result in a substantial change to the current level of service for affected roadways. For these reasons, construction impacts to traffic would be considered less than significant. During operations, the Proposed Project would not be expected to result in any change to the existing level of service on any roads or highways in the project area. Impacts to traffic levels of service on roads and highways would be considered less than significant.				
c) Results in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
The Proposed Project would not result in any changes to air traffic patterns that could result in any increases in safety risks.				

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Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
No alterations to area roadways are proposed. No substantial increase in hazards or incompatible uses would be anticipated as a result of the Proposed Project.				
e) Result in inadequate emergency access?				X
No changes in access to emergency facilities or nearby land uses are expected to occur as a result of implementation of the project.				
f) Result in inadequate parking capacity?			X	
The proposed WWTP expansion would not require additional employees or maintenance vehicles. The additional proposed project facilities would be maintained by City personnel who currently park within the existing WWTP boundaries. The impact of the Proposed Project on parking is considered to be less than significant.				
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X
No modifications to the area roadways or bikeways are proposed. There would be no effects on existing facilities and structures (i.e., bus turnouts and bicycle racks) that support alternative transportation. Therefore, the Proposed Project would not result in any conflicts with policies that support alternative transportation.				
XVI. Utilities and Service Systems. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
The Proposed Project would not result in any discharges of wastewater that exceed treatment requirements regulated by the California Regional Water Quality Control Board (CRWQCB). Any discharges would be conducted in accordance with the City's Waste Discharge Requirements (Order No. 01-022) which would be amended for processing of recycled water. Therefore, there would be no impacts.				
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
The Proposed Project would result in construction and operation of new recycled water distribution facilities intended to meet the growing demand for water in the area. Expansion of the existing Banning WWTP would result in order to meet the demand of planned growth and provide a new capability for recycled water production. Impacts to water or wastewater treatment facilities from the Proposed Project would not be expected.				

Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
The Proposed Project would provide recycled water production and distribution facilities for residents in the City of Banning. This would enable irrigation of parks, golf courses and other buffer areas with recycled water, which would replace the use of potable water. No increase in water use would be expected. The Proposed Project would have no effect on storm water drainage in the area.				
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
Water used at the Banning WWTP is supplied by the City of Banning Water/Wastewater Utilities Department. The Proposed Project would use additional water for the MBR treatment process. This water would be extracted from Well R1 located on City property. The City has entitlement to this water supply in accordance with its 2004 adjudication judgment for groundwater pumping and storage rights in the Beaumont Basin (City of Banning, 2005). Therefore, impacts to water supply would be considered less than significant.				
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
The Proposed Project would not result in any increase in wastewater generation or otherwise adversely impact the existing regional sewer system and local wastewater treatment plant. Operation of the Proposed Project would result in no net change in the number of employees or residents in the project area. The project would not result in a need for additional wastewater treatment capacity in the project area. The additional treatment capacity is being added in order to accommodate planned growth in the community and to provide the capability to produce recycled water. No impacts to wastewater treatment systems are expected.				
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
Construction activities would generate solid waste, however the amount generated would be minimal and is not expected to significantly impact landfill capacities. Solid waste from the project would be disposed of in landfills that have sufficient permitted capacity (Lamb Canyon Sanitary Landfill, El Sobrante Landfill and the Badlands Landfill). Operation of the Proposed Project would not generate solid waste. Impacts to solid waste disposal would be considered to be less than significant.				
g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	
All solid waste disposal would be managed in accordance with applicable federal, state and local statutes and regulations. Impacts to solid waste would be considered less than significant.				

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Potential Impacts	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. Mandatory Findings of Significance				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?			X	
The analysis conducted in this Initial Study results in a determination that the project could result in a less than significant effect on the local environment. The construction activities associated with the Proposed Project would not be expected to substantially degrade fish, wildlife, and/or plant populations. Intrusion on any previously undiscovered cultural or historic resources would not be anticipated (mitigation for inadvertent discovery of cultural materials has been included in this analysis).				
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X	
The Proposed Project would result in loss of up to approximately 9.5 acres of marginal habitat as a result of construction of the expansion of the Banning WWTP. Because the habitat that would be lost is marginal in value, impacts from the Proposed Project would not be cumulatively considerable. The analysis in this Initial Study has determined that the project impacts would be considered less than significant.				
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?				X
Direct and indirect adverse effects on human beings would not be expected as a result of the project. The Proposed Project would result in a new capability to produce and distribute Title 22 recycled water to the Banning community, which is considered a beneficial impact.				
NOTE: Authority cited: Section 21083, Public Resources Code; Reference: Section 21001 and 21068, Public Resources Code.				

SECTION 3. SUPPORTING INFORMATION

3.1 References

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APPENDIX A

Clean Air Act General Conformity Applicability Analysis

DRAFT

CLEAN AIR ACT GENERAL CONFORMITY APPLICABILITY ANALYSIS FOR THE PROPOSED WASTEWATER TREATMENT PLANT EXPANSION AND PHASE I RECYCLED WATER SYSTEM BANNING, CALIFORNIA

CITY OF BANNING
Water/Wastewater Utilities Department
176 E. Lincoln Street
Banning, California 92220

May 2007

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ACRONYMS AND ABBREVIATIONS

AQCR	Air Quality Control Region
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CARB	California Air Resources Board
CEIDARS	California Emission Inventory and Reporting System
CFR	Code of Federal Regulations
CO	Carbon monoxide
°F	degrees Fahrenheit
FONSI	Finding of No Significant Impact
FR	Federal Register
FY	fiscal year
gpm	gallons per minute
m^3	cubic meter
mg	milligrams
NA	Not applicable
NAAQS	National Ambient Air Quality Standards
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
NSR	New Source Review
O_3	ozone
Pb	lead
PM	particulate matter
$PM_{2.5}$	particulate matter less than or equal to 2.5 microns in aerodynamic diameter
PM_{10}	particulate matter less than or equal to 10 microns in aerodynamic diameter
ppm	parts per million
PSD	Prevention of Significant Deterioration
ROD	Record of Decision
SIP	State Implementation Plan
SO_2	sulfur dioxide
SO_X	sulfur oxides
sq ft	square feet
SRF	State Revolving Fund
tpy	tons per year
TSP	total suspended particulates
µg	micrograms
U.S.C.	United States Code
USEPA	United States Environmental Protection Agency
VOC	volatile organic compounds
WRCC	Western Regional Climate Center
WWTP	wastewater treatment plant

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SECTION 1
CLEAN AIR ACT CONFORMITY

1.1 INTRODUCTION

The Clean Air Act (CAA) requires the U.S. Environmental Protection Agency (USEPA) to promulgate rules that ensure that federal actions conform to the appropriate State Implementation Plan (SIP). These rules are codified in 40 Code of Federal Regulations (CFR) Parts 6, 51, and 93. The SIP is a plan that provides for the implementation, maintenance, and enforcement of the National Ambient Air Quality Standards (NAAQS). This plan provides emission limitations and control measures to attain and maintain the NAAQS. Conformity to a SIP is defined as being consistent with the SIP's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards.

A federal agency responsible for a proposed action is required to determine if its actions conform to the applicable SIP. If the action involves the Federal Highway Administration or Federal Transit Authority, it falls under Transportation Conformity Rules. All other Proposed Actions fall under General Conformity Rules. The Wastewater Treatment Plant Expansion and Phase I Recycled Water System in Banning, California is applying for funding from the State Revolving Fund (SRF) Loan Program. The SRF Loan Program is partially funded by the USEPA and subject to federal environmental regulations, including the General Conformity Rule for the Clean Air Act. Therefore, the proposed Wastewater Treatment Plant Expansion and Phase I Recycled Water System in Banning, California is a federally-funded action subject to the USEPA General Conformity rules and must conform to the SIP for the State of California.

1.2 CONFORMITY BACKGROUND INFORMATION

Section 176(c) of the CAA prohibits federal entities from taking actions in nonattainment or maintenance areas that do not conform to the SIP for the attainment and maintenance of the NAAQS. Therefore, the purpose of conformity is to:

- Ensure federal activities do not interfere with the emission budgets in the SIPs;
- Ensure federal actions do not cause or contribute to new violations; and,
- Ensure attainment and maintenance of the NAAQS.

In December 1993, USEPA promulgated two sets of regulations to implement Section 176(c) of the CAA. First, on December 24, the USEPA promulgated the Transportation Conformity Regulations (applicable to highways and mass transit) to establish the criteria and procedure for determining that transportation plans, programs, and projects funded under Title 23 U.S.C. or the Federal Transit Act conform with the SIP (58 FR 62188). On December 30, the USEPA promulgated regulations, known as the General Conformity Regulations (applicable to all other projects), to ensure that other federal actions also conform to the SIPs (58 FR 63214).

With respect to General Conformity, all Proposed Actions, such as the proposed Wastewater Treatment Plant Expansion and Phase I Recycled Water System project, are covered unless otherwise exempt. Actions considered exempt from General Conformity include:

- Actions covered by Transportation Conformity;
- Action with clearly *de minimis* emissions;
- Exempt actions listed in the rule; and,
- Actions covered by a "Presumed to Conform" demonstration (an approved list).

Conformity can be demonstrated by:

- Showing emission increases are included in the SIP;

- The affected state agreeing to include increases in the SIP;
- No new violations of NAAQS and/or no increase in the frequency/severity of violations for areas without SIPs;
- Offsets; and,
- Mitigation.

1.3 GENERAL CONFORMITY DETERMINATION PROCESS

The General Conformity Rule consists of three major parts: applicability, analysis, and procedure. These three parts are described in the following sections.

1.3.1 Applicability

Attainment Areas

The General Conformity Rule applies to Proposed Actions occurring in air basins designated as nonattainment for criteria pollutants or areas designated as maintenance areas. Proposed Actions occurring in air basins that are in attainment of the NAAQS are not subject to the Conformity Rule.

A criteria pollutant is defined as a pollutant for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health and public welfare. A nonattainment area is any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant. A maintenance area is a redesignated nonattainment area for any air pollutant that has attained the national primary ambient air quality standard for that air pollutant. Criteria pollutants and designation of attainment status are further discussed in Section 3.2.

De Minimis Emissions Levels

Threshold (*de minimis*) rates of emissions were established in the Final Rule to focus conformity requirements on those Proposed Actions with the potential to have significant air quality impacts. With the exception of lead, the *de minimis* levels are based on the CAA's major stationary source definitions for the criteria pollutants (and precursor criteria pollutants) and vary by the severity of the nonattainment area. A conformity determination is required when the annual total of direct and indirect emissions from a Proposed Action occurring in a nonattainment or maintenance area equals or exceeds the annual *de minimis* levels.

Table 1-1 lists the *de minimis* levels by pollutant applicable for Proposed Actions in nonattainment areas. The *de minimis* level for ozone applies to each precursor, volatile organic compounds (VOC) and nitrogen oxides (NO_X). The *de minimis* level for $PM_{2.5}$ applies to each precursor (as deemed significant), sulfur dioxide (SO_2), NO_X, and VOC or ammonia. Those levels specific to Air Quality Control Region (AQCR) 24, the region in which the project is located, are shown in bold type. The project activities will occur in an area designated as serious nonattainment for CO and PM_{10}; severe-17 nonattainment for 8-hour ozone; and nonattainment for $PM_{2.5}$.

Regional Significance

A Proposed Action that does not exceed the threshold rates of criteria pollutants may still be subject to a General Conformity determination. General Conformity applies if a Proposed Action is considered to be "regionally significant", meaning the direct and indirect emissions of any pollutant represent ten (10) percent or more of a nonattainment or maintenance area's emissions inventory for that pollutant.

Exemptions and Presumptions

The final rule contains exemptions from the General Conformity process. Certain Proposed Actions are deemed by the USEPA to conform because of the thorough air quality analysis

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required to comply with other statutory requirements. Examples of these actions include those subject to the New Source Review program, and remedial activities under the Comprehensive Environmental Response, Compensation and Liability Act.

Table 1-1 *De Minimis* Levels for Criteria Pollutants in Nonattainment Areas

Pollutant	Designation	Tons/Year
Ozone*	Serious Nonattainment	50
	Severe Nonattainment	**25**
	Extreme Nonattainment	10
	Other nonattainment areas outside of ozone transport region	100
	Marginal and moderate nonattainment areas inside ozone transport region	50/100
Carbon Monoxide	**All nonattainment areas**	**100**
Sulfur Dioxide	All nonattainment areas	100
Lead	All nonattainment areas	25
Nitrogen Dioxide	All nonattainment areas	100
Particulate Matter	Moderate nonattainment (PM_{10})	100
	Serious Nonattainment (PM_{10})	**70**
	Nonattainment ($PM_{2.5}$)	**100**

* includes precursors: VOC or NO_X
Bold values indicate pollutant levels specific to AQCR 24
Source: 40 CFR 51.853

Other Proposed Actions that are exempt from the conformity process include those actions that would result in no increase in emissions, or an increase in emissions that is clearly *de minimis*. Examples include continuing or recurring activities, routine maintenance and repair, administrative and planning actions, land transfers, and routine movement of mobile assets.

A federal agency can establish its own presumptions of conformity through separate rulemaking actions. Section 176(c) of the CAA does not specifically exempt any activity, thus a separate analysis would need to show that the activity presumed to conform has no impacts to air quality. Based on this analysis, a federal agency can document that certain types of future actions would be *de minimis*.

1.3.2 Analysis

A conformity analysis for the Proposed Action examines the impacts of the direct and indirect emissions from mobile and stationary sources, and emissions from any reasonably foreseeable Proposed Action. Indirect emissions are those emissions of a criteria pollutant or its precursors that are caused by the Proposed Action but may occur later in time and/or may be farther removed in distance from the action itself but are still reasonably foreseeable; and the federal agency can control and will maintain control over the indirect action due to a continuing program responsibility of the federal agency. Reasonably foreseeable emissions are projected future indirect emissions that are identified at the time the conformity determination is made; the location of such emissions is known and the emissions are quantifiable, as described and documented by the federal agency based on its own information and after reviewing any information presented to the federal agency.

The conformity determination procedure is detailed in 40 CFR 51.589. The analysis is based upon the latest planning assumptions, the latest emission estimation techniques, applicable air quality models, databases, and other requirements of the "Guideline on Air Quality Models (Revised)" (USEPA Publication No. 450/2-78-027R, 1986), and on the total of direct and indirect emissions from the action. Finally, actions required to issue a conformity determination must list mitigation measures and go through the public notice process. Exempt actions are not required to go through this process.

1.3.3 Procedure

Procedural requirements of the conformity rule allow for public review of the federal agency's conformity determination. Although the conformity determination is a federal responsibility, state and local air agencies are provided notification and their expertise is consulted. No

documentation or public participation is required for applicability analyses that result in *de minimis* determinations.

The federal agency must provide a 30-day notice of the Proposed Action and draft conformity determination to the appropriate USEPA Region, and state and local air control agencies. The federal agency must also make the draft determination available to the public to allow opportunity for review and comment.

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SECTION 2
DESCRIPTION OF THE PROPOSED ACTION

The City of Banning proposes to expand its existing 3.6 mgd wastewater treatment plant and construct additional supporting structures to support the City's planned recycled water storage and distribution capability in accordance with the Banning Recycled Water Master Plan.

2.1 LOCATION OF THE PROPOSED ACTION

The City of Banning is located in Riverside County approximately 20 miles west of Palm Springs along the Interstate 10 (I-10) corridor. Figure 2-1 shows the general location of the project area. The Proposed Action is located within AQCR 24.

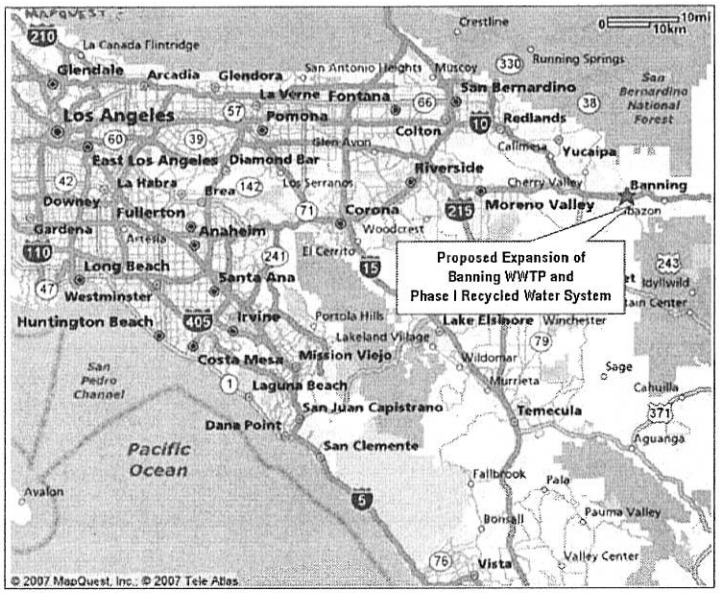

Figure 2-1 Location of the Proposed Action

2.2 PURPOSE OF THE PROPOSED ACTION

The purpose of the project is to provide the existing Banning WWTP with upgrades necessary to process high strength wastewater generated in the service area and produce Title 22 recycled water. The Proposed Action would provide a recycled water distribution system to meet the ongoing and projected water supply needs for the Sun Lakes and Five Bridges housing areas. Recycled water would be used primarily for irrigation of street medians, greenbelts, parks and golf courses. Surplus recycled water available during certain times of the year would be stored in reservoirs for future use or percolated into the East Banning groundwater aquifer.

2.3 ELEMENTS OF THE PROPOSED ACTION

2.3.1 Project Construction

As shown on Table 2-1, several areas of construction will be associated with the Proposed Action:

- **Expansion of Existing WWTP. This project would include construction of the expansion on approximately 16 of the 126 total acres of property at the Banning WWTP. The expansion includes an aboveground water storage reservoir, electrical controls/laboratory building, a chlorine contact tank, and the facility for the MBR process.**
- **Installation of 3,500 feet of pipeline. Existing Well R1, east of the WWTP and its percolation ponds, would be retrofitted in order to extract and convey groundwater into the treatment process. Approximately 3,500 feet of buried pipeline would be constructed from the wellhead to the access road and along Charles Street to the WWTP expansion site. Pipeline construction would typically include trenching to a depth of approximately five feet in a corridor approximately five feet wide, placing of bedding material, laying of pipe, backfilling the trench and repaving the street or restoring landscaping.**

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Table 2-1 Construction Project Information

Project	Project Area (sq ft)	Demolition (sq ft)	Start Date (FY)	Duration (months)
Expansion of existing WWTP	418,176	NA	08	8 months
Installation of 3,500 feet of pipeline	35,000	NA	08	3 months
Installation of 5 miles of pipeline	264,000	NA	08	24 months
Total	717,176	NA	NA	NA

* Based on trenching to a depth of approximately five feet in a corridor approximately five feet wide

- **Installation of 5 miles of pipeline. Approximately 5 miles of recycled water pipeline would be constructed from the existing WWTP to the Sun Lakes housing development to the west. Pipeline construction would typically include trenching to a depth of approximately five feet in a corridor approximately five feet wide, placing of bedding material, laying of pipe, backfilling the trench and repaving the street or restoring landscaping**

Four other past and reasonably foreseeable projects could occur during the same time period as the Proposed Action. Table 2-2 lists the construction projects.

Table 2-2 Construction Project Information, Cumulative Condition

Project	Project Area (Square Feet)	Demolition (Square Feet)	Start Date (FY)	Duration (months)
Lennar Five Bridges	23,870,880	0	08	72
Mopar Drag City	2,613,600	0	08	12
Sun Lakes (Commercial)	2,047,320	0	08	36
Banning Business Center	392,040	0	06	12
Total:	28,923,840	0	NA	NA

- **Lennar Five Bridges Development. Lennar has proposed a new community on 548 acres of land located west of Sunset Avenue south of the Interstate 10 and the Union Pacific Railroad right-of-way. The Draft Specific Plan EIR is in public review. Included in the development are 2,160 residences, mostly comprised of single-family dwellings with densities ranging from 3 units to 8 units per acre. There are about 95 patio homes and 273 townhouses at a higher density, with 51.6 acres of commercial retail space, 106.2 acres of parks and open space, and a site for a new fire station. A major improvement would be a grade separation between the Union Pacific Railroad tracks and Sunset Avenue, which is scheduled to begin construction in 2008.**
- **Mopar Drag City. Drag City, under construction just south of the Banning Municipal Airport runway, will include a track surface, lights for night racing, and a depressed design to limit the impact of noise on adjacent areas. Drag City will include a quarter-mile regulation drag strip and bleacher seating for up to 10,000 people on approximately 60 acres.**
- **Sun Lakes Commercial Project. The Sun Lakes Specific Plan includes 47 acres of vacant commercial land north of the Sun Lakes residential subdivision and south of Interstate 10. This commercial acreage is east of the Albertson's/K-Mart Shopping Plaza on Highland Springs Avenue. Plans for this project would include a new auto mall and medical offices along Sun Lakes Boulevard.**
- **Banning Business Center. The Banning Business Center is a planned business park that would offer condominium space to office, light manufacturing and service retail users. Located on nine acres at the northwest corner of 4th Street and Lincoln Street, the**

business park would have access to Interstate 10 from the 8th Street exit, which is grade-separated from the Union Pacific Railroad tracks.

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SECTION 3
EXISTING AIR QUALITY

Air quality is characterized by the existing concentrations of various air pollutants, and the climatic and meteorological conditions within an area. Precipitation, wind direction and speed (horizontal airflow), and atmospheric stability (vertical airflow) are factors that determine the extent of pollutant dispersion.

3.1 METEORLOGICAL CONDITIONS

The Banning area experiences consistent wind conditions. The average annual wind speed is 5.0 knots. The wind averages 4.5 knots during the winter months and 5.5 knots during the summer months. During June through August, the predominant wind directions are from the west-northwest and typically have the highest average wind speed of 5.5 knots (WRCC, 2007).

The Banning area experiences mild temperatures with an average annual temperature of 76 degrees Fahrenheit (°F). The warmest months are July and August with a mean monthly temperature of 94°F and January is the coldest month with a mean monthly temperature of 37°F (WRCC, 2007).

The Banning area experiences moderate precipitation. Most of the precipitation falls during the winter months of December through March. The average precipitation during this time period is 3.0 inches per month. Throughout the rest of the year, the average precipitation is only 0.7 inches per month. The average annual precipitation is 18 inches (WRCC, 2007).

3.2 CRITERIA POLLUTANTS AND STANDARDS

The NAAQS were established by the USEPA for six pollutants. Criteria pollutants are defined as those pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health. Criteria pollutants cause or contribute to air pollution which could endanger the public health or welfare. The USEPA has described the potential health and welfare effects of these pollutants. It is on the basis of these criteria and the health and welfare objectives that the standards are set or revised.

The six criteria pollutants are ozone (O_3), particulate matter ($PM_{2.5}$ and PM_{10}), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), and lead (Pb). Even though ozone is a regulated criteria pollutant, it is not directly emitted from sources. Ozone forms as a result of VOC and NO_x reacting with sunlight in the atmosphere.

The General Conformity Rule addresses the impact of the Proposed Action on the area's attainment of the NAAQS. The NAAQS for the criteria pollutants are shown in Table 3-1.

Air quality is determined by comparing ambient air levels with the appropriate primary or secondary NAAQS for each criteria pollutant. National primary standards establish the level of air quality necessary to allow an adequate margin of safety to protect the public heath. National secondary standards establish the level of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

Table 3-1 National Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Standards	
		Primary	Secondary
Ozone (O_3)	1 Hour	No Standard	Same as Primary Standard
	8 Hour	0.08 ppm (157 µg/m^3)	
Respirable Particulate Matter (PM_{10})	24 Hour	150 µg/m^3	Same as Primary Standard
	Annual Arithmetic Mean	---	
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	65 µg/m^3	Same as Primary Standard
	Annual Arithmetic Mean	15 µg/m^3	
Carbon Monoxide (CO)	8 Hour	9 ppm (10 mg/m^3)	None
	1 Hour	35 ppm (40 mg/m^3)	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.053 ppm (100 µg/m^3)	Same as Primary Standard
Lead	Average Calendar Quarter	1.5 µg/m^3	Same as Primary Standard
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	0.030 ppm (80 µg/m^3)	---
	24 Hour	0.14 ppm (365 µg/m^3)	---
	3 Hour	---	0.5 ppm (1300 µg/m^3)

Due to a lack of evidence linking health problems to long-term exposure to coarse particle pollution, the U.S. Environmental Protection Agency revoked the former annual PM_{10} standard of 50 µg/m^3 in 2006 (effective December 17, 2006). Source: http://epa.gov/air/criteria.html#2

Areas not meeting ambient air quality standards are designated as being in nonattainment for the specific pollutant causing the violation. The CAA Amendments of 1990 (CAAA) further classified O_3, CO, and PM nonattainment areas based on the magnitude of the problem. Depending on the classification (e.g., ozone: marginal, moderate, serious, severe, or extreme), an area must adopt certain air pollution reduction measures. The classification also determines when the area must achieve attainment.

3.2.1 Ozone

Ozone is not emitted directly into the air but is formed through chemical reactions between natural and man-made emissions of VOC and NO_x in the presence of sunlight. Thus, VOC and NO_x are referred to as "precursors" of ozone. The level of ozone in the air depends on the outdoor levels of these organic gases, the radiant energy of the sun, and other weather conditions. The biggest concern with high ozone concentrations is the damage it causes to human health, vegetation and many common materials used everyday. High ozone concentrations can cause shortness of breath, coughing, wheezing, headaches, nausea, eye and throat irritations and lung damage.

3.2.2 Carbon Monoxide

Carbon monoxide is a colorless, odorless and tasteless toxic gas found naturally in trace quantities in the atmosphere and emitted from any form of combustion. At low concentrations,

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the central nervous system is affected. At higher concentrations, irritability, headaches, rapid breathing, blurred vision, lack of coordination, nausea and dizziness can all occur. It is especially dangerous indoors when ventilation is inadequate; unconsciousness or death can occur.

3.2.3 Nitrogen Dioxide

Nitrogen dioxide is a reddish-brown to dark brown poisonous gas that produces an irritating odor. It is a byproduct of high combustion sources. Health effects include damage to lungs, bronchial and respiratory system irritation, headaches, nausea, coughing, choking and chest pains.

3.2.4 Sulfur Dioxide

Sulfur dioxide is a colorless gas with a strong suffocating odor. It is a gas resulting from the burning of sulfur-containing fuels. Exposure to SO_2 can irritate the respiratory system including lung and throat irritations and nasal bleeding. In the presence of moisture, SO_2 can form sulfuric acid that can cause damage to vegetation.

3.2.5 Suspended Particulate Matter

There are two categories of particulate matter: particles with diameters less than 10 microns (PM_{10}) and particles with diameters less than 2.5 microns ($PM_{2.5}$). The sources of PM_{10} emissions include industrial and agricultural operations, automobile exhaust, and construction. Sources of fine particles include all types of combustion activities (i.e., motor vehicles, power plants, wood burning) and certain industrial processes. PM_{10} poses a health concern because it can be inhaled into, and accumulate in, the respiratory system. $PM_{2.5}$ is referred to as "fine" particles and is believed to pose the greatest health risks. Because of their small size (approximately 1/30th the average width of a human hair), fine particles can lodge deeply into the lungs.

3.2.6 Lead

Lead is a bluish-white to silvery gray solid. Lead particles can originate from motor vehicle exhaust, industrial smelters and battery plants. Health effects include decreased motor function, reflexes and learning as well as damage to the central nervous system, kidneys and brain. At high levels of exposure, seizures, coma or death may occur.

3.3 AIR QUALITY CONTROL REGION

The State of California is divided into a number of areas designated as air basins. The Proposed Action is located in the Metropolitan Los Angeles Air Quality Control Region, which includes parts of the counties of Los Angeles, San Bernardino, Riverside, Ventura and Santa Barbara. This area is known as Air Quality Control Region 24 (AQCR 24). The air basin is under the jurisdiction of South Coast Air Quality Management District, Ventura County Air Pollution Control District and the Santa Barbara County Air Pollution Control District. Table 3-2 lists the air emissions for the AQCR 24 for 2005.

Table 3-2 2005 Emissions Inventory for AQCR 24 (tons)

CO	VOC	NO_X	SO_X	PM_{10}	$PM_{2.5}$
1,636,843	327,405	411,757	35,478	129,539	52,524

Source: CARB, 2007

3.3.1 Attainment Status

Areas not meeting ambient air quality standards are designated as being in nonattainment for the specific pollutant causing the violation. National standards other than for ozone, particulates and those based on annual averages are not to be exceeded more than once a year. The 8-hour ozone standard is attained when the 3-year average of the 4th highest daily

concentrations is 0.08 ppm or less. The 24-hour PM_{10} standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 $\mu g/m^3$. The 24-hour $PM_{2.5}$ standard is attained when the 3-year average of 98th percentiles is less than 65 $\mu g/m^3$. Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM_{10} is met if the 3-year average falls below the standard at every site. The annual $PM_{2.5}$ standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard.

3.3.1.1 Ozone

In 1997, the USEPA promulgated the 8-hour ozone standard. On April 15, 2004, USEPA issued the first 8-hour ozone designations. Before that date, ozone attainment designations were determined by the 1-hour ozone standard of 0.12 ppm. The new 8-hour standard became effective 60 days after promulgation (June 15, 2004), while the existing 1-hour standard, for most purposes, remains in effect until USEPA determines an area has air quality meeting the 1-hour standard.

In relation to General Conformity, the proper *de minimis* threshold to use to determine conformity depends upon when the Proposed Action begins. Actions beginning before June 15, 2005 must meet the 1-hour ozone *de minimis* threshold. Actions beginning on or after June 15, 2005 must meet the 8-hour ozone *de minimis* threshold (Personal Communication, 2004). Since the Proposed Action is scheduled to start after June 15, 2005, the 8-hour ozone threshold applies.

According to 40 CFR 81.305, AQCR 24 has been designated as severe-17 nonattainment for the 8-hour ozone standard.

3.3.1.2 Particulate Matter

On January 5, 2005, USEPA issued the first $PM_{2.5}$ designations. Before that date, PM attainment designations were determined by the PM_{10} standard of 150 ug/m^3. The new $PM_{2.5}$ standard became effective 90 days after promulgation on April 5, 2005, while the existing PM_{10} standard, for most purposes, remains in effect until USEPA determines an area has air quality meeting the PM_{10} standard.

In relation to General Conformity, the proper *de minimis* threshold to use to determine conformity depends upon when the Proposed Action Finding of No Significant Impact (FONSI) or Record of Decision (ROD) is signed. Documents signed before April 5, 2006 must meet the PM_{10} *de minimis* threshold. Documents signed on or after April 5, 2006 must meet the $PM_{2.5}$ *de minimis* threshold (Personal Communication, 2005). This criteria does not apply to the proposed Wastewater Treatment Plant Expansion and Phase I Recycled Water System in Banning, which is subject to General Conformity requirements as part of its SRF loan application process.

According to 40 CFR 81.305, AQCR 24 has been designated as nonattainment for $PM_{2.5}$ and as serious nonattainment for PM_{10}.

3.3.1.3 Nitrogen Dioxide

According to 40 CFR 81.305, AQCR 24 has been designated as cannot be classified or better than national standards for NO_2.

3.3.1.4 Sulfur Dioxide

According to 40 CFR 81.305, AQCR 24 has been designated as better than national standards for SO_2.

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3.3.1.5 Carbon Monoxide

According to 40 CFR 81.305, AQCR 24 has been designated serious nonattainment for CO.

3.3.1.6 Lead

There is no information concerning lead in 40 CFR 81.305 for any part of California; therefore, the area has been designated as "cannot be classified" for lead.

SECTION 4
ANALYSIS AND RESULTS

This section includes a comprehensive analysis of the resultant emissions from the Proposed Action. The purpose of this analysis is to determine whether the Proposed Action will conform to the SIP as specified in Section 176(c) of the CAA. A positive conformity determination can be demonstrated by determining that the Proposed Action does not increase emissions with respect to the current emissions. A discussion of the overall analytical methodology, emission changes by sources and a conclusion of General Conformity are presented in this chapter. Appendix A contains supporting air pollutant emission calculations.

4.1 CONFORMITY DETERMINATION METHODOLOGY

4.1.1 Analytical Methods

The methodology for the General Conformity analysis for the Proposed Action consisted of the following steps: (1) determine the pollutants of concern based on the attainment status of the air basin; (2) define the scope of the Proposed Action; (3) calculate emissions based on the scope; (4) review net emission changes for *de minimis* threshold levels and regional significance; (5) determine conformity for applicable criteria pollutants.

The emission factors applied in the analysis are based on USEPA guidance. Fugitive dust would be generated from activities associated with site clearing, grading, cut and fill operations, and from vehicular traffic moving over the disturbed site. These emissions would be greatest during the initial site preparation activities and would vary from day to day depending on the construction phase, level of activity, and prevailing weather conditions.

The quantity of uncontrolled fugitive dust emissions from a construction site is proportional to the area of land being worked and the level of construction activity. The USEPA estimates that uncontrolled fugitive dust emissions from ground-disturbing activities would be emitted at a rate of 80 lbs of total suspended particulate (TSP) per acre per day of disturbance (USEPA, 1995). In a USEPA study of air sampling data at a distance of 50 meters downwind from construction activities, PM_{10} emissions from various open dust sources were determined based on the ratio of PM_{10} to TSP sampling data. The average PM_{10} to TSP ratios for top soil removal, aggregate hauling, and cut and fill operations are reported as 0.27, 0.23, and 0.22, respectively (USEPA, 1988). Using 0.24 as the average ratio for purposes of analysis, the emission factor for PM_{10} dust emissions becomes 19.2 lbs per acre per day of disturbance.

The USEPA also assumes that 230 working days are available per year for construction (accounting for weekends, weather, and holidays), and that only half of these working days would result in uncontrolled fugitive dust emissions at the emitted rate described above (USEPA, 1995). The USEPA estimates that the effects of fugitive dust from construction activities would be reduced significantly with an effective watering program. Watering the disturbed area of the construction site twice per day with approximately 3,500 gallons per acre per day would reduce TSP emissions as much as 50 percent (USEPA, 1995).

Specific information describing the types of construction equipment required for a specific task, the hours the equipment is operated, and the operating conditions vary widely from project to project. For purposes of analysis, these parameters were estimated using established cost estimating methodologies for construction and experience with similar types of construction projects (Means, 1996). Combustive emissions from construction equipment exhausts were estimated from USEPA approved emissions factors for heavy duty diesel powered construction equipment (USEPA 1985).

Additional PM emission factors are from the California Air Resources Board (CARB) PM Profile (CARB, 2002) and USEPA estimates for $PM_{2.5}$ (USEPA, 2005).

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4.1.2 Pollutants of Concern

The area affected by the Proposed Action is in severe-17 nonattainment for 8-hour ozone as described in Section 3.3.1.1; serious nonattainment for PM_{10} and nonattainment for $PM_{2.5}$ as described in Section 3.3.1.2; and, serious nonattainment for carbon monoxide as described in Section 3.3.1.5. Consequently, direct and indirect emissions of VOC and NO_X (precursors to ozone), as well as CO, PM_{10}, and $PM_{2.5}$, resulting from the Proposed Action are subject to a conformity determination. Thus, the conformity analysis will focus on only these pollutants.

4.1.3 Applicability

As discussed in Section 1.3.1, the Proposed Action conforms for a criteria pollutant if the emissions for that pollutant do not exceed the *de minimis* thresholds specified in the Final Conformity Rule (see Table 1-1). Conversely, if the total direct and indirect emissions of a pollutant exceed its *de minimis* threshold, a formal General Conformity Determination is required for that pollutant.

4.2 CHANGES IN EMISSIONS FROM THE PROPOSED ACTION

The Proposed Action will affect the total amount of emissions from several categories of sources. The analysis includes all sources subject to the change in emission rates, exclusive of any stationary sources that are subject to review and that may require a permit under the New Source Review (NSR) or Prevention of Significant Deterioration (PSD) programs. The emissions associated with the Proposed Action are included in the analysis.

4.2.1 Construction

Emissions from construction activity are considered area emissions, although short-term, while emissions from vehicles supporting construction are considered mobile sources.

4.2.1.1 Methodology

Emission factors from the USEPA were used to estimate construction-related air pollutant emissions. These factors include on-site construction equipment and workers' travel.

Several construction areas are anticipated in support of the Proposed Action. The Banning area has four other past and reasonably foreseeable actions that could occur during the same period as the Proposed Action. The fiscal year (FY) with the greatest emissions was used to present the extreme condition in this analysis.

4.2.1.2 Results

Table 4-1 summarizes the net emission changes anticipated from construction activities. An increase in emissions is logical. The USEPA watering factor for reducing particulate matter emissions has been applied in these calculations.

4.2.2 Summary of Results

Table 4-2 compares the net change in emissions associated with the Proposed Action with de minimis thresholds for AQCR 24 and states whether or not the emissions exceed de minimis or would be regionally significant.

Table 4-1 Change in Construction Emissions Associated with the Proposed Action

	Pollutants Emitted (tons/year)					
	CO	VOC	NO_X	SO_X	PM_{10}	$PM_{2.5}$
Proposed Action Construction						
Expansion of existing WWTP	**0.66**	**0.13**	**1.61**	**0.17**	**3.64**	**0.62**
Installation of 3,500 feet of pipeline	**0.00**	**0.00**	**0.01**	**0.00**	**0.56**	**0.09**
Installation of 5 miles of pipeline	**0.01**	**0.00**	**0.02**	**0.00**	**8.37**	**1.42**
Net Change in Emissions Associated with the Proposed Action:	**0.67**	**0.13**	**1.65**	**0.18**	**12.28**	**2.09**
Cumulative Condition Project Construction						
Lennar Five Bridges*	**154.57**	**19.69**	**137.18**	**0.00**	**6.76**	**1.15**
Mopar Drag City	**13.31**	**2.14**	**25.95**	**2.81**	**12.72**	**2.16**
Sun Lakes (Commercial)	**3.42**	**0.35**	**3.40**	**0.36**	**26.17**	**4.45**
Banning Business Center	**6.29**	**1.15**	**13.74**	**1.49**	**5.88**	**1.00**
Net Change in Emissions from Cumulative Condition Projects	**177.59**	**23.33**	**180.28**	**4.65**	**51.52**	**8.76**

* Unmitigated emissions estimate taken from Table 4.3-8 of the Draft EIR for the Five Bridges Specific Plan (Nov 2006). These emissions are subject to change, and the construction start date for this project is not known at this time.

Table 4-2 Regional Significance Analysis and Comparison to Conformity *De Minimis* Thresholds in AQCR 24

Category	Pollutants Emitted (tons/year)					
	CO	VOC	NO_X	SO_X	PM_{10}	$PM_{2.5}$
Emissions Inventory	1,636,843	327,405	411,757	35,478	129,539	52,524
Project Emissions	**0.67**	**0.13**	**1.65**	**0.18**	**12.28**	**2.09**
Percent Change	**negligible**	**negligible**	**negligible**	**negligible**	**negligible**	**negligible**
de minimis Threshold	100	25	25	NA	70	100
Exceed *de minimis* Threshold?	**No**	**No**	**No**	NA	**No**	**No**
Regionally Significant? (>10%)	**No**	**No**	**No**	NA	**No**	**No**

NA =Not applicable because *de minimis* does not apply since this AQCR is in attainment for this particular pollutant.

Bold indicates pollutants of concern for Conformity Determination.

4.3 CONFORMITY DETERMINATION RESULTS

As explained in Section 4.1.3, a conformity determination is required if the total direct and indirect emissions of a pollutant from the Proposed Action exceed the *de minimis* threshold established in the Final Rule. The emissions must be compared to the air quality emissions

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inventory of the air basin to determine regional significance of the Proposed Action when the total nonattainment criteria pollutant emissions do not exceed the *de minimis* thresholds. The Proposed Action is considered regionally significant for a particular pollutant if the amount of emissions is greater than 10 percent of the emissions inventory. Regionally significant actions must be further reviewed to determine conformity.

4.3.1 Proposed Action

De Minimis Levels

Table 4-2 summarizes the Proposed Action emissions in AQCR 24 and compares them to the *de minimis* thresholds. As a result of the Proposed Action, there would be an increase in emissions for CO, PM_{10}, $PM_{2.5}$, SO_X, VOC and NO_X. A Proposed Action conforms to the applicable SIP when criteria pollutants do not exceed their respective *de minimis* thresholds of: 100 tons per year (tpy) for CO and $PM_{2.5}$; 70 tpy for PM_{10}; and, 25 tpy for VOC and NO_X. CO, NO_X and PM_{10} emissions do not exceed their respective *de minimis* threshold. A Proposed Action does not conform to the applicable SIP when criteria pollutants exceed their respective *de minimis* thresholds.

Regional Significance

The Proposed Action is not considered to be regionally significant because the CO, PM_{10}, $PM_{2.5}$, SO_X, VOC and NO_X emissions are less than 10 percent of the emissions inventory (see Table 4-2).

4.4 CONCLUSION

The Proposed Action will occur in an area designated as severe-17 nonattainment for 8-hour ozone; serious nonattainment for PM_{10} and nonattainment for $PM_{2.5}$; serious nonattainment for carbon monoxide. Thus, this conformity determination focuses on only the criteria pollutants of CO, PM_{10}, $PM_{2.5}$, VOC and NO_X.

The analysis of direct and indirect emission changes from mobile and stationary sources and reasonably foreseeable and controllable actions for the Proposed Action supports a positive conformity determination.

The total of direct and indirect CO, PM_{10}, and NO_X emissions are below the *de minimis* threshold established for these pollutants (see Table 4-2). Additionally, the emissions of CO, VOC, SO_X, PM_{10}, $PM_{2.5}$ and NO_X would be less than 10 percent of the emissions inventory and, therefore, the action would not be considered regionally significant (see Table 4-2). It has been determined that the Proposed Action positively conforms to the applicable SIP. The City is supporting an activity that has been demonstrated by USEPA standards not to cause or contribute to new violations of any national ambient air quality standard in the affected area, nor would this action increase the frequency or severity of an existing violation. Implementation of the Proposed Action will not delay timely attainment of any standards in AQCR 24, and the action is in compliance or is consistent with all relevant requirements and milestones contained in the applicable SIP. This conclusion of positive General Conformity for the Proposed Action fulfills the City's obligation and responsibility under 40 CFR Part 93, Subpart B.

SECTION 5
REFERENCES

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USEPA, 2005. *Examination of the Multiplier Used to Estimate $PM_{2.5}$ Fugitive Dust Emissions from PM_{10}.* PowerPoint Presentation made at the USEPA Emission Inventory Conference. April.

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Estimated Pollutant Emissions from Construction Activities

New Construction or Renovation (N/R) (enter "N" for new, "R" for renovation)	N			
Building Square Footage	16,612.2 ft^2	No. Stories	1	
Asphalt Area	- ft^2	Depth	0	inches
Concrete Area	- ft^2	Depth	0	inches
Demolition Building Area	- ft^2			
Total Area of Site	9.60	Acres (area disturbed by ground breaking)		
Project Duration	8	Months (ground breaking to completion)		

Construction Emissions

Construction Activity	CO (tons)	VOC (tons)	NO_X (tons)	SO_X (tons)	PM_{10} (tons)	$PM_{2.5}$ (tons)
Site Preparation/Ground Disturbance	0.01	0.00	0.03	0.00	3.54	0.60
New Building Construction	0.65	0.13	1.58	0.17	0.10	0.02
Existing Building Renovation	-	-	-	-	-	-
Building Demolition	-	-	-	-	-	-
Asphalt Paving Operations	-	-	-	-	-	-
Concrete Paving Operations	-	-	-	-	-	-
Total Emissions	**0.66**	**0.13**	**1.61**	**0.17**	**3.64**	**0.62**

Expansion of existing WWTP

Estimated Pollutant Emissions from Construction Activities

New Construction or Renovation (N/R) (enter "N" for new, "R" for renovation)	N				
Building Square Footage	- ft^2	No. Stories	0		
Asphalt Area	- ft^2	Depth	0	inches	
Concrete Area	- ft^2	Depth	0	inches	
Demolition Building Area	- ft^2				
Total Area of Site	2.01	Acres (area disturbed by ground breaking)			
Project Duration	3	Months (ground breaking to completion)			

Construction Emissions

Construction Activity	CO (tons)	VOC (tons)	NO_X (tons)	SO_X (tons)	PM_{10} (tons)	$PM_{2.5}$ (tons)
Site Preparation/Ground Disturbance	0.00	0.00	0.01	0.00	0.28	0.05
New Building Construction	-	-	-	-	-	-
Existing Building Renovation	-	-	-	-	-	-
Building Demolition	-	-	-	-	-	-
Asphalt Paving Operations	-	-	-	-	-	-
Concrete Paving Operations	-	-	-	-	-	-
Total Emissions	**0.00**	**0.00**	**0.01**	**0.00**	**0.28**	**0.05**

Installation of 3,500 feet of pipeline

Estimated Pollutant Emissions from Construction Activities

New Construction or Renovation (N/R) (enter "N" for new, "R" for renovation)	N			
Building Square Footage	-	ft^2	No. Stories	0
Asphalt Area	-	ft^2	Depth	0 inches
Concrete Area	-	ft^2	Depth	0 inches
Demolition Building Area	-	ft^2		
Total Area of Site	15.15	Acres (area disturbed by ground breaking)		
Project Duration	24	Months (ground breaking to completion)		

Construction Emissions

Construction Activity	CO (tons)	VOC (tons)	NO_X (tons)	SO_X (tons)	PM_{10} (tons)	$PM_{2.5}$ (tons)
Site Preparation/Ground Disturbance	0.02	0.01	0.05	0.01	16.73	2.84
New Building Construction	-	-	-	-	-	-
Existing Building Renovation	-	-	-	-	-	-
Building Demolition	-	-	-	-	-	-
Asphalt Paving Operations	-	-	-	-	-	-
Concrete Paving Operations	-	-	-	-	-	-
Total Emissions	**0.02**	**0.01**	**0.05**	**0.01**	**16.73**	**2.84**

Installation of 5 miles of pipeline

Breakdown Summary	CO (tons)	VOC (tons)	NO_X (tons)	SO_X (tons)	PM_{10} (tons)	$PM_{2.5}$ (tons)
Expansion of existing WWTP	0.66	0.13	1.61	0.17	3.64	0.62
Installation of 3,500 feet of pipeline	0.00	0.00	0.01	0.00	0.28	0.05
Installation of 5 miles of pipeline	0.01	0.00	0.02	0.00	8.37	1.42
Construction Totals:	**0.67**	**0.13**	**1.65**	**0.18**	**12.28**	**2.09**

Cumulative Condition	CO (tons)	VOC (tons)	NO_X (tons)	SO_X (tons)	PM_{10} (tons)	$PM_{2.5}$ (tons)
FY08	177.59	23.33	180.28	4.65	51.52	8.76
Totals:	**177.59**	**23.33**	**180.28**	**4.65**	**51.52**	**8.76**

Estimated Pollutant Emissions from Construction Activities

New Construction or Renovation (N/R)	N			
(enter "N" for new, "R" for renovation)				
Building Square Footage	5,255.0 ft^2	**No. Stories**	1	
Asphalt Area	594,000.0 ft^2	**Depth**	2	**inches**
Concrete Area	594,000.0 ft^2	**Depth**	6	**inches**
Demolition Building Area	- ft^2			
Total Area of Site	8.00	**Acres (area disturbed by ground breaking)**		
Project Duration	12	**Months (ground breaking to completion)**		

Construction Emissions

Construction Activity	CO (tons)	VOC (tons)	NO_X (tons)	SO_X (tons)	PM_{10} (tons)	$PM_{2.5}$ (tons)
Site Preparation/Ground Disturbance	0.01	0.00	0.03	0.00	4.42	0.75
New Building Construction	0.21	0.04	0.50	0.05	0.03	0.01
Existing Building Renovation	-	-	-	-	-	-
Building Demolition	-	-	-	-	-	-
Asphalt Paving Operations	0.77	0.04	0.19	0.02	0.01	0.00
Concrete Paving Operations	4.28	0.75	10.03	1.09	0.62	0.11
Total Emissions	**5.27**	**0.83**	**10.74**	**1.17**	**5.09**	**0.86**

Mopar Drag City (a)

Estimated Pollutant Emissions from Construction Activities

New Construction or Renovation (N/R) (enter "N" for new, "R" for renovation)	N			
Building Square Footage	158,400.0	ft^2	No. Stories	3
Asphalt Area	316,800.0	ft^2	Depth	10 inches
Concrete Area	-	ft^2	Depth	0 inches
Demolition Building Area	-	ft^2		
Total Area of Site	12.00	Acres (area disturbed by ground breaking)		
Project Duration	12	Months (ground breaking to completion)		

Construction Emissions

Construction Activity	CO (tons)	VOC (tons)	NO_X (tons)	SO_X (tons)	PM_{10} (tons)	$PM_{2.5}$ (tons)
Site Preparation/Ground Disturbance	0.01	0.00	0.04	0.00	6.63	1.13
New Building Construction	5.97	1.20	14.68	1.59	0.97	0.16
Existing Building Renovation	-	-	-	-	-	-
Building Demolition	-	-	-	-	-	-
Asphalt Paving Operations	2.06	0.10	0.49	0.05	0.03	0.01
Concrete Paving Operations	-	-	-	-	-	-
Total Emissions	**8.04**	**1.31**	**15.21**	**1.64**	**7.63**	**1.30**

Mopar Drag City (a)

Estimated Pollutant Emissions from Construction Activities

New Construction or Renovation (N/R)	N			
(enter "N" for new, "R" for renovation)				
Building Square Footage	91,000.0 ft^2	**No. Stories**	2	
Asphalt Area	1,730,840.0 ft^2	**Depth**	6	**inches**
Concrete Area	- ft^2	**Depth**	0	**inches**
Demolition Building Area	- ft^2			
Total Area of Site	47.00	**Acres (area disturbed by ground breaking)**		
Project Duration	36	**Months (ground breaking to completion)**		

Construction Emissions

Construction Activity	CO (tons)	VOC (tons)	NO_X (tons)	SO_X (tons)	PM_{10} (tons)	$PM_{2.5}$ (tons)
Site Preparation/Ground Disturbance	0.05	0.02	0.15	0.02	77.84	13.23
New Building Construction	3.43	0.69	8.43	0.91	0.56	0.09
Existing Building Renovation	-	-	-	-	-	-
Building Demolition	-	-	-	-	-	-
Asphalt Paving Operations	6.77	0.34	1.62	0.15	0.11	0.02
Concrete Paving Operations	-	-	-	-	-	-
Total Emissions	**10.25**	**1.05**	**10.21**	**1.08**	**78.51**	**13.35**

Sun Lakes (Commercial)

Estimated Pollutant Emissions from Construction Activities

New Construction or Renovation (N/R) (enter "N" for new, "R" for renovation)	N			
Building Square Footage	146,000	ft^2	No. Stories	2
Asphalt Area	200,000.0	ft^2	Depth	6 inches
Concrete Area	-	ft^2	Depth	0 inches
Demolition Building Area	-	ft^2		
Total Area of Site	9.00	Acres (area disturbed by ground breaking)		
Project Duration	12	Months (ground breaking to completion)		

Construction Emissions

Construction Activity	CO (tons)	VOC (tons)	NO_X (tons)	SO_X (tons)	PM_{10} (tons)	$PM_{2.5}$ (tons)
Site Preparation/Ground Disturbance	0.01	0.00	0.03	0.00	4.97	0.84
New Building Construction	5.50	1.11	13.53	1.47	0.89	0.15
Existing Building Renovation	-	-	-	-	-	-
Building Demolition	-	-	-	-	-	-
Asphalt Paving Operations	0.78	0.04	0.19	0.02	0.01	0.00
Concrete Paving Operations	-	-	-	-	-	-
Total Emissions	**6.29**	**1.15**	**13.74**	**1.49**	**5.88**	**1.00**

Breakdown Summary	CO (tons)	VOC (tons)	NO_X (tons)	SO_X (tons)	PM_{10} (tons)	$PM_{2.5}$ (tons)	CY
Lennar Five Bridges	154.57	19.69	137.18	0.00	6.76	1.15	08
Mopar Drag City (a)	5.27	0.83	10.74	1.17	5.09	0.86	08
Mopar Drag City (b)	8.04	1.31	15.21	1.64	7.63	1.30	08
Sun Lakes (Commercial)	3.42	0.35	3.40	0.36	26.17	4.45	08
Banning Business Center	6.29	1.15	13.74	1.49	5.88	1.00	07
Construction Totals:	**177.59**	**23.33**	**180.28**	**4.65**	**51.52**	**8.76**	

FY Summary	CO (tons)	VOC (tons)	NO_X (tons)	SO_X (tons)	PM_{10} (tons)	$PM_{2.5}$ (tons)
FY08	171.30	22.18	166.54	3.17	45.65	7.76
Totals:	**177.59**	**23.33**	**180.28**	**4.65**	**51.52**	**8.76**

APPENDIX B

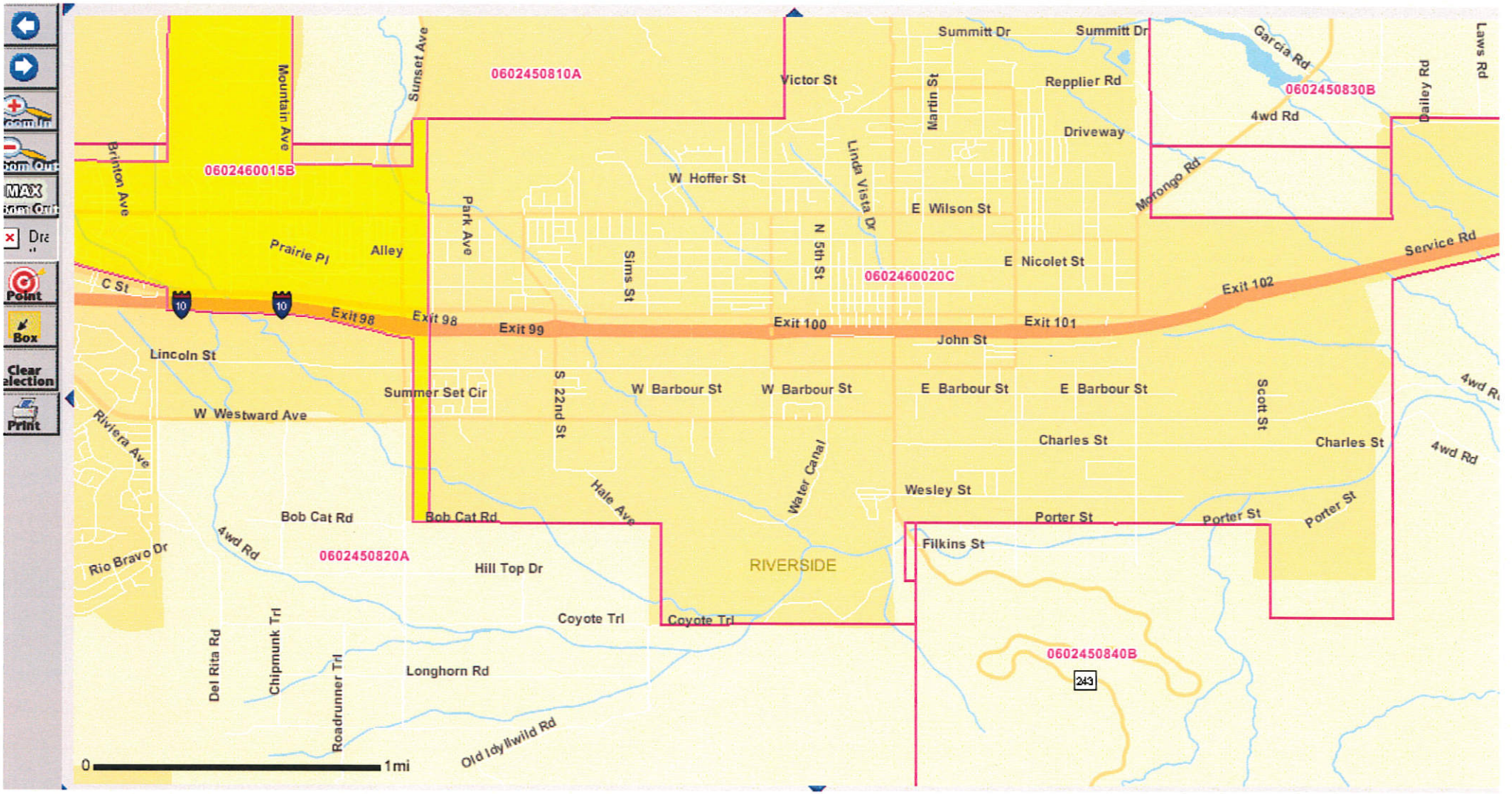
FEMA Flood Zone Maps

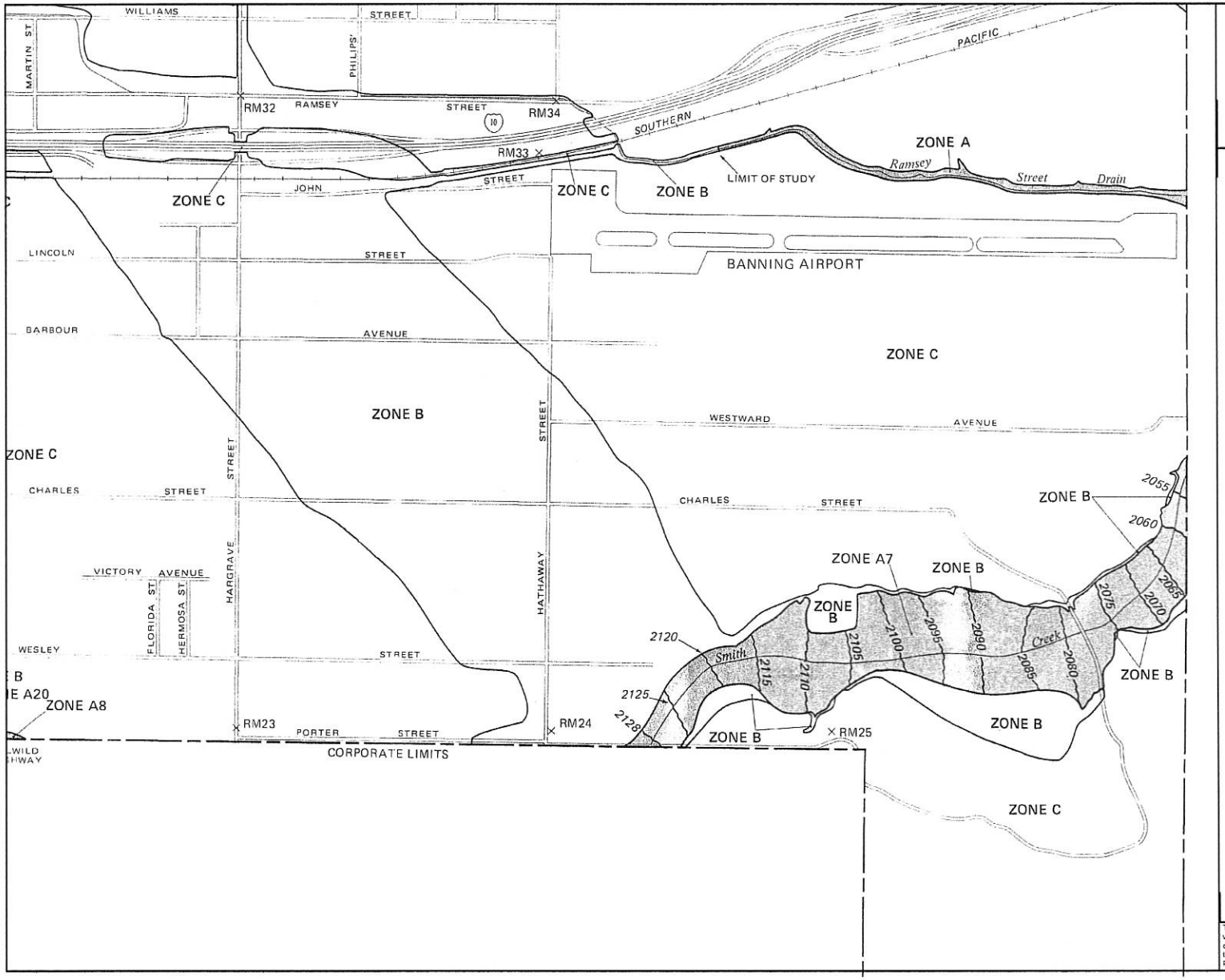
MSC Product Map Search

1 **Select a Product:** Public Flood Map

2 **Search By Address or Coordinates :**

Address: City: State: Zip: go





APPROXIMATE SCALE IN FEET

800 0 800

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

CITY OF
BANNING, CALIFORNIA
RIVERSIDE COUNTY

PANEL 20 OF 20
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
060246 0020 C

MAP REVISED:
JUNE 17, 1991

Federal Emergency Management Agency

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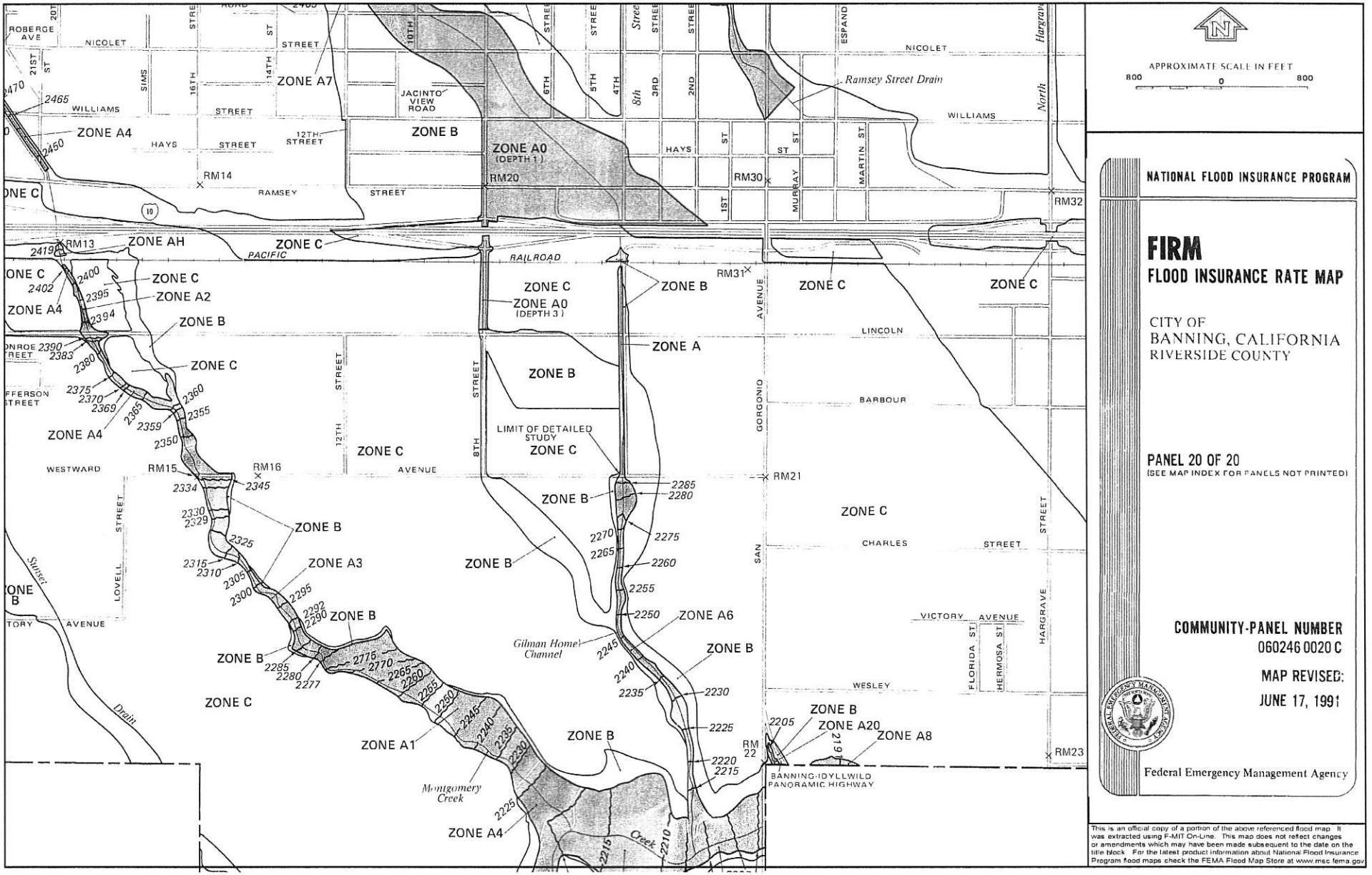

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

CITY OF
BANNING, CALIFORNIA
RIVERSIDE COUNTY

PANEL 20 OF 20
(SEE MAP INDEX FOR PANELS NOT PRINTED)

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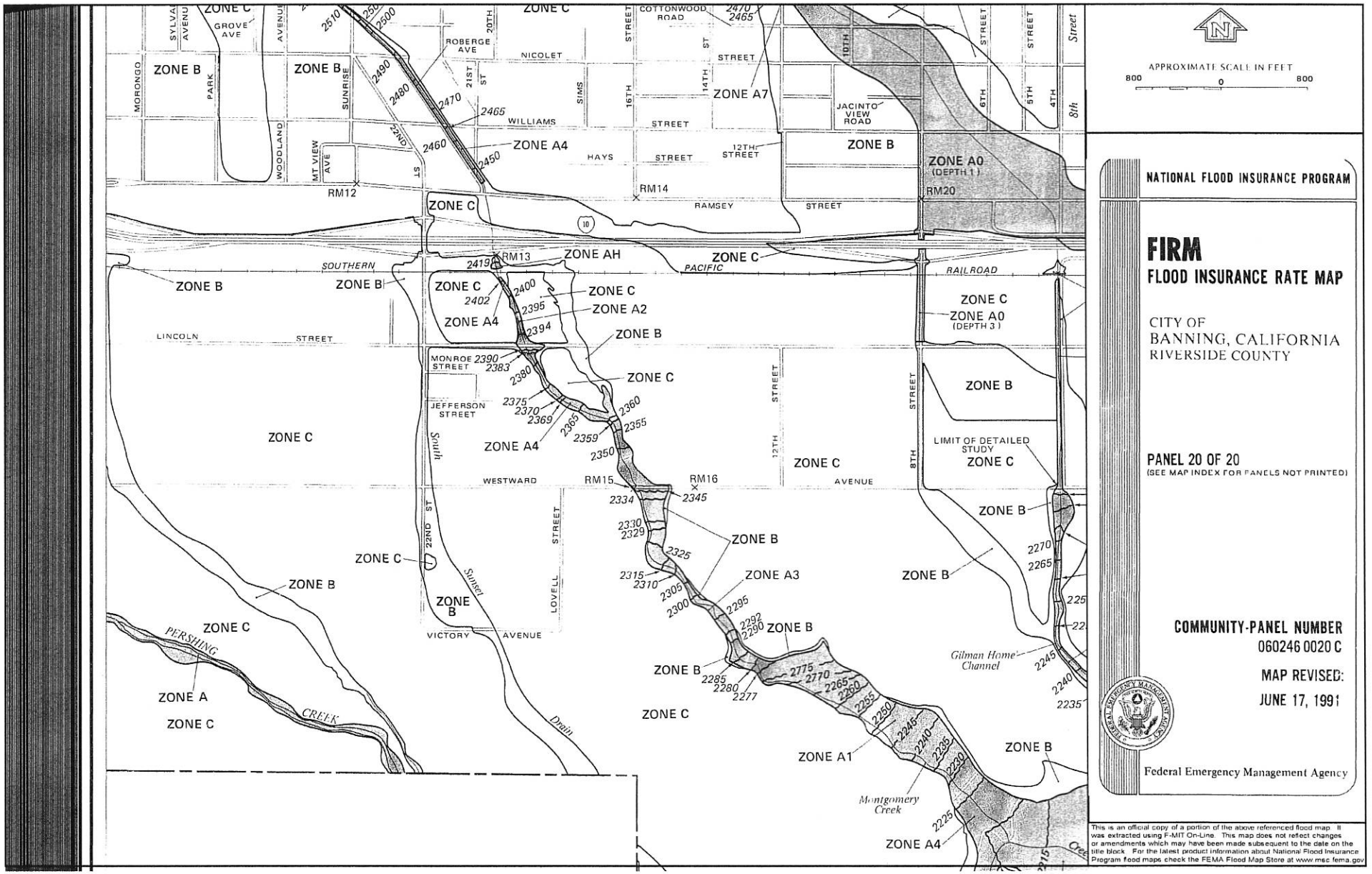
ZONE B
ZONE C
ZONE A4
ZONE A7
ZONE A
ZONE A1
ZONE A3
ZONE A2
ZONE AH
ZONE A0 (DEPTH 1)
ZONE A0 (DEPTH 3)
RM12
RM13
RM14
RM15
RM16
RM20
GROVE AVE
ROBERGE AVE
NICOLET
WILLIAMS
HAYS
RAMSEY
STREET
LINCOLN STREET
MONROE STREET
JEFFERSON STREET
WESTWARD
VICTORY AVENUE
COTTONWOOD ROAD
JACINTO VIEW ROAD
SOUTHERN PACIFIC RAILROAD
LIMIT OF DETAILED STUDY
Sunset
South
Gilman Home Channel
Montgomery Creek
PERSHING
CREEK
Drain
APPROXIMATE SCALE IN FEET
800 0 800
NATIONAL FLOOD INSURANCE PROGRAM
FIRM
FLOOD INSURANCE RATE MAP
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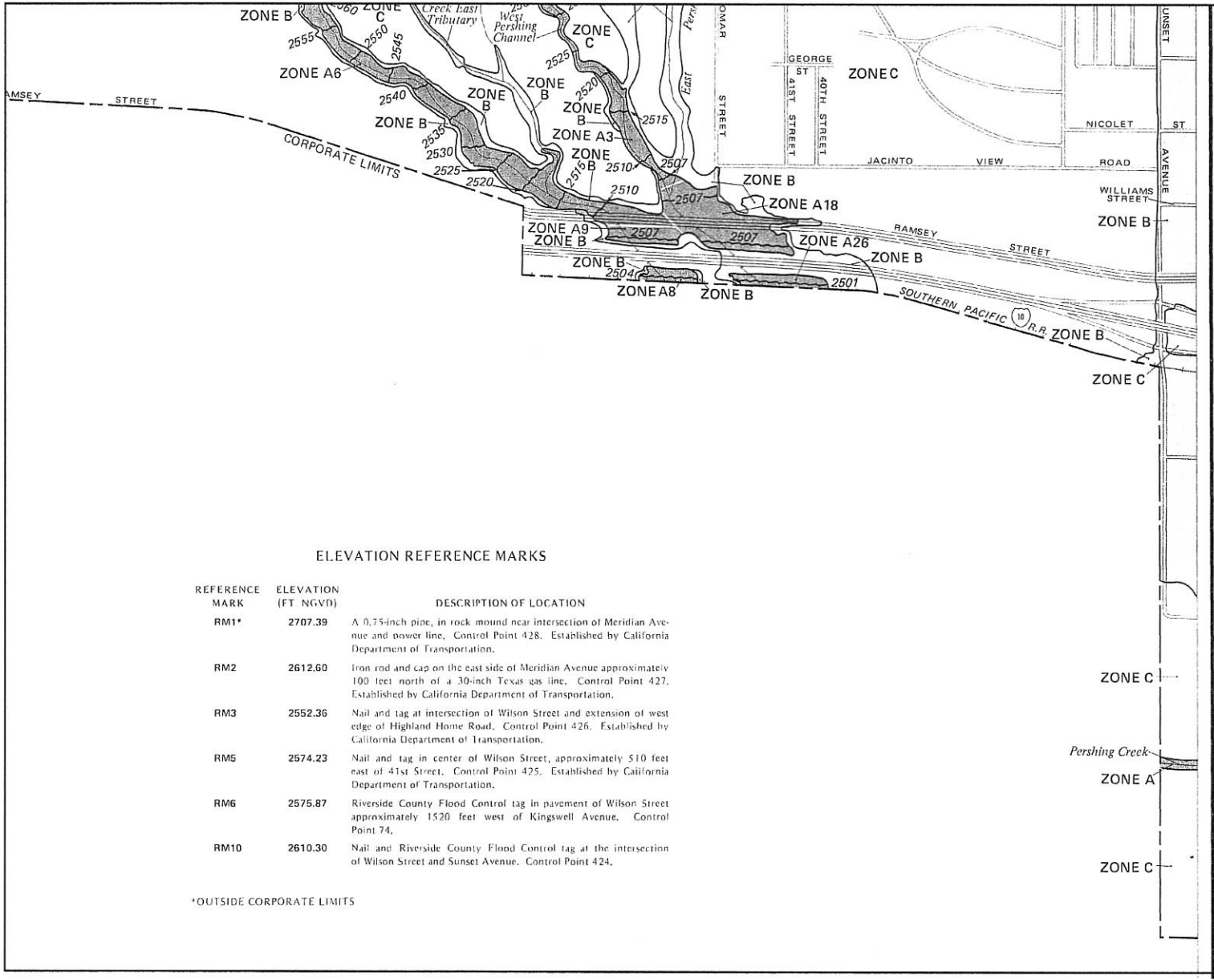

ELEVATION REFERENCE MARKS

REFERENCE MARK	ELEVATION (FT NGVD)	DESCRIPTION OF LOCATION
RM1*	2707.39	A 0.75-inch pipe, in rock mound near intersection of Meridian Avenue and power line. Control Point 428. Established by California Department of Transportation.
RM2	2612.60	Iron rod and cap on the east side of Meridian Avenue approximately 100 feet north of a 30-inch Texas gas line. Control Point 427. Established by California Department of Transportation.
RM3	2552.36	Nail and tag at intersection of Wilson Street and extension of west edge of Highland Home Road. Control Point 426. Established by California Department of Transportation.
RM5	2574.23	Nail and tag in center of Wilson Street, approximately 510 feet east of 41st Street. Control Point 425. Established by California Department of Transportation.
RM6	2575.87	Riverside County Flood Control tag in pavement of Wilson Street approximately 1520 feet west of Kingswell Avenue. Control Point 74.
RM10	2610.30	Nail and Riverside County Flood Control tag at the intersection of Wilson Street and Sunset Avenue. Control Point 424.

*OUTSIDE CORPORATE LIMITS

APPROXIMATE SCALE
800 0 800 FE

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

CITY OF
BANNING, CALIFORNIA
RIVERSIDE COUNTY

COMMUNITY-PANEL NUMBER
060246 0015 B

PAGE 15 OF 20
(SEE MAP INDEX FOR PAGES NOT PRINTED)

EFFECTIVE
OCTOBER 17, 1978

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
FEDERAL INSURANCE ADMINISTRATION

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SOUTHERN
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NATIONAL FLOOD INSURANCE PROGRAM
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FLOOD INSURANCE RATE MAP
RIVERSIDE COUNTY, CALIFORNIA
(UNINCORPORATED AREAS)
PANEL 820 OF 3600
(SEE MAP INDEX FOR PANELS NOT PRINTED)
COMMUNITY-PANEL NUMBER
060245 0820 A
EFFECTIVE DATE:
APRIL 15, 1980
U.S. DEPARTMENT OF HOUSING
AND URBAN DEVELOPMENT
FEDERAL INSURANCE ADMINISTRATION
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APPENDIX C

Cultural Resources Survey Report

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IDENTIFICATION AND EVALUATION OF HISTORIC PROPERTIES

BANNING WASTEWATER TREATMENT PLANT EXPANSION AND RECYCLED WATER SYSTEM

City of Banning
Riverside County, California

For Submittal to:

City of Banning
Water/Wastewater Utilities Department
176 E. Lincoln Street
Banning, CA 92220

Prepared for:

Rosemarie Crisologo
Parsons Water and Infrastructure, Inc.
100 W. Walnut Street, Suite B4
Pasadena, CA 92324

Prepared by:

CRM TECH
1016 E. Cooley Drive, Suites A-B
Colton, CA 92501

Bai "Tom" Tang, Principal Investigator
Michael Hogan, Principal Investigator

July 20, 2007
CRM TECH Contract No. 2083

NATIONAL ARCHAEOLOGICAL DATABASE INFORMATION

Author(s): Bai "Tom" Tang, Principal Investigator/Historian
Josh Smallwood, Archaeologist/Report Writer
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Consulting Firm: CRM TECH
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Date: July 20, 2007

Title: Identification and Evaluation of Historic Properties: Wastewater Treatment Plant Expansion and Recycled Water System, City of Banning, Riverside County, California

For Submittal to: City of Banning
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Banning, CA 92220
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USGS Quadrangle: Beaumont and Cabazon, Calif., 7.5' quadrangles (various sections of T3S R1E, San Bernardino Base Meridian)

Project Size: Approximately 16 acres and 28,500 linear feet

Keywords: City of Banning, Riverside County; historical/archaeological resources survey; Site 33-16207 (rural historical landscape); Site 33-16208/CA-RIV-8364 (early 20th century refuse deposit); testing recommended at Site 33-16208

MANAGEMENT SUMMARY

In June and July 2007, CRM TECH performed a cultural resources study on the Area of Potential Effects (APE) of a proposed wastewater treatment plant expansion and recycled water distribution system in the City of Banning, Riverside County, California. The undertaking involves the construction of additional wastewater treatment facilities on a 16-acre tract of undeveloped land and approximately 28,500 linear feet of water conveyance pipelines. The APE lies to the south of the city's downtown area, in Sections 7-10, 14, 15, and 18 of T3S R1E, San Bernardino Base Meridian. The study is a part of the environmental review process for the proposed undertaking, as required by the City of Banning in compliance with Section 106 of the National Historic Preservation Act and the California Environmental Quality Act (CEQA).

The purpose of the study is to provide the City of Banning with the necessary information and analysis to determine whether the proposed undertaking would have any effects on historical/archaeological resources that may exist in or near the APE, as mandated by Section 106 and CEQA. In order to accomplish the objective of the study, CRM TECH conducted a historical/archaeological resources records search, pursued historical background research, contacted Native American representatives, and carried out a systematic field survey.

As a result of these research procedures, two previously unrecorded historic-period sites, 33-16207 and 33-16208 (CA-RIV-8364), were identified within the APE. Site 33-16207 consists of a group of rural historic landscape features of unknown age, such as olive trees, a fence, and remnants of an irrigation system. Although the site is located on land once owned by Walter Hathaway, a prominent local merchant around the turn of the 20th century and the first mayor of Banning, there is no evidence that these features are closely associated with Hathaway and the prominent role he played in the early history of Banning, nor do they demonstrate any other notable historical/archaeological merits. In fact, historical sources suggest that at least some of the features likely post-date Hathaway's association with the property. Therefore, Site 33-16207 does not appear to qualify as a "historic property," as defined by Section 106, or a "historical resource," as defined by CEQA.

Site 33-16208 is a refuse deposit containing an abundance of temporally and morphologically diagnostic consumer items from the 1920s-1930s, which may provide valuable information on the consumer practices of local households at the time. There may be a subsurface component to the site, as it was observed that many of the artifacts found on the surface were partly buried. While the 1920s-1930s may not be considered a particularly early period in local history, it was a time of accelerated growth and dramatic change in Banning and the entire United States. To date, very few similar sites, with a good level of integrity and a variety of household consumer refuse items dating to the early 20th century, have been recorded in the City of Banning.

Based on these considerations, Site 33-16208 may have the potential to yield important archaeological data for the study of local history with regard to consumerism and the lifestyle of early-20th century agriculturalists in this portion of inland southern California, but that potential cannot be ascertained without further archaeological investigation. In order to determine the significance of the site and its qualification as a "historic property"/"historical resource," CRM TECH recommends that an archaeological testing and evaluation program be implemented on the site. Further recommendations regarding the final treatment of the site will be formulated and presented on the basis of the results of the testing and evaluation program.

No further cultural resources investigation is recommended for the balance of the APE unless project plans undergo such changes as to include areas not covered by this study. However, if buried cultural materials are encountered during construction anywhere within the APE, all work in that area should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

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INTRODUCTION

In June and July 2007, CRM TECH performed a cultural resources study on the Area of Potential Effects (APE) of a proposed wastewater treatment plant expansion and recycled water distribution system in the City of Banning, Riverside County, California (Fig. 1). The undertaking involves the construction of additional wastewater treatment facilities on a 16-acre tract of undeveloped land and approximately 28,500 linear feet of water conveyance pipelines. The APE lies to the south of the city's downtown area, in Sections 7-10, 14, 15, and 18 of T3S R1E, San Bernardino Base Meridian (Fig. 2). The study is a part of the environmental review process for the proposed undertaking as required by the City of Banning in compliance with Section 106 of the National Historic Preservation Act and the California Environmental Quality Act (CEQA).

CRM TECH performed the current study to provide the City of Banning with the necessary information and analysis to determine whether the proposed undertaking would have any effects on historical/archaeological resources that may exist in or near the APE, as mandated by Section 106 and CEQA. In order to accomplish the objective of the study, CRM TECH conducted a historical/ archaeological resources records search, pursued historical background research on the APE, contacted representatives of local Native American groups, and carried out a systematic field survey. The following report is a complete account of the methods and results of the various avenues of research, and the final conclusion of the study.

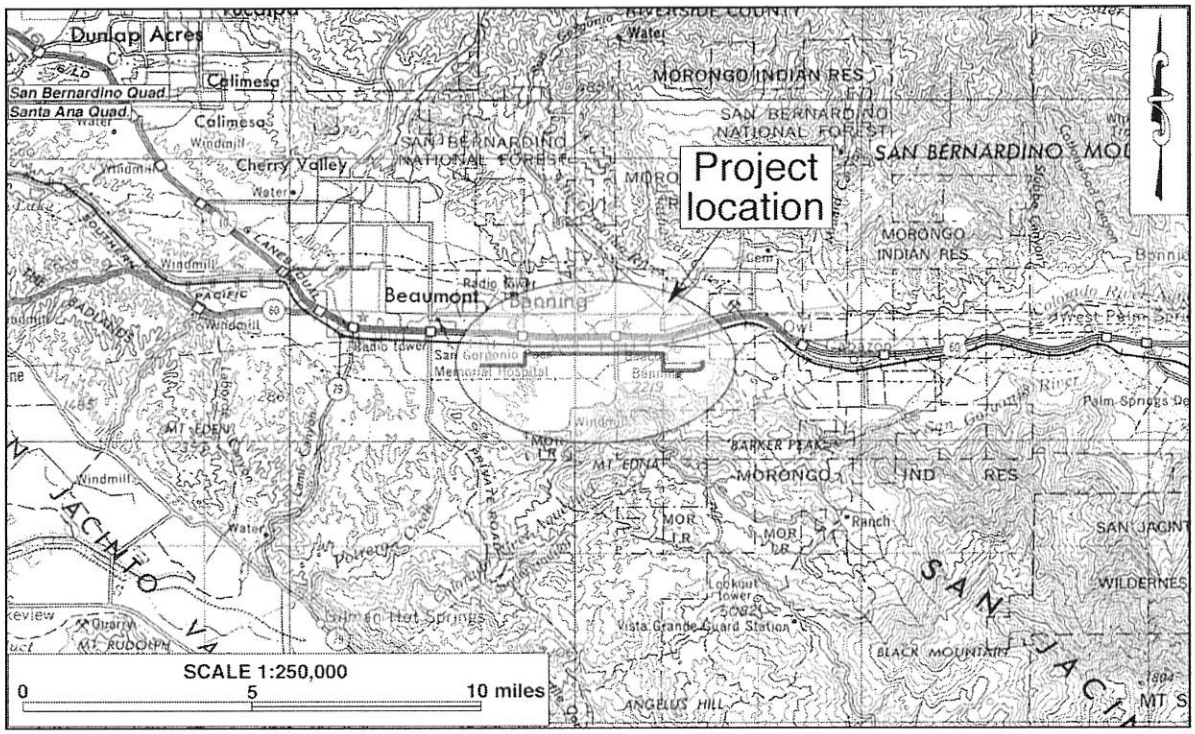

Figure 1. Project vicinity. (Based on USGS San Bernardino and Santa Ana, Calif., 1:250,000 quadrangles [USGS 1969; 1979])

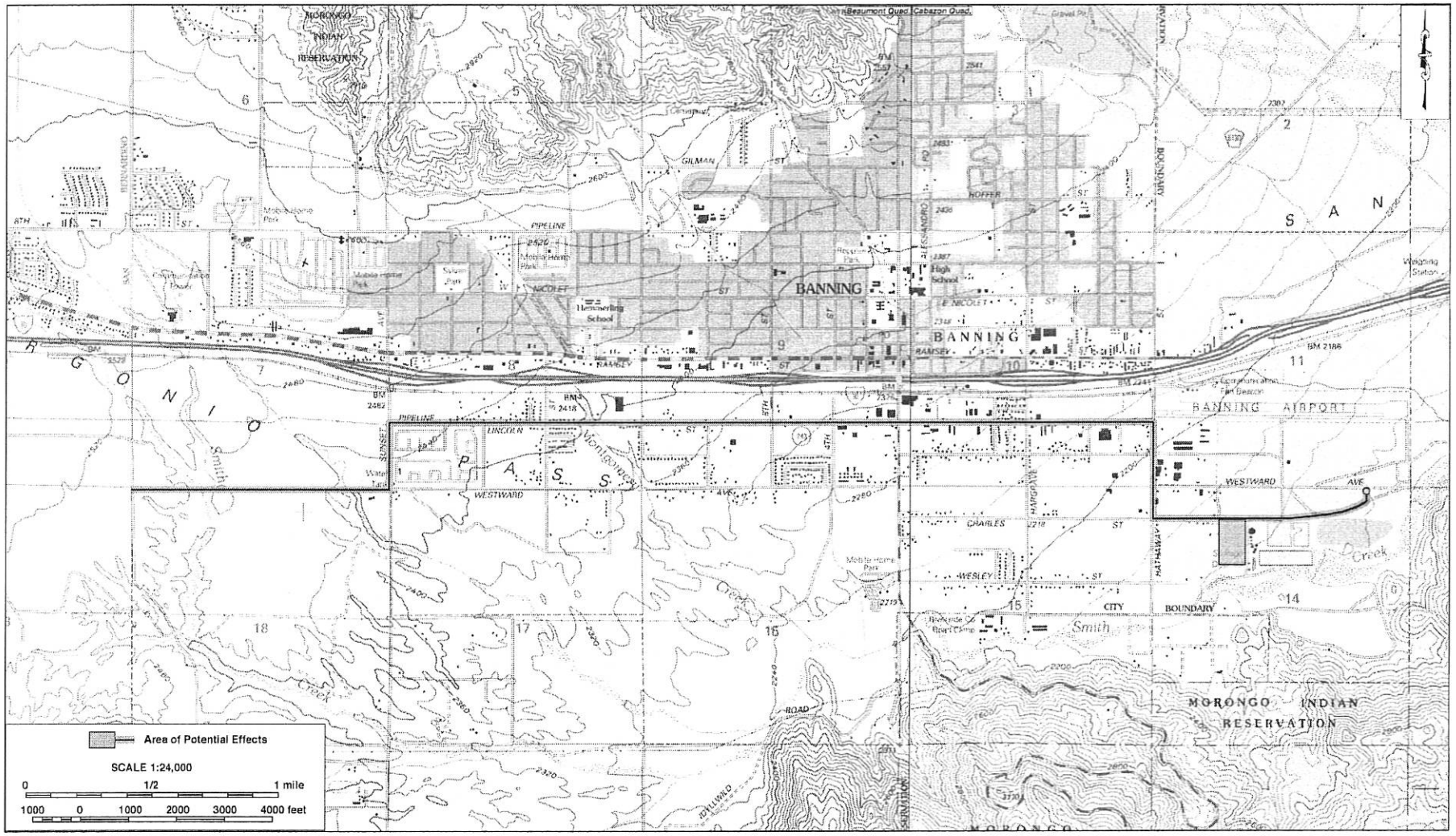

Figure 2. Area of Potential Effects. (Based on USGS Beaumont and Cabazon, Calif., 1:24,000 quadrangles [USGS 1996a; 1996b])

AREA OF POTENTIAL EFFECTS

According to 36 CFR 800.2(d), the Area of Potential Effects is "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist." For the current undertaking, the APE consists of a 16-acre tract of undeveloped land designated for the expansion of the Banning Wastewater Treatment Plant (WWTP) and approximately 28,500 linear feet of pipeline rights-of-way, which measures approximately five feet in width. Table 1 provides further description of the various components of the undertaking and their locations (cf. Fig. 2).

Table 1. Description of the Undertaking

Project Component	Description
Wastewater treatment plant expansion	Construction of additional wastewater treatment facilities on an approximately 16-acre tract of undeveloped land located to the west of the existing Banning WWTP and south of Charles Street.
Pipeline to Well R1	Retrofitting the existing Well R1 located to the east of the WWTP and installing approximately 3,500 linear feet of pipeline from Well R1 to the WWTP expansion site
Recycled water pipeline	Installation of approximately 25,000 linear feet of recycled water pipeline beginning at the existing WWTP, west along Charles Street, north along Hathaway Street, west along Lincoln Street, south along Sunset Avenue, west along an unpaved City access road (an extension of Westward Avenue), to a point of connection at the Sun Lakes housing development.

SETTING

CURRENT NATURAL SETTING

The City of Banning is situated just west of the San Gorgonio Pass, and near the southern foothills of the San Jacinto and San Bernardino Mountains. The San Gorgonio Pass, an east-west trending corridor between the two mountain ranges, is an important connection between southern California's coastal regions and the vast Colorado Desert, with Interstate 10 serving as the main transportation route through the pass. The APE is located to the south of Interstate 10 and extends east-west across both undeveloped and developed areas in the southern portion of the Banning city limits. Elevations along the project route range between approximately 2,080 feet to 2,500 feet above mean sea level. Descriptions of each portion of the APE are presented below.

- **Recycled water pipeline:** Most of the APE lies along the route of the proposed recycled water pipeline, and much of the pipeline route is situated within the existing rights-of-way of various public roads. The route passes through residential, commercial, and light industrial use zones found along Sunset Avenue and Lincoln, Hathaway, and Charles Streets (Fig. 3). The western end of the pipeline route follows an existing gravel-topped access road across undeveloped land to the Sun Lakes housing development (Fig. 3). This portion of the APE is a utility corridor that has been graded smooth along most of its course, and used for both above- and below-ground utilities, including a petroleum pipeline, a fiber optic cable, sewer, and a power transmission line.

- **Banning WWTP expansion:** The 16-acre tract proposed for the expansion of the Banning WWTP is undeveloped and relatively level (Fig. 3). A paved road traverses near its western boundary and serves as the driveway to the Banning Animal Shelter located to the south of the existing WWTP. The 16-acre tract is a portion of Assessor's Parcel No. 532-180-038. Vegetation on the property appears to be controlled by periodic grubbing or mowing, as most of the surface is bare (Fig. 3). A row of olive trees and concrete standpipes line a fence along the western edge of the property.
- **Pipeline to Well R1:** Well R1 is located at the eastern end of the APE and is accessed through an extension of Charles Street from the existing Banning WWTP. The westernmost 600 feet of the proposed pipeline route is along paved road, while the balance is along a dirt service road that leads to the well (Fig. 3).

CULTURAL SETTING

Ethnohistoric Context

The San Gorgonio Pass area has long been a major crossing and intersecting point for Native American tribes in the surrounding regions. It is generally considered to be the

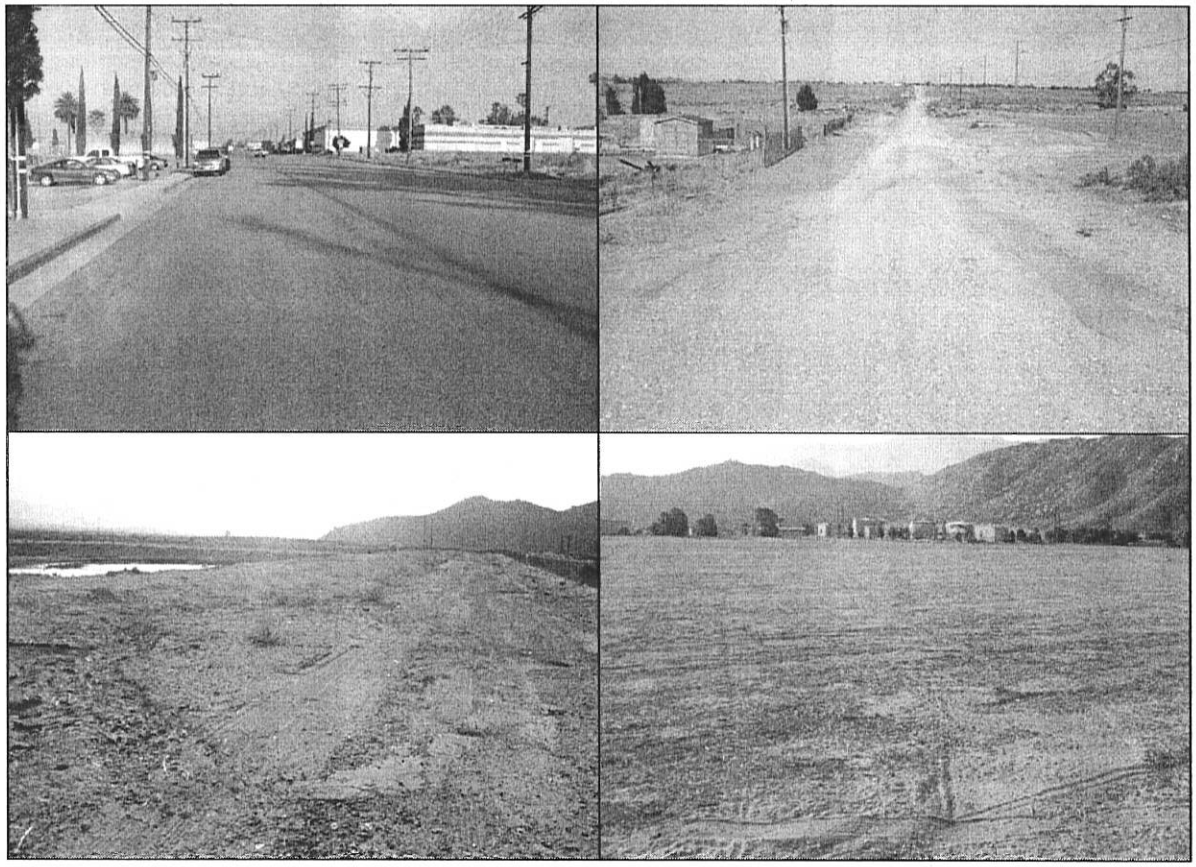

Figure 3. Overview of the current natural setting of the APE. *Clockwise from upper left*: view east along Lincoln Street; view west along utility corridor; view southeast across the 16-acre lot toward existing WWTP facility; view east along dirt access road to Well R1. (Photos taken on July 6 and 9, 2007)

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traditional territory of the Pass Cahuilla Indians, but was probably visited and used by members of the Serrano Indians as well. The Pass Cahuilla are one of the three subgroups—as defined by modern anthropologists—of the Cahuilla, who have occupied the central portion of what is now Riverside County for many centuries. The homeland of the Serrano is centered at the San Bernardino Mountains, but also includes the southern rim of the Mojave Desert, extending from today's Victorville eastward to Twentynine Palms, and may include areas as far south as the present-day March Air Reserve Base.

Modern anthropological literature suggests that the Cahuilla and Serrano societies were similar in many respects. Both groups were primarily gatherers and hunters, and occasional fishers. Both were organized by lineages and clans that were affiliated with one of two exogamous moieties. These different lineages, clans, and moieties interacted with the others through trade, ceremonies and intermarriage.

Although contact with Europeans may have occurred as early as 1771 or 1772, Spanish influence on the Cahuilla and Serrano societies was negligible until the 1800s. Beginning in the early 19th century, the increased Spanish—and later Euroamerican—presence and active involvement in the area brought significant impacts to Indian populations and their lifeways. In particular, the native population was decimated during the 19th century as a result of the exposure to European diseases, most notably smallpox, for which the Native peoples had no immunity. Today, the nearest Native American group to the project location is the Morongo Band of Mission Indians, which includes members of both Cahuilla and Serrano descent.

Historic Context

Dating back to ancient times, the San Gorgonio Pass area was always known as the nexus for cross-desert travels. Most notable among early roads through the pass was the Cocomaricopa Trail, a Native American trading route connecting coastal southern California to areas along the Colorado River. In 1862, the Cocomaricopa Trail was "discovered" by William David Bradshaw, and became known as the Bradshaw Trail. For the next decade and a half, it served as the main thoroughfare between the Los Angeles area and gold mines near present-day Ehrenberg, Arizona, until the completion of the Southern Pacific Railway in 1876-1877 brought an end to its heyday.

During much of the Spanish and Mexican periods in California history, the project vicinity was generally considered a part of Rancho San Gorgonio, the most remote of the 24 principal cattle ranches under the control of Mission San Gabriel (Gunther 1984:458). Around 1845, after secularization of the mission system, Powell "Paulino" Weaver and Isaac "Julian" Williams petitioned the Mexican authorities for a land grant of the 48,400-acre rancho, which stretched from Yucaipa to the eastern edge of the San Gorgonio Pass (Security-First National Bank of Los Angeles 1955; Eyer 1984:4). Although the grant was never issued, Weaver and Williams took possession of the land under assumed ownership (Gunther 1984:459).

Within the present-day City of Banning, the earliest non-Native settlements were the adobe houses built by Isaac W. Smith and José Pope in 1854, after both had secured partial interests in Rancho San Gorgonio (Eyer 1984:5; Jennings et al. 1993:46-47). Pope's house, at what is now the Gilman Ranch, served as a stage station on the Bradshaw Trail under the

later owners of the property, Newton Noble and James M. Gilman (Jennings et al. 1993:46). Smith's ranch, also known to have been a stage stop, later became the site of the Highland Springs Resort (*ibid.*:47).

The railroad came through in 1876, as mentioned above, facilitating population growth and the need for services and amenities. At the time, Banning was called Moore City, after the town's principal landowner, Ransom B. Moore (*Press-Enterprise* 1968; Gunther 1984:40). The area was renamed after Phineas Banning, a Los Angeles-based freight wagon operator and San Gorgonio Pass area sheep rancher around 1877 and a townsite was officially established in 1884 (Gunther 1984:41).

Even with increased development, land ownership was tenuous. Railroad land grants issued to the Southern Pacific and the creation of the Portrero Indian Reservation left the area a checkerboard of claims by the railroad, Native Americans, and early settlers. The matter was finally resolved with federal approval in 1891. Indian land was consolidated as the Morongo Reservation, the railroads received an east-west swath, and displaced settlers were retitled with other parcels (Hughes 1938:29).

Construction in town near the turn of the century included the Bryant House in 1885, later called the San Gorgonio Inn (Eyer 1984:13), and St. Boniface Indian School, built in 1889 on 80 acres purchased by the Bureau of Catholic Indian Missions (Hughes 1938:6). In 1911, two years before the city's incorporation, the Banning Sanitarium opened, marking the beginning of the city's efforts to market the health benefits of the region's dry climate. The campaign extended well into the 1940s with claims that "the nation's best physicians annually send scores of people here to get relief from asthma, bronchial and lung trouble [while] others have learned of the health advantages and charm of Banning through letters from people who have moved here" (Banning Chamber of Commerce 1948; Eyer 1984:13).

The Metropolitan Water District provided a considerable economic and population boost when, in 1930, it chose Banning to set up headquarters for the tunneling operations through the San Jacinto Mountains, a part of the massive Colorado River Aqueduct project. Growth in the city slowed considerably during World War II, but rebounded afterward.

In the meantime, more and more resort and tourist traffic found its way to the Palm Springs area, further to the east. Coupled with the completion of the State Highway 60 bypass in 1962, Banning underwent significant changes in its economic base and population makeup, with a large increase in "unskilled labor, mostly minorities," residents who could find work in hotels and resorts of the Palm Springs area, but could not afford to live there (*Press-Enterprise* 1977). The city, like nearby Beaumont, also supported a large retirement community (*ibid.*).

Banning's economy today is largely geared to travelers on Interstate 10, with many residents finding employment in retail and other consumer services. Although considerably expanded, the city's commercial center remains the same as in the 1920s, along the blocks running east-west on Ramsey Street (City of Banning 1978:4). To a large extent, it is a reflection of the community's strong desire to preserve its traditional town center and prevent the fate that befell numerous other downtown commercial districts throughout the U.S. during the era of rapid urban expansion and suburbanization in the decades immediately following World War II.

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RESEARCH METHODS

RECORDS SEARCH

On June 11, 2007, CRM TECH archaeologist Nina Gallardo (see App. 1 for qualifications) completed the records search at the Eastern Information Center (EIC), located at the University of California, Riverside. During the records search, Gallardo examined maps and records on file at the EIC for previously identified cultural resources within or near the APE, and existing cultural resources reports pertaining to the project vicinity. Previously identified cultural resources include properties designated as California Historical Landmarks, Points of Historical Interest, or Riverside County Landmarks, as well as those listed in the National Register of Historic Places, the California Register of Historical Resources, or the California Historical Resource Information System. The results of the records search are presented below.

HISTORICAL BACKGROUND RESEARCH

Terri Jacquemain, CRM TECH historian (see App. 1 for qualifications), conducted the historical background research on the basis of published literature in local history, archival records of the County of Riverside, and historic maps of the Banning area. Among maps consulted for this study were the U.S. General Land Office's (GLO) land survey plat maps dated 1856-1880, and the U.S. Geological Survey's (USGS) topographic maps dated 1901-1956. These maps are collected at the Science Library of the University of California, Riverside, and the California Desert District of the U.S. Bureau of Land Management, located in Moreno Valley.

NATIVE AMERICAN PARTICIPATION

As part of the research procedures, CRM TECH contacted the State of California's Native American Heritage Commission on June 11, 2007, to request a records search in the commission's sacred lands file. Following the commission's recommendations, CRM TECH further contacted eight Native American representatives in the region in writing on June 13 to solicit local Native American input regarding any possible cultural resources concerns over the proposed project. The correspondences between CRM TECH and the Native American representatives are attached to this report in Appendix 2.

FIELD SURVEY

On July 6 and 9, 2007, CRM TECH archaeologists Josh Smallwood and Nina Gallardo (see App. 1 for qualifications) carried out the field survey of the APE. Smallwood and Gallardo conducted an intensive-level, on-foot inspection of the WWTP expansion site by walking parallel transects spaced 15 meters (approx. 50 feet) apart. The pipeline route to the existing Well R1 and the western portion of the recycled water pipeline route, which traverse across undeveloped land, were also surveyed at an intensive level. The survey of these two areas covered a maximum width of 30 meters (approx. 90 feet), 15 meters on each side of the centerline of the access roads.

The remainder of the APE, lying within the rights-of-way of paved streets, was surveyed at a reconnaissance level mainly by driving along the project route. In this way, the entire

APE was examined systematically for any evidence of human activities dating to the prehistoric or historic periods (i.e., 50 years ago or older). Visibility of the native ground surface ranged between poor (0-20%) along paved or gravel roads and excellent (80-100%) in recently graded, grubbed, or mowed areas.

RESULTS AND FINDINGS

RECORDS SEARCH

According to records on file at the EIC, portions of the APE had been previously surveyed for cultural resources (Figs. 4a, 4b), and two historic-period sites, CA-RIV-7544H and 33-13778, were identified partially across the APE. The boundaries of Site CA-RIV-7544H covers a large area, nearly one mile long and a half-mile wide, encompassing a total of 34 erosion control and water catchment features. These features were located along drainages and erosion channels, and probably served to divert and catch rainwater and prevent erosion of the pasturelands (Messick and Dice 2004). Site 33-13778 was recorded as a large farm/ranching complex comprising five structural foundations and three existing buildings that may have once been part of an early 20th century ranch (Taniguchi and Dice 2004).

During a 2004 study, both of these sites were evaluated against the criteria for listing in the National Register of Historic Places and the California Register of Historical Resources, as established under the provisions of Section 106 and CEQA. Both were found not to be eligible as they failed to meet any of the criteria, and for the lack of historic integrity (Taniguchi and Dice 2004:1-3; Messick and Dice 2004:2-4).

Within a one-mile radius of the APE, as many as 19 cultural resources studies have been carried out on various parcels of land and linear features (Figs. 4a, 4b). As a result of these and other studies, a total of 222 sites and three isolated finds were identified within the scope of the records search (Table 1). These included 11 prehistoric—i.e., Native American—sites, three of which also had historic-period components, 12 historic-period sites, and 199 historic-era buildings, groups of buildings, or other built-environment features. The isolates were fragments of glass from historic-period bottles.

The prehistoric resources were recorded as sites containing bedrock milling features, groundstone pieces, and chipped stone tools and debitage. The historic-period sites included scattered refuse, structural ruins, water conveyance and divergence systems, remains of a mining operation, two electrical substations, a segment of the former Southern Pacific Railway (now a part of the Union Pacific system), and the Gilman Ranch. As for the historic-era buildings, dates of construction ranged between ca. 1884 and 1961. A number of the buildings and structural ruins found within the scope of the records search were recorded along the north and south sides of Lincoln Street, the main route of the recycled water pipeline.

NATIVE AMERICAN PARTICIPATION

In response to CRM TECH's inquiry, the Native American Heritage Commission reported that the sacred lands record search identified no Native American cultural resources in the

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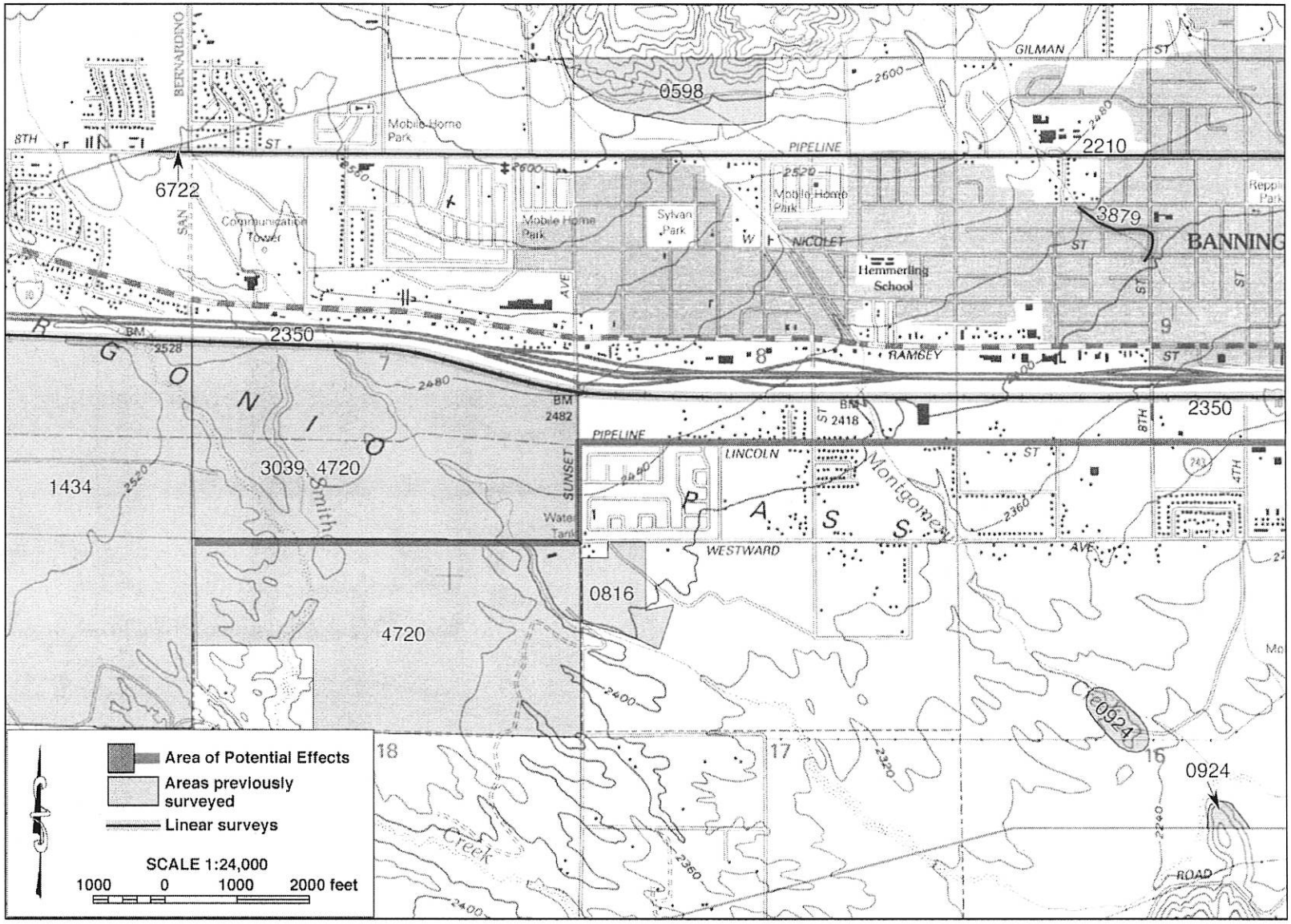

Figure 4a. Previous cultural resources surveys in the vicinity of the APE (western portion), listed by EIC file number. Locations of historical/archaeological sites are not shown as a protective measure.

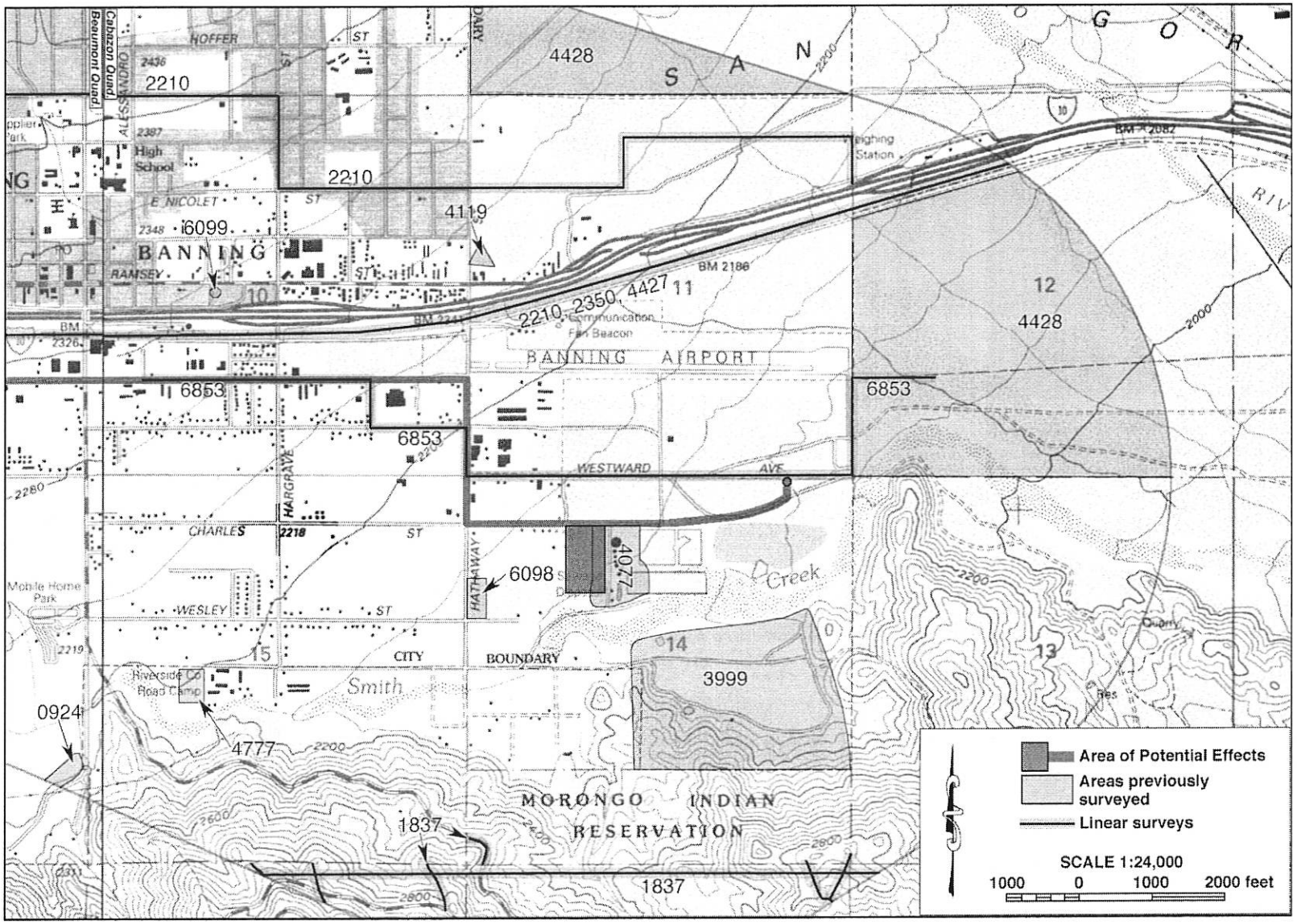

Figure 4b. Previous cultural resources surveys in the vicinity of the APE (eastern portion), listed by EIC file number. Locations of historical/archaeological sites are not shown as a protective measure.

Table 2. Previously Recorded Cultural Resources within the Scope of the Records Search	
Site Number	**Description**
CA-RIV-57	Prehistoric habitation site
CA-RIV-254	One large ceramic olla
CA-RIV-372	Reported location of an Indian village
CA-RIV-373	Reported location of an Indian village
CA-RIV-1701/H	Gilman Ranch Historic Park (including an Indian village site)
CA-RIV-3443H	Historic-period refuse scatter
CA-RIV-3444H	Historic-period refuse scatter
CA-RIV-5678H	Rock-and-mortar channel
CA-RIV-5679H	Rock-and-mortar channel
CA-RIV-5847	Rock art, milling features, and artifacts
CA-RIV-5848/H	Bedrock milling features, two historic-period artifacts and structural debris
CA-RIV-6381H	A segment of the Southern Pacific (now Union Pacific) Railroad
*CA-RIV-7544H	Historic-period water control features
CA-RIV-7815H	Historic-period water diversion system
CA-RIV-7816H	Foundation and associated remnants of historic-period residence
CA-RIV-7817H	Historic-period refuse including riveted metal pipe, car tires, metal barrel, and wood panels from the 1940s
CA-RIV-8227H	Foundation and associated remnants of historic-period residence
CA-RIV-8228H	Foundation and associated remnants of historic-period residence
CA-RIV-8229H	Foundation and associated remnants of historic-period residence; refuse
CA-RIV-8263	Prehistoric residential site at Gilman Ranch
33-7879	Henderson Building (ca. 1880s) or Reid Building (ca. 1890s-present), 54 S. San Gorgonio Ave.
33-7880	Coplin House/Spokane Hotel, 12 S. San Gorgonio Ave., ca. 1900
33-8332	Single-family dwelling, 70 E. Barbour St., ca. 1890s
33-8333	Single-family dwelling, 225 E. Barbour St., ca. 1892
33-8334	Russell Jones House, 391 E. Barbour St., ca. 1900s
33-8335	Single-family dwelling, 434 E. Barbour St., ca. 1920s
33-8336	Single-family dwelling, 451 E. Barbour St., ca. 1890s
33-8337	Davis Home, 933 E. Barbour St., ca. 1892
33-8338	D. Frank Southworth House, 1487 E. Barbour St., ca. 1900s
33-8345	Single-family dwelling, 215 E. George St., ca. 1923
33-8346	Karl Brown Home, 272 E. George St., ca. 1900s
33-8347	Rose House, 779 E. George St., ca. 1910s
33-8350	George Parker House, 1228 S. Hargrave St., ca. 1888
33-8351	Banning Woman's Club,175 W. Hayes St., ca. 1910s
33-8352	Single-family dwelling, 322 E. John St., ca. 1900s
33-8355	Single-family dwelling, 334 N. Murray St., ca. 1910
33-8356	The San Gorgonio Inn/Bryant House, 150 E. Ramsey St., ca. 1884
33-8357	Fox Theater/Corey Building, 84 W. Ramsey St., ca. 1928
33-8358	Hotel Banning, 225 W. Ramsey St., ca. 1920s
33-8359	Purcell House, 11639 N. San Gorgonio Ave., Single-family dwelling, ca. 1932
33-8360	Banning High School, NE corner of San Gorgonio Ave. and Nicolet St., ca. 1935
33-8362	Holcumb Building, 40 S. San Gorgonio Ave., ca. 1900s
33-8363	Conrad Graf House, 717 S. San Gorgonio Ave., ca. 1910
33-8399	Single-family dwelling, 132 E. Wesley St., ca. 1920s
33-8400	Vollaro House/J.R. Fountain House, 270 E. Wesley St., ca. 1888
33-9096	Mary Ellis Home, 170 W. Williams St., ca. 1910s
33-9097	Banning Unified School District Offices, 161 W. Williams St., ca. 1908
33-9098	Charlie Morris House, 486 W. Williams St., ca. 1897
33-9099	Single-family dwelling, 530 W. Williams St., ca. 1902

*Recorded partially within the APE

Table 2. Previously Recorded Cultural Resources within the Scope of the Records Search (Continued)	
Site Number	**Description**
33-9100	Single-family dwelling, 562 N. Woodland St., ca. 1933
33-9104	McAllister Home, 111 N. First St., ca. 1906
33-9105	Single-family dwelling, 125 N. First St., ca. 1932
33-9106	Single-family dwelling, 144 N. First St., ca. 1920s
33-9107	Single-family dwelling, 157 N. First St., ca. 1910s
33-9108	Single-family dwelling, 160 N. First St., ca. 1910s
33-9109	Saint Agnes Church/Grace Lutheran Church, 111 N. Second St., ca. 1930s
33-9110	C.D. Hamilton Home, 181 N. Second St., ca. 1890s
33-9111	United Methodist Church, 235 N. Second St., ca. 1928
33-9112	Dr. Ryan Home, 115 N. Third St., ca. 1900s
33-9113	Methodist Parsonage, 180 N. Third St., ca. 1897
33-9115	Samuels Home, 384 N. Third St., ca. 1908
33-9116	Single-family dwelling, 524 N. Third St., ca. 1910
33-9117	F.F. Lemon Home, 181 N. Fourth St., ca. 1887
33-9118	Osborne House, 416 N. Fourth St., ca. 1923
33-9119	Rutherford House, 385 N. Fifth St., ca. 1912
33-9120	Single-family dwelling, 899 W. Hayes St., ca. 1920s
33-9121	Single-family dwelling, 1015 W. Hayes St., ca. 1920s
33-9122	Single-family dwelling, 1067 W. Hayes St., ca. 1920s
33-9123	Single-family dwelling, 81 King St., ca. 1910s
33-9124	Single-family dwelling, 94 King St., ca. 1910s
33-9125	Single-family dwelling, 58 W. King St., ca. 1910s
33-9126	Single-family dwelling, 943 Linda Vista Dr., ca. 1920s
33-9127	Single-family dwelling, 946 Linda Vista Dr., ca. 1920s
33-9128	Single-family dwelling, 1118 Linda Vista Dr., ca. 1930s
33-9129	Commercial building, 160 W. Ramsey St., ca. 1930s
33-9130	Commercial building, 170 W. Ramsey St., ca. 1930s
33-9131	Mason Moore Building, 185 W. Ramsey St., ca. 1928
33-9132	Hendrick's Market, 141 N. San Gorgonio Ave., ca. 1930s
33-9133	American Legion Hall, 375 N. San Gorgonio Ave., ca. 1921
33-9134	Odd Fellows Building, 25 South San Gorgonio Ave., ca. 1920s
33-9135	Single-family dwelling, 873 N. First St., ca. 1930s
33-9136	Single-family dwelling, 889 N. First St., ca. 1930s
33-9137	Single-family dwelling, 901 N. First St., ca. 1930s
33-9138	Single-family dwelling, 933 N. First St., ca. 1930s
33-9139	Single-family dwelling, 961 N. First St., ca. 1920s
33-9140	Single-family dwelling, 978 N. First St., ca. 1920s
33-9141	Single-family dwelling, 1051 N. First St., ca. 1920s
33-9142	Single-family dwelling, 1119 N. First St., ca. 1920s
33-9143	Single-family dwelling, 1138 N. First St., ca. 1910s
33-9144	Single-family dwelling, 65 Ensign St., ca. 1920s
33-9145	Single-family dwelling, 91 Ensign St., ca. 1920s
33-9147	Mixter House, 1626 W. George St., ca. 1910s
33-9149	Single-family dwelling, 59 Lancaster Rd., ca. 1920s
33-9150	Single-family dwelling, 1222 W. Lincoln St., ca. 1920s
33-9151	Single-family dwelling, 78 W. Pendleton Rd., ca. 1920s
33-9152	Single-family dwelling, 145 W. Pendleton Rd., ca. 1920s
33-9153	Constantino's/Hopper Café, 140 W. Ramsey St., ca. 1930s
33-9154	Banning City Hall, 169 W. Ramsey St.
33-9155	Commercial building, 260 W. Ramsey St., ca. 1920s
33-9156	Banning Medical Clinic, 330 W. Ramsey St., ca. 1900s
33-9157	Single-family dwelling, 385 W. Ramsey St., ca. 1920s
33-9159	Single-family dwelling, 1025 W. Ramsey St., ca. 1910s

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Table 2. Previously Recorded Cultural Resources within the Scope of the Records Search (Continued)	
Site Number	**Description**
33-9160	Single-family dwelling, 1211 W. Ramsey St., ca. 1910s
33-9161	Single-family dwelling, 1231 W. Ramsey St., ca. 1920s
33-9163	Berlin Building, 65 N. San Gorgonio Ave., ca. 1920s
33-9164	Hazel's Thrift Shop/U.S. Post Office, 125 N. San Gorgonio Ave., 1930s
33-9165	Stagecoach Press Building/ B.D. Wilson Building, 137 N. San Gorgonio Ave., ca. 1930s
33-9166	John Moore House, 1023 N. San Gorgonio Ave., ca. 1910s
33-9167	Single-family dwelling, 1111 N. San Gorgonio Ave., ca. 1920s
33-9168	Single-family dwelling, 1419 N. San Gorgonio Ave., ca. 1910s
33-9169	Single-family dwelling, 1455 N. San Gorgonio Ave., ca. 1920s
33-9170	Single-family dwelling, 1558 N. San Gorgonio Ave., ca. 1920s
33-9171	Single-family dwelling, 1580 N. San Gorgonio Ave., ca. 1920s
33-9172	Single-family dwelling, 1617 N. San Gorgonio Ave., ca. 1920s
33-9173	Single-family dwelling , 1661 N. San Gorgonio Ave.
33-9174	Single-family dwelling, 1725 N. San Gorgonio Ave., ca. 1930s
33-9175	Single-family dwelling, 290 E. Santa Rita Pl., ca. 1920s
33-9176	Single-family dwelling, 3190 Westward Ave., ca. 1920
33-9177	Single-family dwelling, 185 W. Westward Ave., ca. 1930s
33-9178	Single-family dwelling, 116 N. Fourth St., ca. 1920s
33-9179	Single-family dwelling, 141 N. Fourth St., ca. 1920s
33-12425	Historic downtown Banning commercial district bounded by Ramsey St., Livingston St., San Gorgonio Ave., and Murray St., ca. 1880s-1920s
33-12626	Historic-period isolate, pieces of glass from the same bottle
*33-13778	Historic-period buildings and foundations at 3176 and 3190 Westward St., early 20th century
33-15102	Prehistoric milling features and historic-period mining
33-15103	Historic-period road that leads to mining site
33-15183	Single-family dwelling, 371 East Wesley St., ca. 1950
33-15184	Single-family dwelling, 315 East Wesley St., ca. 1949
33-15185	Single-family dwelling, 291 East Wesley St., ca. 1952
33-15186	Single-family dwelling, 243 East Wesley St., ca. 1920s
33-15187	Single-family dwelling, 185 East Wesley St., ca. 1946
33-15188	Single-family dwelling, 425 East Charles St., ca. 1920s
33-15189	Single-family dwelling, 390 East Barbour St., ca. 1940s
33-15190	Single-family dwelling, 410 East Barbour St., ca. 1930s
33-15191	Single-family dwelling, 421 East Barbour St., ca. 1930
33-15192	Single-family dwelling, 390 East Ramsey St., ca. 1920s
33-15193	Single-family dwelling, 402 East Ramsey St., ca. 1920s
33-15194	Single-family dwelling, 381 East Williams St., ca. 1947
33-15195	Single-family dwelling, 403-411 East Williams St., ca. 1940s
33-15196	Single-family dwelling, 380 East Nicolet St., ca. 1920s
33-15197	Single-family dwelling, 416 Drury Ln., ca. 1938
33-15198	Single-family dwelling, 436 Drury Ln., ca. 1936
33-15199	Single-family dwelling, 464 Drury Ln., ca. 1936
33-15200	Single-family dwelling, 494 Drury Ln., ca. 1935
33-15208	Single-family dwelling, 370 East George St., ca. 1920
33-15209	Single-family dwelling, 355 East George St., ca. 1936
33-15210	Single-family dwelling, 418 East George St., ca. 1946
33-15211	Single-family dwelling, 417 East George St., ca. 1950s
33-15212	Single-family dwelling, 388 East Hoffer St., ca. 1955
33-15213	Single-family dwelling, 385 East Hoffer St., ca. 1948
33-15214	Single-family dwelling, 1250 North Allesandro St., ca. 1934

*Recorded partially within the APE

Table 2. Previously Recorded Cultural Resources within the Scope of the Records Search (Continued)	
Site Number	**Description**
33-15215	Single-family dwelling, 1190 North San Gorgonio Ave., ca. 1938
33-15216	Single-family dwelling, 53 West Gilman St., ca. 1934
33-15217	Single-family dwelling, 56 West Gilman St., ca. 1939
33-15218	Single-family dwelling, 94 West Gilman St., ca. 1930
33-15219	Single-family dwelling, 130 West Gilman St., ca. 1927
33-15220	Single-family dwelling, 158 West Gilman St., ca. 1938
33-15221	Single-family dwelling, 174 West Gilman St., ca. 1938
33-15222	Single-family dwelling, 190 West Gilman St., ca. 1938
33-15223	Single-family dwelling, 1195 Linda Vista Dr., ca. 1953
33-15224	Single-family dwelling, 378 West Gilman St., ca. 1954
33-15225	Single-family dwelling, 624 West Gilman St., ca. 1939
33-15226	Single-family dwelling, 666 West Gilman St., ca. 1954
33-15227	Single-family dwelling, 694 West Gilman St., ca. 1953
33-15228	Single-family dwelling, 1212 North San Gorgonio Ave., ca. 1937
33-15229	Single-family dwelling, 1221 North San Gorgonio Ave., ca. 1939
33-15230	Single-family dwelling, 73 West Gilman St., ca. 1951
33-15231	Single-family dwelling, 99 West Gilman St., ca. 1917
33-15232	Single-family dwelling, 125 West Gilman St., ca. 1935
33-15233	Single-family dwelling, 93 West Gilman St., ca. 1930s
33-15234	Single-family dwelling, 265 West Gilman St., ca. 1945
33-15235	Single-family dwelling, 425 West Gilman St., ca. 1952
33-15236	Single-family dwelling, 501 West Gilman St., ca. 1950
33-15237	Single-family dwelling, 505 West Gilman St., ca. 1950s
33-15238	Single-family dwelling, 575 West Gilman St., ca. 1950s
33-15239	Single-family dwelling, 609 West Gilman St., ca. 1940s
33-15240	Single-family dwelling, 619 West Gilman St., ca. 1910
33-15241	Brinton Ranch, 915-1190 Brinton Road, ca. 1940s
33-15290	Single-family dwelling, 482 Drury Ln., ca. 1935
33-15293	Isolated shards of historic-period sun-altered manganese glass
33-15294	Isolated shards of historic-period milk and perfume bottle
33-15655	Prehistoric milling slick
33-15678	Prehistoric milling slicks
33-15802	Single-family dwelling, 176 West Lincoln St., ca. 1951
33-15806	Single-family dwelling, 275 East Lincoln St., ca. 1950s
33-15807	Single-family dwelling, 379 23rd St., ca. 1960s
33-15808	Single-family dwelling, 380 23rd St., ca. 1960s
33-15809	Single-family dwelling, 1380 West Lincoln St., ca. 1950s
33-15810	Single-family dwelling, 1430 West Lincoln St., ca. 1950
33-15811	Single-family dwelling, 1476 West Lincoln St., ca. 1947
33-15812	Single-family dwelling, 1574 West Lincoln St., ca. 1950s
33-15813	Single-family dwelling, 1617 West Lincoln St., ca. 1947
33-15814	Single-family dwelling, 1661 West Lincoln St., ca. 1940s
33-15815	Single-family dwelling, 1692 West Lincoln St., ca. 1959
33-15816	Single-family dwelling, 1706 West Lincoln St., ca. 1959
33-15817	Single-family dwelling, 1722 West Lincoln St., ca. 1960
33-15818	Single-family dwelling, 2005 West Lincoln St., ca. 1956
33-15819	Single-family dwelling, 2008 West Lincoln St., ca. 1959
33-15820	Single-family dwelling, 2025 West Lincoln St., ca. 1921
33-15821	Single-family dwelling, 2028 West Lincoln St., ca. 1959
33-15822	Single-family dwelling, 2044 West Lincoln St., ca. 1961
33-15823	Single-family dwelling, 2049 West Lincoln St., ca. 1957

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Table 2. Previously Recorded Cultural Resources within the Scope of the Records Search (Continued)	
Site Number	**Description**
33-15824	Single-family dwelling, 2071 West Lincoln St., ca. 1956
33-15825	Single-family dwelling, 2080 West Lincoln St., ca. 1961
33-15826	Single-family dwelling, 2102 West Lincoln St., ca. 1961
33-15827	Single-family dwelling, 2120 West Lincoln St., ca. 1961
33-15828	Single-family dwelling, 2131 West Lincoln St., ca. 1950s
33-15829	Single-family dwelling, 2148 West Lincoln St., ca. 1960
33-15830	Single-family dwelling, 2156 West Lincoln St., ca. 1961
33-15831	Single-family dwelling, 2174 West Lincoln St., ca. 1961
33-15832	Single-family dwelling, 2290 West Lincoln St., ca. 1961
33-15833	Single-family dwelling, 2343-2345 West Lincoln St., ca. 1940s
33-15834	Single-family dwelling, 2387 West Lincoln St., ca. 1940s
33-15835	Single-family dwelling, 2413 West Lincoln St., ca. 1959
33-15836	Single-family dwelling, 2437 West Lincoln St., ca. 1950s
33-15837	Single-family dwelling, 2539 West Lincoln St., ca. 1950s
33-15838	Single-family dwelling, 2637 West Lincoln St., ca. 1961
33-15839	Single-family dwelling, 2671-2673 West Lincoln St., ca. 1951
33-15840	Single-family dwelling, 2699 West Lincoln St., ca. 1958
33-15841	Single-family dwelling, 2705 West Lincoln St., ca. 1950s
33-15842	Single-family dwelling, 2721 West Lincoln St., ca. 1958
33-15843	Banning Substation, Lincoln St., ca. 1954
33-15844	Cove Lane House, mid-20th century
33-15845	Single-family dwelling, San Timoteo Canyon Rd., mid-20th century
33-15846	Zanja Substation, 34763 Juniper Avenue, ca. 1951

immediate project vicinity. However, noting that "the absence of specific site information in the Sacred Lands File does not guarantee the absence of cultural resources in any 'area of potential effect'," the commission suggested that local Native American representatives be contacted, and provided a list of potential contacts in the region (see App. 2).

Upon receiving the Native American Heritage Commission's response, CRM TECH contacted all six individuals on the list and the organizations they represent. In addition, John Gomez, Jr., Cultural Resources Coordinator for the Ramona Band of Cahuilla Indians, was also contacted at the recommendation of tribal Vice-Chairman Joseph Hamilton. Andrea Candellaria, Tribal Receptionist for the Santa Rosa Band of Mission Indians, was later contacted by telephone. As of this time, two written responses and one verbal response have been received (see App. 2).

An e-mail was received from Britt Wilson, Cultural Resources Coordinator, for the Morongo Band of Mission Indians, on June 13, 2007. In the e-mail Mr. Wilson states that due to the close proximity of the Red Hands Village Site (CA-RIV-57) and a rock art site (CA-RIV-5847) to the undertaking, the Tribe believes that there is a high probability that Native American cultural resources could be discovered in the APE. Therefore, the Morongo Band recommends archaeological monitoring for the undertaking, with at least one monitor being a Native American from the Morongo Band of Mission Indians. The Tribe also wishes to be present during any preconstruction meetings.

John Gomez, Jr., of the Ramona Band of Cahuilla Indians, replied in a letter dated July 5, 2007. Mr. Gomez states that the Tribe has no information regarding cultural resources within the APE, but reserves the right to provide comments upon review of the findings. A copy of the report was requested. Andrea Candellaria, Tribal Receptionist for the Santa

Rosa Band of Mission Indians, stated by phone on June 22, 2007, that the tribe had no specific concerns at this time regarding the APE, but would reserve the right to be notified of any cultural resources discovered during ground-disturbing activities.

FIELD SURVEY

During the field survey, none of the previously recorded water diversion/conveyance features of Site CA-RIV-7544 or structural ruins/buildings of Site 33-13778 was encountered within or immediately adjacent to the APE. CA-RIV-7544 consists of more than 30 structural features scattered over a rather large area, delineated by an all-encompassing site boundary that extends across the proposed pipeline alignment. However, none of the features of Site CA-RIV-7544 was previously recorded within the APE. Although the boundaries of Site 33-13778 encompass a portion of the APE along Sunset and Westward Avenues, all of the components of the site are located outside the road rights-of-way, and outside the APE boundaries. Since the proposed undertaking has no potential to affect either of these sites, they do not require any further consideration.

Two previously unrecorded sites were encountered within the APE boundaries during the field survey, one near existing Well R1, and the other located on the 16-acre WWTP expansion site. Both of these sites, since designated as 33-16207 and 33-16208 (CA-RIV-8364), are from the historic period. Site 33-16207 consists of a group of rural historic landscape features, including a row of olive trees, a fence, concrete irrigation standpipes, a cistern, and a small, rectangular structural footing, all located along the western edge of the WWTP expansion site.

Site 33-16208 is situated to the southwest of Well R1 and northeast of Southern California Edison power pole #1989008E. It consists of historic-period refuse found in low-density concentrations on both sides of Charles Street and scattered to the northeast near Well R1. The site measures approximately 70 x 50 meters and contains fragmented glass bottles, ceramic kitchen wares, metal cans, and other household refuse items. Many of the artifacts found at Site 33-16208, though fragmented, are temporally and morphologically diagnostic. Consumer products represented in the deposit include salve, medicine, milk, carbonated beverages, bleach, preserves, tobacco, perfume, and canned meat, to name a few.

Manganese glass manufactured between 1880-1920s was present at the site and has turned amethyst in color from sun exposure. Maker's marks on some of the bottle bases found at the site include (based on Toulouse 1971): Southern Glass Company, Vernon, CA (1917-1931); Owens Bottle Company, Toledo, OH (1911-1929); Pacific Coast Glass Works, San Francisco, CA (1902-1924; Pacific Coast Glass Company, San Francisco, CA (1925-1930); and Illinois Pacific Glass Company, San Francisco, CA (1902-1925).

Ceramic marks included (based on Lehner 1988): Pacific Clay Products Company, Los Angeles, CA (1922-1946); Carr China Company, Grafton, WV (1916-1952); and D.E. McNicol Pottery, Clarksburg, WV (1920s-1960s). A few church-key opened steel-top beverage cans date to 1935-1960, and hinged-lid tobacco tins, popular throughout the early and mid-20th century, were also found (IMACS 1992:471). The presence of these datable artifacts suggests the refuse was deposited at this location sometime around the 1920s-1930s.

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HISTORICAL BACKGROUND RESEARCH

Historic maps consulted for this study indicate that the vicinity of the APE showed ample evidence of human activities as early as the mid-19th century, thanks in part to its location on the Cocomaricopa-Bradshaw Trail. In the 1850s, when the U.S. government conducted the first systematic land survey in the region, the surveyors noted a number of roads and Indian trails crisscrossing the largely barren landscape, including a wagon road that was undoubtedly a part of the Cocomaricopa-Bradshaw Trail (Fig. 5). Some of the lesser-known Indian trails evidently crossed various portions of the APE (*ibid.*).

During the second half of the 19th century, homesteading and other settlement/land development activities gradually spread through the San Gorgonio Pass area, and in the mid-1870s, the Southern Pacific Railway joined the Cocomaricopa-Bradshaw Trail along roughly the same course. The completion of the Southern Pacific Railway and the subsequent establishment of the town of Banning in 1884 ushered in a major growth spurt in the project vicinity during the late 19th and early 20th centuries. By 1897-1898, the town of Banning had essentially taken shape north of the APE, with a few streets extending into the APE (Fig. 6).

Between then and the 1950s, the area around the town of Banning gradually developed a cultural landscape that was typical of rural southern California at the time, featuring a regular grid of crisscrossing roads lined with stretches of orchards and scattered buildings, most of them presumably farmhouses (Figs. 7, 8). That development pattern evidently persisted in the area until the late 20th century, when southern California's thirst for affordable housing brought about accelerated urbanization in the communities in the San Gorgonio Pass region.

Most of the APE was located along these various roads, and the rest of it, primarily the WWTP expansion site, evidently remained vacant throughout the historic period (Figs. 5-8). Formerly Lot 13 of the Waverly Tract, the WWTP expansion site, including the area of Site 33-16207, was acquired by the City of Banning from Walter S. Hathaway around 1935, three years before his death (County Assessor 1933-1938). A prominent local merchant around the turn of the 20th century, Walter Hathaway served as the first mayor of Banning after the city was incorporated in 1913 (Holtzclaw 2005:23).

Since at least 1913, no assessments had been levied for improvements on Lot 13 (County Assessor 1913-1938), suggesting that neither a building nor any trees and vines were present on the property when it was acquired by the City. Meanwhile, no buildings or other built-environment features were apparent at or near the location of Well R1 during the historic period, where the refuse deposit at Site 33-16208 was found. That area was, and still is, used for cattle ranching, as evidenced by free-range cattle that were observed during the field survey.

DISCUSSION

Based on the research results discussed above, the following sections present the CRM TECH's conclusion on whether any "historic properties" or "historical resources," as defined

Figure 5. The APE and vicinity in 1852-1856. (Source: GLO 1856; 1857)

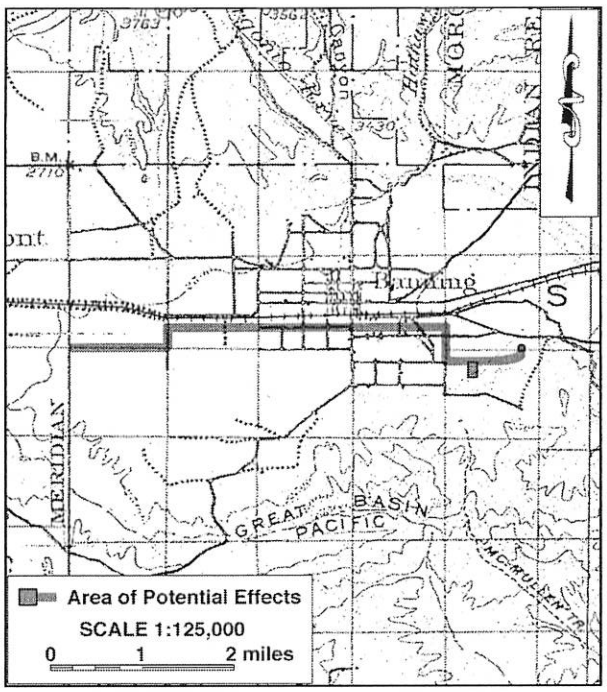

Figure 6. The APE and vicinity in 1897-1898. (Source: USGS 1901)

by Section 106 and CEQA regulations, are present within or immediately adjacent to the APE and may be affected by the proposed undertaking.

DEFINITION

"Historic properties," as defined by the Advisory Council on Historic Preservation, include "prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior" (36 CFR 800.16(l)). The eligibility for inclusion in the National Register is determined by applying the following criteria, developed by the National Park Service as per provision of the National Historic Preservation Act:

> The quality of significance in American history, architecture, archaeology, engineering, and culture

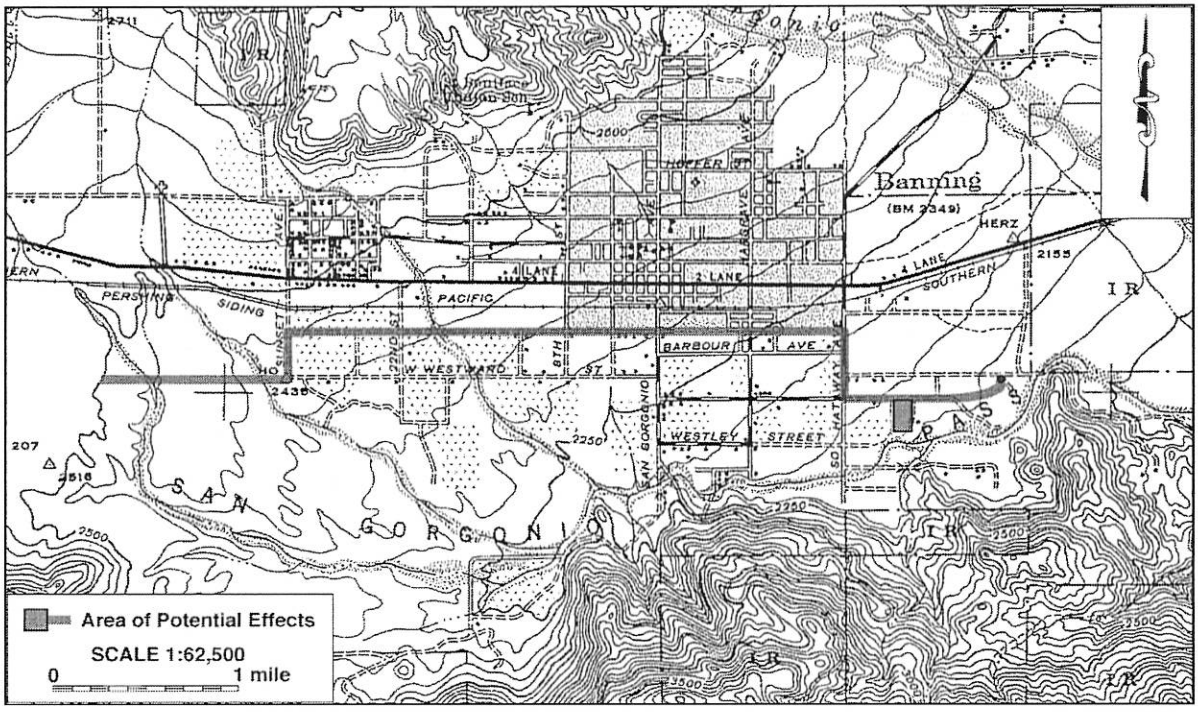

Figure 7. The APE and vicinity in 1939-1941. (Source: USGS 1942)

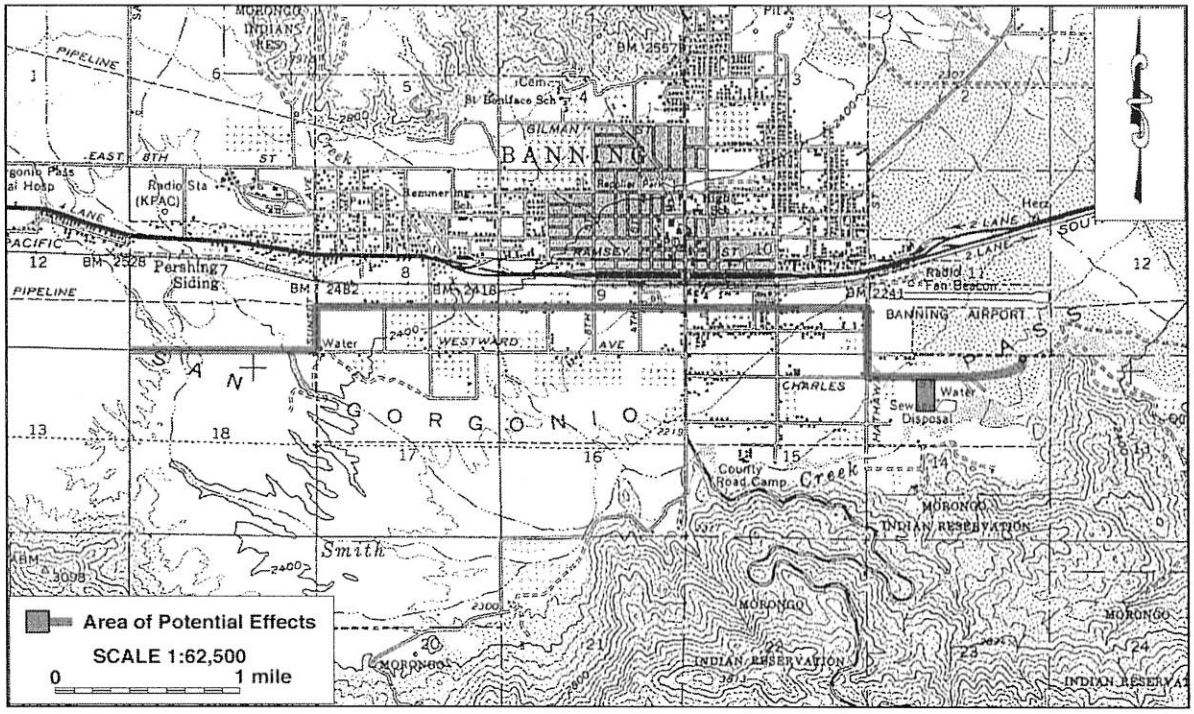

Figure 8. The APE and vicinity in 1949-1951. (Source: USGS 1956)

is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and

(a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
(b) that are associated with the lives of persons significant in our past; or
(c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
(d) that have yielded, or may be likely to yield, information important in prehistory or history. (36 CFR 60.4)

For CEQA-compliance considerations, the State of California's Public Resources Code (PRC) establishes the definitions and criteria for "historical resources," which require similar protection to what NHPA Section 106 mandates for historic properties. "Historical resources," according to PRC §5020.1(j), "includes, but is not limited to, any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California." More specifically, CEQA guidelines state that the term "historical resources" applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources, included in a local register of historical resources, or determined to be historically significant by the Lead Agency (Title 14 CCR §15064.5(a)(1)-(3)).

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Regarding the proper criteria of historical significance, CEQA guidelines mandate that "a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" (Title 14 CCR §15064.5(a)(3)). A resource may be listed in the California Register if it meets any of the following criteria:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
(2) Is associated with the lives of persons important in our past.
(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
(4) Has yielded, or may be likely to yield, information important in prehistory or history. (PRC §5024.1(c))

As mentioned above, two previously recorded sites, CA-RIV-7544H and 33-13778, were reportedly located partially across the proposed pipeline route, but the field survey reveals that none of the features of these two sites is located within or immediately adjacent to the APE. In addition, both of these sites were previously determined not to be eligible for listing in either the National Register or the California Register (Taniguchi and Dice 2004:1-3; Messick and Dice 2004:2-4). Therefore, the only potential "historic properties"/"historical resources" present within the APE are Site 33-16207 and 33-16208 (CA-RIV-8364). Pursuant to these statutory and regulatory guidelines, Sites 33-16207 and -16208 are evaluated under the criteria for the National Register and the California Register, and the results of the evaluation are discussed below.

SITE EVALUATION

Site 33-16207

Site 33-16207 consists of a group of rural historic landscape features of unknown age, such as olive trees, a fence, and remnants of an irrigation system. Although the site is located on land once owned by Walter Hathaway, a notable local merchant and community leader around the turn of the 20th century, there is no evidence that these features are closely associated with Hathaway and the prominent role he played in the early history of Banning. In fact, historical sources suggest that at least some of the features, such as the olive trees, likely post-date Hathaway's association with the property. In addition, none of the features demonstrates a close association with any historical event, special aesthetic values, or any other historical/archaeological merits. Therefore, Site 33-16207 does not appear to be eligible for listing in the National Register or the California Register, and does not appear to qualify as a "historic property" or a "historical resource."

Site 33-16208 (CA-RIV-8364)

The refuse deposit found and recorded as Site 33-16208 contains an abundance of temporally and morphologically diagnostic artifacts that may provide valuable information on the consumer practices of local households around the 1920s-1930s, even though the refuse itself does not appear to be associated with any particular household, a specific person, or a historical event. The site may contain a subsurface component, as it was

observed that many of the artifacts found on the surface were partly buried. While the 1920s-1930s may not be considered a particularly early period in local history, it was a time of accelerated growth and dramatic change in Banning and the entire United States after the end of World War I, during a decade of unprecedented prosperity and the ensuing Great Depression, and before the U.S. involvement in World War II.

In light of the location of the site, it may be associated with residents who lived to the southeast of downtown Banning and were primarily agriculturalists, as evidenced by the numerous orchards and farmhouses observed in historic maps. This area has since been developed and many of the former farms and ranches have become the scene of residential and commercial developments, most of which occurred during the post-WWII boom. Remnants of the agricultural landscapes and free-range cattle observed in the site vicinity during the field survey attest to the area's historical use, which is quickly vanishing due to the effects of urban sprawl.

As of 2004, only four other historic-period refuse scatters have been recorded in the City of Banning and its sphere of influence, as reported by the Eastern Information Center (Tang et al. 2004:8). In comparison to most sites of this type that have been recorded in the southern California desert region, Site 33-16208 is remarkable in that it retains a good level of integrity and contains a variety of household consumer refuse items that date to the early 20th century. As such, Site 33-16208 may have the potential to yield important archaeological data for the study of local history with regard to consumerism and the lifestyle of early-20th century agriculturalists in this portion of inland southern California.

However, the data potential—and thus the significance—of the site cannot be ascertained without additional archaeological investigations, including a surface collection of the diagnostic artifacts, subsurface testing to explore the quantity and quality of the artifact deposit, and analysis of the recovered materials. In order to determine the significance of Site 33-16208 and its qualification as a "historic property"/"historical resource," a testing phase study will be necessary at the site, as outlined below.

CONCLUSION AND RECOMMENDATIONS

Section 106 of the National Historic Preservation Act mandates that federal agencies take into account the effects of their undertakings on historic properties and seek ways to avoid, minimize, or mitigate any adverse effects on such properties (36 CFR 800.1(a)). Similarly, CEQA establishes that "a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment" (PRC §21084.1). "Substantial adverse change," according to PRC §5020.1(q), "means demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired."

The present study has concluded that Site 33-16207 does not appear to qualify as a "historic property" or a "historical resource," but that the significance of Site 33-16208 cannot be determined without further studies. Based on these findings, CRM TECH recommends that an archaeological testing and evaluation program be implemented on Site 33-16208 prior to the commencement of the project. The testing and evaluation program should consist of, at a minimum, the following procedures:

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- Preparation of a research design;
- Surface collection of diagnostic artifacts;
- Excavation of archaeological test units to determine the subsurface content of the site;
- Laboratory analysis of artifacts recovered through the archaeological field procedures;
- Cataloguing and permanent curation, at an appropriate facility, of all artifacts recovered from the site;
- Preparation of a final report to summarize the findings of the procedures outlined above and to interpret such findings within the context of a regional research design.

Further recommendations regarding the final treatment of Site 33-16208 will be formulated and presented on the basis of the results of the testing and evaluation program. No additional cultural resources investigation is recommended for the balance of the APE unless project plans undergo such changes as to include areas not covered by this study. However, if buried cultural materials are encountered during construction anywhere within the APE, all work in that area should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

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1956 Map: Banning, Calif. (15', 1:62,500); aerial photographs taken in 1949 and 1951.
1969 Map: San Bernardino, Calif. (1:250,000); 1958 edition revised.
1979 Map: Santa Ana, Calif. (1:250,000); 1959 edition revised.
1996a Map: Beaumont, Calif. (7.5', 1:24,000); 1953 edition, photorevised in 1994.
1996b Map: Cabazon, Calif. (7.5', 1:24,000); 1988 edition photorevised in 1994.

APPENDIX 1

PERSONNEL QUALIFICATIONS

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PRINCIPAL INVESTIGATOR/HISTORIAN
Bai "Tom" Tang, M.A.

Education

1988-1993	Graduate Program in Public History/Historic Preservation, UC Riverside.
1987	M.A., American History, Yale University, New Haven, Connecticut.
1982	B.A., History, Northwestern University, Xi'an, China.
2000	"Introduction to Section 106 Review," presented by the Advisory Council on Historic Preservation and the University of Nevada, Reno.
1994	"Assessing the Significance of Historic Archaeological Sites," presented by the Historic Preservation Program, University of Nevada, Reno.

Professional Experience

2002-	Principal Investigator, CRM TECH, Riverside, California.
1993-2002	Project Historian/Architectural Historian, CRM TECH, Riverside, California.
1993-1997	Project Historian, Greenwood and Associates, Pacific Palisades, California.
1991-1993	Project Historian, Archaeological Research Unit, UC Riverside.
1990	Intern Researcher, California State Office of Historic Preservation, Sacramento.
1990-1992	Teaching Assistant, History of Modern World, UC Riverside.
1988-1993	Research Assistant, American Social History, UC Riverside.
1985-1988	Research Assistant, Modern Chinese History, Yale University.
1985-1986	Teaching Assistant, Modern Chinese History, Yale University.
1982-1985	Lecturer, History, Xi'an Foreign Languages Institute, Xi'an, China.

Honors and Awards

1988-1990	University of California Graduate Fellowship, UC Riverside.
1985-1987	Yale University Fellowship, Yale University Graduate School.
1980, 1981	President's Honor List, Northwestern University, Xi'an, China.

Cultural Resources Management Reports

Preliminary Analyses and Recommendations Regarding California's Cultural Resources Inventory System (With Special Reference to Condition 14 of NPS 1990 Program Review Report). California State Office of Historic Preservation working paper, Sacramento, September 1990.

Numerous cultural resources management reports with the Archaeological Research Unit, Greenwood and Associates, and CRM TECH, since October 1991.

Membership

California Preservation Foundation.

PRINCIPAL INVESTIGATOR/ARCHAEOLOGIST
Michael Hogan, Ph.D., RPA*

Education

1991	Ph.D., Anthropology, University of California, Riverside.
1981	B.S., Anthropology, University of California, Riverside; with honors.
1980-1981	Education Abroad Program, Lima, Peru.
2002	Section 106—National Historic Preservation Act: Federal Law at the Local Level. UCLA Extension Course #888.
2002	"Recognizing Historic Artifacts," workshop presented by Richard Norwood, Historical Archaeologist.
2002	"Wending Your Way through the Regulatory Maze," symposium presented by the Association of Environmental Professionals.
1992	"Southern California Ceramics Workshop," presented by Jerry Schaefer.
1992	"Historic Artifact Workshop," presented by Anne Duffield-Stoll.

Professional Experience

2002-	Principal Investigator, CRM TECH, Riverside, California.
1999-2002	Project Archaeologist/Field Director, CRM TECH, Riverside.
1996-1998	Project Director and Ethnographer, Statistical Research, Inc., Redlands.
1992-1998	Assistant Research Anthropologist, University of California, Riverside
1992-1995	Project Director, Archaeological Research Unit, U. C. Riverside.
1993-1994	Adjunct Professor, Riverside Community College, Mt. San Jacinto College, U.C. Riverside, Chapman University, and San Bernardino Valley College.
1991-1992	Crew Chief, Archaeological Research Unit, U. C. Riverside.
1984-1998	Archaeological Technician, Field Director, and Project Director for various southern California cultural resources management firms.

Research Interests

Cultural Resource Management, Southern Californian Archaeology, Settlement and Exchange Patterns, Specialization and Stratification, Culture Change, Native American Culture, Cultural Diversity.

Cultural Resources Management Reports

Author and co-author of, contributor to, and principal investigator for numerous cultural resources management study reports since 1986.

Memberships

* Register of Professional Archaeologists.
Society for American Archaeology.
Society for California Archaeology.
Pacific Coast Archaeological Society.
Coachella Valley Archaeological Society.

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PROJECT ARCHAEOLOGIST/REPORT WRITER
Josh Smallwood, B.A.

Education

1998	B.A., Anthropology, Humboldt State University, Arcata, California.
1997	Archaeological Field School, Fort Ross Historic District, Fort Ross, California.
	Archaeological Field School, Coastal Test and Mitigation Projects, Arcata, California.
1996	Archaeological Field School, Mad River Watershed Surveys, Blue Lake, California.
1994	A.A., Anthropology, Palomar College, San Marcos, California.
1993	Archaeological Field School, San Pasqual Battlefield, San Pasqual, California.
	Archaeological Field School, Las Flores Asisténcia, Camp Pendleton, CA.
1992	Archaeological Field School, Palomar College Campus Late Prehistoric Sites, San Marcos, California.
1994-	Extensive study of lithic resource procurement strategies, reduction technology, tool manufacture, and reproduction.
2002	"Historical Archaeology Workshop," presented by Richard Norwood, Base Archaeologist, Edwards Air Force Base.
2001	"CEQA and Section 106 Basics," presented by Richard Carrico, Principal Investigator, Brian F. Mooney & Associates, San Diego.
	"OSHA Safety Training for Construction Monitors," presented by OSHA and City of San Diego.
2000	"HABS/HAER Recording Methods for Historic Structures," presented by Robert Case, Historic Archaeologist, Mooney & Associates, San Diego.
1998	"Unexploded Ordinance Training," presented by EOD officers, Fort Irwin Army Training Facility, Barstow.
1997	"Obsidian Sourcing through Characterization," presented by Thomas Origer, Sonoma State University.

Professional Experience

2002- Project Archaeologist/Report Writer, CRM TECH, Riverside, California.

- Writer/co-author of cultural resource reports for BLM, FCC, and Caltrans-review, city general plans, commercial, and residential development projects.
- Field director, archaeological field work, historic-period building surveys and recordation, historical archaeologist, and lithic analysis.
- Historical research based on published literature, historic maps, oral interviews, county and city archival records, internet sources, and consultation with local historical societies.

1997-2002 Archaeologist for several cultural resource management/environmental consultants, Department of Defense subcontractors, and Humboldt State University.

Cultural Resources Management Reports

Co-author of and contributor to numerous CEQA and Section 106 compliance studies since 1997.

CRM TECH
FAX COVER SHEET

1016 E. Cooley Drive,
Suites A-B
Colton, CA 92324
909·824·6400·Tel
909·824·6405·Fax

To:
Native American Heritage Commission

Fax:
(916) 657-5390

From:
Laura Hensley Shaker

Date:
June 11, 2007

Number of pages (including this cover sheet):
3

HARDCOPY:

_____ will follow by mail

_√_ will not follow unless requested

RE: Sacred Land records search

This is to request a Sacred Lands records search

Name of project:
Banning WWTP
CRM TECH #2083

Location:
In the City of Banning
Riverside County

USGS 7.5' quad sheet data:
Beaumont & Cabazon, Calif.,
Sections 8-11, 14-18, T3S R1E, SBBM

Please call if you need more information or have any questions.

Results may be faxed to the number above.

I appreciate your assistance in this matter.

Map included

June 13, 2007

Anthony J. Andreas, Jr.
3022 W. Nicolet Street
Banning, CA 92220

RE: Banning WWTP
In the City of Banning, Riverside County
CRM TECH Contract #2083

Dear Mr. Andreas:

CRM TECH is conducting a cultural resources study for the project referenced above. In the meantime, I am writing to request your input on potential Native American cultural resources in or near the project area. Please respond at your earliest convenience if you have any specific knowledge of sacred/religious sites or other sites of Native American traditional cultural value within or near the project area that we should be aware of. The lead agency for this project is the City of Banning for CEQA compliance purposes.

The project is located in the City of Beaumont, Riverside County. The accompanying map, based on the USGS Beaumont and Cabazon, Calif., quadrangles, depicts the location of the APE in Sections 8-11 and 14-18, T3S R1E, SBBM.

Any information, concerns or recommendations regarding cultural resources in the vicinity of the project area may be forwarded to CRM TECH by telephone, e-mail, facsimile or standard mail. Thank you for the time and effort in addressing this important matter.

Respectfully,

Laura Hensley Shaker
CRM TECH

Encl.: Project area map

STATE OF CALIFORNIA Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
e-mail: ds_nahc@pacbell.net

June 11, 2007

Laura Hensley Shaker
CRM TECH
1016 E. Cooley Drive, Suite B
Colton, CA 92324

Sent by FAX to: 909-824-6405
Number of pages: 2

Re: Proposed Banning WWTP CRM TECH #2083t, Riverside County

Dear Ms. Hensley Shaker:

The Native American Heritage Commission was able to perform a record search of its Sacred Lands File (SLF) for the affected project area. The SLF failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the Sacred Lands File does not guarantee the absence of cultural resources in any 'area of potential effect (APE).'

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Enclosed are the nearest tribes that may have knowledge of cultural resources in the project area. A List of Native American contacts are attached to assist you. The Commission makes no recommendation of a single individual or group over another. It is advisable to contact the person listed; if they cannot supply you with specific information about the impact on cultural resources, they may be able to refer you to another tribe or person knowledgeable of the cultural resources in or near the affected project area (APE).

Lack of surface evidence of archeological resources does not preclude the existence of archeological resources. Lead agencies should consider avoidance, as defined in Section 15370 of the California Environmental Quality Act (CEQA) when significant cultural resources could be affected by a project. Also, Public Resources Code Section 5097.98 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery. Discussion of these should be included in your environmental documents, as appropriate.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton
Program Analyst

Attachment: Native American Contact List

Native American Contacts
Riverside County
June 11, 2007

Cahuilla Band of Indians
Anthony Madrigal, Jr., Interim-Chairperson
P.O. Box 391760 Cahuilla
Anza , CA 92539
tribalcouncil@cahuilla.net
(951) 763-2631

(951) 763-2632 Fax

Morongo Band of Mission Indians
Britt W. Wilson, Cultural Resources-Project Manager
49750 Seminole Drive Cahuilla
Cabazon , CA 92230 Serrano
britt_wilson@morongo.org
(951) 755-5206
(951) 755-5200/323-0822-cell
(951) 922-8146 Fax

Ramona Band of Mission Indians
Joseph Hamilton, vice chairman
P.O. Box 391670 Cahuilla
Anza , CA 92539
admin@ramonatribe.com
(951) 763-4105
(951) 763-4325 Fax

Cahuilla Band of Indians
Maurice Chacon, Cultural Resources
P.O. Box 391760 Cahuilla
Anza , CA 92539
cbandodian@aol.com
(951) 763-2631

(951) 763-2632 Fax

Anthony J. Andreas, Jr.
3022 W. Nicolet Street Cahuilla
Banning , CA 92220
(951) 849-3844

Santa Rosa Band of Mission Indians
John Marcus, Chairman
P.O. Box 609 Cahuilla
Hemet , CA 92546
srtribaloffice@aol.com
(951) 658-5311
(951) 658-6733 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native American with regard to cultural resources for the proposed BAnning WWTP (CRM TECH #2083) located in the City of Banning; Biverselde County, California for which a Sacred Lands File search was requested.

Subject: City of Banning WWTP
Date: Wednesday, June 13, 2007 3:38 PM
From: Britt Wilson <britt_wilson@morongo.org>
To: Laura Hensley-Shaker <laura.shaker@crmtech.us>
Cc: Britt Wilson <britt_wilson@morongo.org>
Conversation: City of Banning WWTP

Laura,

Thank you for contacting the Morongo Band of Mission Indians concerning the City of Banning's proposed WWTP project.

Due to the proximity of the site to the extensive Red Hands Village Site (RIV-57) and rock art (RIV-5847) and adjacent Smith Creek, the Tribe believes the site of the actual plant is in a high-probability area for cultural resources and we recommend an archaeological site monitoring plan for the plant area. At least one monitor should be Native American provided by Morongo under contract to the City/contractor. The Tribe also asks that it be invited to any pre-construction meeting.

Thank you for considering our comments.

Sincerely,

Britt W. Wilson
Project Manager - Cultural Resources
Morongo Band of Mission Indians
Casino Morongo Building
49750 Seminole Drive
Cabazon, CA 92230
Office: (951) 755-5200 Direct: (951) 755-5206
Mobile: (951) 323-0822
Fax: (951) 922-8146 E-mail: Britt_wilson@morongo.org

Wayta' Yawa' (always believe)

RAMONA BAND OF CAHUILLA

56310 Highway 371, Suite B
Post Office Box 391670
Anza, California 92539

Tel: (951) 763-4105
Fax: (951) 763-4325
E-mail: admin@ramonatribe.com

"A SOVEREIGN NATION"

July 5, 2007

Laura Hensley Shaker
CRM Tech
1016 E. Colley Drive, Suite B
Colton, CA 92324

Re: Banning WTTP; CRM Tech Contract #2083

Dear Ms. Shaker:

The Ramona Band of Cahuilla Indians appreciates the opportunity to consult with you regarding the proposed project listed above and mentioned in your June 13, 2007 letter.

The Ramona Band of Cahuilla Indians is concerned about the protection of unique and irreplaceable cultural resources, such as Cahuilla village and burial sites and archaeological items that may be displaced by ground-disturbing work associated with any project within the aboriginal homelands of the Cahuilla people.

The Ramona Band of Cahuilla Indians is also concerned about the proper and lawful treatment of any cultural or ceremonial items, Native American human remains, or sacred items discovered during planning and/or construction of the project.

At this time, the Ramona Band of Cahuilla Indians has no information to provide regarding cultural resources that may be located within the project area. However, the Ramona Band of Cahuilla Indians reserves the right to provide comments regarding the Project upon review of the findings of the cultural resources assessment for the subject property. Please forward a copy of the cultural resources study/investigation of the above referenced property to the address listed above.

The Ramona Band of Cahuilla Indians appreciates the opportunity to consult regarding the proposed project.

Sincerely,

John A. Gomez, Jr.
Cultural Resources Coordinator
Ramona Band of Cahuilla Indians

RECEIVED JUL 11 2007

TELEPHONE LOG

Name	Tribe/Affiliation	Phone	Comments
Anthony Andreas	Cahuilla	June 22, 2007; 3:10 pm June 26, 2007; 4:35 pm	No answer: phone number disconnected
Anthony Madrigal, Jr.,	Cahuilla Band of Indians	None	Maurice Chacon will respond on behalf of the tribe.
Maurice Chacon, Cultural Resources Coordinator	Cahuilla Band of Indians	June 22, 2007; 3:20pm June 26, 2007; 4:15pm June 27, 2007; 2:10pm	Left messages; no response to date.
Britt Wilson, Environmental Coordinator	Morongo Band of Mission Indians	None	An e-mail was received from Mr. Wilson on June 13, 2007. (Copy attached)
Joseph Hamilton, Vice-Chairman	Ramona Band of Cahuilla Mission Indians	None	John Gomez responded on behalf of the tribe. (See below)
John Gomez, Jr., Cultural Resources Coordinator	Ramona Band of Cahuilla Mission Indians	June 22, 2007; 3:23pm June 26, 2007; 4:20pm	Mr. Gomez responded in a letter dated July 5, 2007. (Copy attached)
John Marcus, Chairman	Santa Rosa Band of Mission Indians	None	Andrea Candellaria responded on behalf of the Tribe. (See below)
Andrea Candellaria, Tribal Receptionist	Santa Rosa Band of Mission Indians	June 22, 2007; 3:30pm	Andrea Candellaria stated that the Tribe had no specific concerns at this time regarding the project area but would reserve the right to be notified of any cultural resources discovered during ground-disturbing activity.

APPENDIX 3

SITE RECORDS
(Confidential)

APPENDIX D

Biological Resources Survey Report

Biological Survey Report: City of Banning Wastewater Treatment Plant Expansion and Phase I Recycled Water System

The City of Banning proposes to expand its 3.6 mgd wastewater treatment plant (WWTP) and construct a recycled water storage and distribution system in accordance with the Banning Recycled Water Master Plan. The capacity of the existing WWTP, on approximately 126 acres of land, would expand from 3.6 mgd to 5.1 mgd. The additional 1.5 mgd capacity would include an advanced treatment process using a Membrane Bioreactor (MBR) to produce recycled water. The MBR treatment process would satisfy State of California Department of Health Services (DHS) Title 22 water quality requirements without filtration. Expansion of the treatment plant would occur primarily on approximately 16 acres of undeveloped land west of the existing WWTP. Expansion of the WWTP and installation of a recycled water system would necessitate ground disturbance at three locations:

- From an existing, capped water well (Well R1) northeast of the WWTP to the existing WWTP;
- A 9.5-acre undeveloped field immediately west of the existing WWTP; and,
- Along paved streets between the WWTP on the eastern side of town and Sunset Avenue on the west side of Banning, and between Sunset Avenue and the eastern side of the Sun Lakes residential development.

Survey Techniques

On April 4, 2007, Mr. John Moeur, Terrestrial Ecologist and Principal Scientist (Parsons), examined the proposed sites for the various components of the WWTP expansion and recycled water system. A broad characterization of the project biological study area was deemed sufficient initially, rather than quantitative descriptions derived from systematic sampling techniques. For these reasons, a pedestrian survey was combined with windshield observations, as appropriate.

The site of Well R1, the undeveloped field, and a diagonal route between Sunset Avenue and Westward Avenue were walked. Other project components could be seen adequately from a slow-moving vehicle. The study area includes approximately 1.3 acres (0.54 hectares [h]) around the site of Well R1, 9.5 acres (3.83 h) of vacant field just west of the treatment plant, about 14.3 acres (5.78 h) along the diagonal between Sunset Avenue and Westward Avenue. The proposed alignment for the recycled water pipeline is composed of various paved streets with minimal to no biological value, as any plants were growing through asphalt pavement.

Formally Protected Species

Records kept by California Department of Fish and Game (CDFG) as the California Natural Diversity Database (CNDDB) (2003) reflect previous biological collections and observations that display collection locales. Such information can indicate land areas possibly still inhabited by protected species.

The United States Fish and Wildlife Service (USFWS) identified 16 federally protected species known to inhabit locales in the general region of the City of Banning (see attached letter dated September 14, 2007). With the exception of Stephen's kangaroo rat and mountain yellow-legged frog, none of these species occur any closer than 3 miles from the project site (most are known only from very considerably farther away than 3 miles from the project site).

Stephen's kangaroo rat (*Dipodomys stephensi*), of the rodent (Family Heteromyidae) is listed as endangered by the USFWS and threatened by the CDFG. Stephen's kangaroo rat generally occurs in annual and perennial grasslands dominated by brome grasses and filaree, but has also been found to inhabit sparse coastal sage scrub, scrub mixed with chamise, or sagebrush plant assemblages. This

small mammal prefers areas with well-drained, gravelly or sandy soil for digging their burrows, but will also burrow in firm soils. Stephen's kangaroo rat has been recorded on the Five Bridges housing site.

Yellow-legged frog (*Rana mucosa*), a true frog (Family Ranidae) is listed by the USFWS as endangered, but does not have formal listing by the CDFG. This species always occurs very near water. The instance (CNDDB EOIndex № 42456) which maps within 0.25 mile of the study area is from a collection made in 1925 at a vaguely described locale. The species possibly has been extirpated from this locale. The mapped occurrence (shown as 1.0 mile in radius) would intersect the project study area only along Lincoln Street at about San Gorgonio Avenue.

Sensitive Species

In the extent of the project study area between well R1 on the eastern side of Banning and the Sun Lakes residential development on the west, CNDDB records show locales of seven other species thought to be declining in their abundance or being restricted from their historic range. While most have been termed California Species of Concern, none has formal status under either the federal or the state Endangered Species Act. These seven species are: Yucaipa onion (*Allium marvinii*), Plummer's mariposa lily (*Calochortus plummerae*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), mesa horkelia (*Horkelia cuneata puberula*), Los Angeles pocket mouse (*Perognathus longimembris brevinasus*), western spadefoot toad (*Spea hammondii*), and the American badger (*Taxidea taxus*).

Twelve additional sensitive species were reported (Impact Sciences, 2006) from the western portion of the present study area during biological surveys conducted for the Five Bridges residential development. CNDDB archives do not record these species in this geographic area (not an uncommon circumstance). Most are birds of special concern: Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), Bell's sage sparrow (*Amphispiza belli*), golden eagle (*Aquila chrysaetos*), burrowing owl (*Athene cunicularia*), California horned lark (*Eremophila alpestris actia*), northern harrier (*Circus cyaneus*), and loggerhead shrike (*Lanius ludovicianus*). Two mammals and two reptiles were also identified: the pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*), San Diego black-tailed jack rabbit (*Lepus californicus bennettii*), coastal western whiptail (*Aspidoscelis tigris stejnegeri*), and coast San Diego horned lizard (*Phrynosoma coronatum blainvillei*), respectively.

Site for Well R1

The Well R1 site, approximately 1.3 acres in size within the Banning WWTP property fence line, has been partially cleared. The ground around Well R1 has been scraped flat. An existing dirt road provides access to percolation ponds and Well R1. The well's casing protrudes from the ground at coordinates 11S 0514386E 3753048N (UTM NAD 1983). Although the dirt road is heavily traveled, this area is characterized by presence of buckwheat (*Eriogonom fasciculatum*), filaree (*Erodium* sp.), and mustard (*Brassica* sp.). Lark sparrow (*Chondestes grammacus*), western kingbird (*Tyrannus verticalis*), killdeer (*Charadrius vociferous*), and jack rabbit (*Lepus californicus*) were observed on April 4, 2007. These jack rabbits may belong to the sensitive subspecies (*L. californicus bennettii*) given this location and occurrences just a few miles west as recorded by CNDDB. Small burrows west of the well may be used by pocket mouse species. The area may potentially serve as habitat for three other species considered sensitive by the California Natural Diversity Data Base (CNDDB): pallid San Diego pocket mouse, Los Angeles pocket mouse and coast San Diego horned lizard. None of these three California Species of Special Concern (CSC) were observed on April 4, 2007.

Undeveloped Field West of WWTF

The proposed expansion site west of the existing Banning WWTP is generally flat, about 9.5 acres in size, and was planted with domestic olive trees as hedgerows (*Olea europaea*) along two sides of the field. The property is mowed twice yearly. Vehicular traffic along a perimeter road into the Banning Animal Shelter crosses the parcel near its southern boundary. Plants found on the site include California croton (*Croton californicus*), mustard, yellow fiddleneck (*Amsinckia* sp.), sun cup (*Camissonia* sp.) and annual grasses. Common raven (*Corvus corax*), American crow (*Corvus brachyrhynchos*),

and numerous burrows dug by California ground squirrel (*Spermophilus beecheyi*) were observed on the site on April 4, 2007. No burrowing owls were seen flying or posting on dirt mounds on April 4, 2007, and no ground squirrel burrow had indirect evidence of burrowing owls that may inhabit this site.

Pipeline Route Along Paved Residential Streets

The proposed recycled water pipeline corridor from the Banning WWTP to Sunset Avenue would be constructed entirely on paved surfaces, primarily in residential areas. A natural gas pipeline and water supply line are located beneath Lincoln Street (and other streets along this route). Annual, introduced grasses were visible in vacant areas between houses, as were ground squirrel burrows. No species but those common to urban areas were noted.

Alignment Along Westward Avenue

The proposed recycled water pipeline corridor from Sunset Avenue to the Sun Lakes housing area would be constructed on a gravel surface comprising the extension of Westward Avenue. This access road experiences frequent vehicular traffic and bisects the proposed Five Bridges housing property. Although a corridor south of the roadway is fenced, this property is used for cattle grazing. Utility lines (gas and fiber optics) are located on the north side of Westward Avenue, with an aboveground, suspended sewage pipe crossing to the south side of the roadway near Smith Creek. A series of bridges provide the roadway over the large wash. Wildlife observed on April 4, 2007 included Say's phoebe (*Sayornis saya*), mourning dove (*Zenaida macroura*), European starling (*Sturnis vulgaris*), Brewer's blackbird (*Euphagus cyanocephalus*), crow, raven, and turkey vulture (*Cathartes aura*). Although evidence of pocket gopher (*Thomomys bottae*) was observed, the dirt shoulders of the road contain no biological resources of concern.

Undeveloped land north of Westward Avenue was surveyed for the Five Bridges residential development, and evidence of Stephens' kangaroo rat were observed there. CNDDB records also show areas mapped as inhabited by *D. stephensi* (Fig. 1). A possible route across this currently undeveloped acreage was examined on April 4, 2007 looking particularly for burrows probably dug by heteromyid rodents. Four such burrows were found. All are in the general vicinity of mapped local distribution of Stephen's kangaroo rat (Fig. 1). No sign of burrowing owls was found anywhere along the diagonal alignment. A cluster of large gums trees (*Eucalyptus* sp.), mature willows (*Salix goodingii*), and mule fat (*Baccharis salisifolia*) grows where this diagonal route would cross Pershing Creek. The grove of trees constitutes an island of arboreal habitat in an otherwise spare tract. A number of bird species were present and active there at mid-day. Tracks of several native mammals species were also seen there.



Fig. 1. Location of four burrows (yellow Xs) close to a diagonal route (blue) across undeveloped land north of Westward Avenue. Irregular polygon (orange) shows land occupied by Stephen's kangaroo rat, as recorded by CNDDB. Magenta oval denotes large trees populated by a variety of bird species.

This diagonal route should be avoided in favor of the north shoulder of Westward Avenue between Sunset Avenue and the Sun Lakes Development. The diagonal route is not being considered for the recycled water pipeline at this time.

Conclusion

Two federally listed species and eighteen sensitive species have been recorded historically in the general vicinity of the proposed recycled water pipeline and water treatment facilities as proposed by the City of Banning. No listed species were evident in the project study area where proposed trenches would be excavated. The site of the water treatment facility west of the existing plant has no signs of any species of concern.

Installation of pipelines along existing roads would have no adverse consequence to any listed species or California species of special concern.

No need for formal coordination with agencies would arise as all effects of ground disturbance would occur in either existing paved streets through residential neighborhoods of Banning, along the manufactured and maintained shoulders of compacted gravel roads used regularly for operational purposes, or on a vacant tract of land adjacent to the exiting treatment facility. As no foreseeable adverse affects would be anticipated, no mitigation would be required to compensate for project effects to biological resources.

Bibliography

California Department of Fish and Game, Biogeographic Data Branch. 2003. California Natural Diversity Database (CNDDB). RareFind, commercial version 3.1.0, February 2007.

Impact Sciences, Inc., 2006. Draft Environmental Impact Report (EIR) Five Bridges Specific Plan. November.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road
Carlsbad, California 92011

In Reply Refer To:
FWS-WRIV-5469.1

SEP 14 2007

Rosemarie Crisologo
Parsons
100 W. Walnut Street
Pasadena, California 91124

Subj: Species List for the Proposed Waste Water Treatment Plant Expansion and Phase I Recycled Water System, City of Banning, Riverside County, California.

Dear Ms. Crisologo:

This letter is in response to your written request, received on September 05, 2007, for information on federally endangered, threatened, proposed, and candidate species that occur in the vicinity of the proposed wastewater treatment expansion and recycled water system that includes pipelines, pumps, a skimmer, and storage reservoirs. The proposed project is located in the City of Banning at 2242 East Charles Street and includes a pipeline that would be constructed west along Charles Street, north on Hathaway Street, west on Lincoln Street, south to an unpaved access road terminating at the Sun Lakes housing development. To assist you in evaluating the potential occurrence of federally listed endangered, threatened, proposed, and candidate species that may occur in the vicinity of the area identified, we are providing the enclosed list.

The proposed project is located within the plan area for the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The MSHCP provides for the long-term conservation and management of habitat for many federally listed and sensitive species in the region while authorizing certain impacts to these species. The City of Banning is signatory to the MSHCP, and therefore, will need to conduct this project consistent with the provisions of the MSHCP.

If the proposed project is authorized, funded, or carried out by a Federal agency and may affect a listed species, then the Federal agency must consult with us, pursuant to section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C 1531 *et seq*).

Although we have provided a list of federally listed endangered, threatened, proposed, and candidate species that may occur in the vicinity of the proposed action, we do not have site-specific information for the project area. Therefore, we recommend that project proponents seek assistance from a biologist familiar with the habitat conditions and associated species in and around the proposed project site to assess the actual potential for direct, indirect and cumulative impacts likely to result from the proposed activity.

TAKE PRIDE IN AMERICA

If you have any questions regarding this letter, please contact Kathleen Pollett of this office at (760) 431-9440, extension 357.

Sincerely,

for Karen A. Goebel
Assistant Field Supervisor

enclosure

Federally Endangered, Threatened, Proposed, and Candidate Species and Critical Habitat that May Occur in the Vicinity of the City of Banning WWTP Expansion and Phase I Recycled Water System, Riverside County, California
September 14, 2007

Common Name	Scientific Name	Federal Status	Critical Habitat in Vicinity
Crustaceans			
Riverside fairy shrimp	*Streptocephalus woottoni*	endangered	-
vernal pool fairy shrimp	*Branchinecta lynchi*	threatened	-
Plants			
Munz's onion	*Allium munzii*	endangered	-
San Diego ambrosia	*Ambrosia pumila*	endangered	-
thread-leaved brodiaea	*Brodiaea filifolia*	threatened	-
slender-horned spineflower	*Dodecahema leptoceras*	endangered	-
Santa Ana River woolly-star	*Eriastrum densifolium ssp. sanctorum*	endangered	-
Slender-horned spineflower	*Dodecahema leptoceras*	endangered	-
Spreading navarretia	*Navarretia fossalis*	threatened	-
Birds			
southwestern willow flycatcher	*Empidonax traillii extimus*	endangered	-
least Bell's vireo	*Vireo bellii pusillus*	endangered	-
coastal California gnatcatcher	*Polioptila californica*	threatened	-
Mammals			
Stevens' kangaroo rat	*Dipodomys stephensi*	endangered	-
Amphibians			
arroyo toad	*Bufo californicus*	endangered	-
mountain yellow-legged frog	*Rana muscosa*	endangered	-
Insects			
Quino checkerspot butterfly	*Euphydryas editha quino*	endangered	-

APPENDIX E

Mitigation Monitoring and Reporting Program

MITIGATION MONITORING AND REPORTING PROGRAM: CITY OF BANNING WASTEWATER TREATMENT PLANT EXPANSION AND PHASE I RECYCLED WATER SYSTEM

Section 21081.6 of the Public Resources Code, enacted by passage of AB 3180 (Cortese Bill), requires public agencies approving projects with significant environmental impacts to adopt a Mitigation Monitoring and Reporting Program. This objective of the program is to ensure that mitigation measures adopted to avoid or mitigate potentially significant environmental impacts are implemented. Section 21081.6 of the Public Resources Code requires all state and local agencies to establish monitoring and reporting programs whenever approval of a project relies upon a mitigated negative declaration or an environmental impact report (EIR). In accordance with these requirements, this mitigation monitoring and reporting program has been prepared to ensure that mitigation measures identified in the Initial Study/Mitigated Negative Declaration for the Wastewater Treatment Plant Expansion and Phase I Recycled Water System (or subsequent revisions thereto), are implemented in an effective and timely manner, and that identified impacts are avoided or mitigated to a level of insignificance. This program provides a discussion of parties responsible for the mitigation program, and a detailed discussion of monitoring and reporting procedures for the mitigation.

I. RESPONSIBLE PARTY

The City of Banning Water/Wastewater Utilities Department (City) will be responsible for implementing and reporting of the mitigation measures in this mitigation program. This agency will be responsible for construction management and oversight, and will ensure that mitigation measures are properly carried out by designated and qualified personnel, which may include specialty contractors.

II. MITIGATION REQUIREMENTS

The Proposed Project includes construction to expand the existing wastewater treatment plant (WWTP) by 3.6 million gallons per day, install new pipeline to transport recycled water, construct a pump station and a storage reservoir for recycled water. Based on the findings of the Initial Study, a total of ten (10) mitigation measures are required for biological and cultural resources, while four (4) construction best management practices are recommended for air quality and hydrology/water quality. Potentially significant impacts and specific mitigation measures are described on Table 1.

III. SCHEDULE AND REPORTING FREQUENCY

Monitoring of mitigation activities will be documented on a Mitigation Monitoring Report form (see Exhibit A). This form will be filled out by the appropriate individual in the event an inadvertent discovery of archaeological materials, paleontological materials, or human remains are found. Monitoring reports will be submitted to the City, retained in the City's project files, and be available for inspection upon request. Completion of these forms will demonstrate and document compliance with Public Resources Code 21081.6.

Table 1. Summary of Environmental Impacts and Mitigation Measures

Resource Area	Potentially Significant Impact	Mit. No.	Mitigation Measure	Frequency of Reporting	Significance After Mitigation
Aesthetics	None.	---	None required.	---	---
Agricultural Resources	None.	---	None required.	---	---
Air Quality	None.	1	The best management practice of watering for dust control is recommended.	---	---
Biological Resources	Potential to interfere with movement of small animals	2	The following mitigation measures will be incorporated into project design and planning to avoid or minimize habitat disturbance: • *Pipeline design will be limited to the disturbed shoulders of the existing roadway along Westward Avenue. Placement of recycled water pipeline in any washes or creeks will be avoided.*	Upon 100% design completion and during construction	Less than significant
		3	• *A qualified biologist will be present during trenching to monitor ground disturbance to ensure that construction vehicles do not stray north of Westward Avenue into grasslands of marginal quality but where kangaroo rat burrows might occur north of the project site.*	During construction	Less than significant
		4	• *Pipeline installation along Westward Avenue from Sunset Avenue to the Sun Lakes housing area would be conducted by minimizing the width of the trench corridor to less than 5 feet, wherever possible.*	Upon 100% design completion and during construction	Less than significant
		5	• *Construction laydown and staging areas would be sited along nearby paved road surfaces and would not be located upon any undisturbed, natural areas.*	Upon 100% design completion and during construction	Less than significant
		6	• *To avoid potential impacts, construction work limits would be clearly designated on construction plans and specifications.*	Upon 100% design completion and during construction	Less than significant
		7	• *To retain native plant material, any topsoil removed from the site would be stockpiled, covered and replaced on-site, as much as possible. During pipeline construction, any non-paved areas that are trenched would be returned to their original condition following pipeline installation.*	Upon 100% design completion and during construction	Less than significant

Table 1. Summary of Environmental Impacts and Mitigation Measures (Cont'd)

Resource Area	Potentially Significant Impact	Mit. No.	Mitigation Measure	Frequency of Reporting	Significance After Mitigation
Cultural Resources	Construction activities may encounter previously undiscovered archaeological resources	8	• *The pipeline from Well R1 to the Banning WWTP would be aligned to avoid Site 33-16208. The City would ensure that a qualified archaeological monitor flags the boundaries of the site prior to any groundwork, and that the monitor is present during pipeline trenching at this location. In lieu of avoiding the site, the City may also conduct an archaeological testing and evaluation program for Site 22-16208 as described in the Cultural Resources Survey Report (July 20, 2007) for this project.*	Upon 100% design completion and during construction	Less than significant
		9	• *In the event any archaeological materials or subsurface deposits are unearthed during earthmoving activities, the construction contractor would cease activity in the affected area (e.g., redirect activities into another area) until the discovery can be evaluated by a qualified archaeologist or historic resources specialist, as required, and appropriate treatment measures implemented.*	Upon 100% design completion and during construction	Less than significant
	Construction earthmoving activities and unauthorized collection of fossil remains by construction personnel	10	To avoid potential impacts to paleontological resources, the District would ensure that the two mitigation measures described above are incorporated into project planning (these measures would restrict ground disturbance to specified work areas), and the following mitigation would be implemented during construction: • *In the event paleontological resources are encountered during earthwork, the construction contractor would cease activity in the affected area (e.g., redirect activities into another area) until a qualified paleontologist can evaluate the discovery, and implement appropriate treatment measures. The paleontologist would determine if the paleontological material should be salvaged, identified and permanently preserved. Curation of specimens into an accredited museum repository would be conducted by a qualified paleontologist, who would also prepare a report of findings for the City of Banning.*	Immediately upon discovery	Less than significant

Table 1. Summary of Environmental Impacts and Mitigation Measures (Cont'd)

Resource Area	Potentially Significant Impact	Mit. No.	Mitigation Measure	Frequency of Reporting	Significance After Mitigation
Cultural Resources (Cont'd)	Construction activities encountering human remains	11	To avoid potential impacts to human remains that may be buried beneath the surface in the work area, the City would ensure that the following mitigation measure is implemented: • *In the event human remains are encountered during project construction, the Riverside County Coroner shall be contacted to determine whether or not investigation of the cause of death is required. In the event the remains are Native American in origin, the Native American Heritage Commission shall be contacted to determine necessary procedures for protection and preservation of remains, including reburial, as provided in the CEQA Guidelines, Section 15064.5(e).*	Immediately upon discovery	Less than significant
Geology and Soils	None.	---	None required.	---	---
Hazards and Hazardous Materials	None.	---	None required.	---	---
Hydrology and Water Quality	None.	12	Three construction best management practices for erosion control would be implemented during construction of project facilities to minimize the potential for sediment to be picked up and transported off-site by runoff. • *Standard erosion control measures would include stockpiling and covering topsoil, as well as best management practices to prevent water quality impacts.*	Upon 100% design completion and during construction	Less than significant
		13	• *Construction equipment would not be rinsed off on-site or in such a manner as to adversely impact Smith Creek along the southern boundary of the project site.*	Upon 100% design completion and during construction	Less than significant
		14	• *Construction materials would be covered and stored in contained areas away from any drainage areas. Construction materials would be covered and stored in contained areas away from any drainage areas.*	Upon 100% design completion and during construction	Less than significant

Table 1. Summary of Environmental Impacts and Mitigation Measures (Cont'd)

Resource Area	Potentially Significant Impact	Mit. No.	Mitigation Measure	Frequency of Reporting	Significance After Mitigation
Land Use and Planning	None.	---	None required.	---	---
Mineral Resources	None.	---	None required.	---	---
Noise	None.	---	None required.	---	---
Population and Housing	None.	---	None required.	---	---
Public Services	None.	---	None required.	---	---
Recreation	None.	---	None required.	---	---
Transportation/Traffic	None.	---	None required.	---	---
Utilities and Service Systems	None.	---	None required.	---	---
Mandatory Findings of Significance	None.	---	None required.	---	---

EXHIBIT A

MITIGATION MONITORING REPORT FORM

MITIGATION MONITORING REPORT

SECTION 21081.6 PUBLIC RESOURCES CODE

City of Banning **Water/Wastewater Utilities Department** **176 E. Lincoln Street** **Banning, California 92220**	Page ____ of ____
Facility	Project **WWTP EXPANSION AND PHASE I RECYCLED WATER SYSTEM**
Location	File No.
Mitigation Measure No. _____ Mitigation Description:	
Monitoring Frequency	Reporting Requirement
Remarks	

The information contained in this report is an independent evaluation based on my personal observations and information provided to me. In accordance with Section 21081.6 of the California Public Resources Code, I hereby certify under penalty of perjury that the information contained herein is true and correct to the best of my knowledge.

Name of Person Completing Form _____ Title _____

Signature _____ Date Signed _____

Form Received by: _____ Signature: _____

Title: _____ Department/Division: _____ Date Rec'd: _____

Compliance Acceptance: ☐Yes ☐ No Date Rec'd by Report Recipient: _____
Mitigation Completed: ☐Yes ☐ No Date Completed: _____
Monitoring Completed: ☐Yes ☐ No Date Completed: _____

Attach additional sheets if necessary.

City of Banning

Wastewater Treatment Plant and Recycled Water Upgrades Feasibility Study (Revision 1)

January 5, 2024



N2W Engineering, Inc.

3240 El Camino Real, Suite 150, Irvine, CA 92602

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Prepared by: Iris Jimenez and Jamal Awad

Reviewed by: James Wang



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List of Abbreviations

ADD – average day demand
AFY – acre-feet per year
BMP – best management practice
BMZ – Beaumont Management Zone
CEQA – California Environmental Quality Act
CIP – capital improvement plan
CWSRF – Clean Water State Revolving Fund
DDW – State Water Resources Control Board, Division of Drinking Water
DWR – California Department of Water Resources
ETo – evapotranspiration
FONSI – Finding of No Significant Impacts
gpm – gallons per day
GSAs – Groundwater Sustainability Agencies
GSPs – Groundwater Sustainability Plans
IS-MND – Initial Study-Mitigated Negative Declaration
MBR – membrane bioreactor
MCL – maximum contaminant level
MGD – million gallons per day
MWC – Banning Heights Mutual Water Company
NEPA – National Environmental Policy Act
NTU – nephelometric turbidity unit
O&M – operation and maintenance
RO – reverse osmosis
RWQCB—Colorado River Basin Regional Water Quality Control Board
SGMA – Sustainable Groundwater Management Act
SGPWA – San Gorgonio Pass Water Agency
STMZ – San Timoteo Management Zone
SWP – California State Water Project
SWRCB – State Water Resources Control Board
TDS – total dissolved solids
TN – total Nitrogen
US EPA – United States Environmental Protection Agency
UVAOP – ultraviolet advanced oxidation
WDRs – waste discharge requirements
WIFIA – Water Infrastructure Finance Innovation Act
WWTP – City of Banning Wastewater Treatment Plant

EXECUTIVE SUMMARY

The City of Banning (City) has prepared this feasibility study to support a grant application for WaterSMART: Title XVI WIIN Act Water Reclamation and Reuse Projects for Fiscal Years 2023 and 2024 per Funding Opportunity Announcement No. R23AS00464. This study evaluates the feasibility of upgrading the City's Wastewater Treatment Plant (WWTP) to tertiary disinfected recycled water standards for non-potable reuse under the terms of the U.S. Bureau of Reclamation (USBR) Water Reclamation and Reuse (Title XVI) program. This study is structured to follow the Bureau of Reclamation Manual, Directives and Standards, "WTR 11-01."

The existing WWTP consists of preliminary treatment, primary treatment, secondary treatment, solids handling, disinfection (currently not in use), and evaporation/percolation ponds. The WWTP effluent is currently in compliance with discharge requirements, but it requires significant upgrades to comply with impending water quality discharge limits by the Regional Water Quality Control Board (RWQCB). In addition, the Trickling Filters, which perform secondary treatment, have reached their end of life. WWTP effluent discharges to percolation ponds that recharge into the Cabazon Groundwater Basin but is not entirely extracted by Banning - the percolated water flows to other water agencies located downgradient.

The proposed Wastewater Treatment Plant and Recycled Water Upgrades Project (Project) evaluated by this study consists of three phases: I) upgrading the existing WWTP to recycled water standards and building pipelines to connect the WWTP to customers currently using ground water from non-potable wells, II) building pipelines to connect the WWTP to the future recycled water customers, and III) building pipelines to connect the WWTP to a groundwater recharge basin upgradient of the Cabazon storage unit. Phase I will be implemented in the near term, and Phases II and III will be implemented in the long-term. Phases II and III are not included in this Feasibility Study for clarity. The City has only requested funding for Phase I in the WaterSMART funding application but will seek additional funding for Phases II and III in the future and will provide an updated Feasibility Study at that time.

Currently, there are no non-potable recycled water uses that have been implemented in the City. By implementing both project components, non-potable reuse and indirect potable reuse, the supply and usage of locally sourced non-potable water supply will increase by an estimated 4,035 AFY (3.6 MGD) of recycled water.

The City relies upon purchasing water from the San Gorgonio Pass Water Agency (SGPWA) for groundwater recharge. The increased supply of local non-potable water supplies produced from this Project would decrease demands on the SGPWA, and on its supplier, the California State Water Project, thereby reducing diversions from natural watercourses in the Sacramento-San Joaquin Delta. The Project also provides non-quantifiable benefits including improving non-potable water supply reliability and drought resiliency.

1. INTRODUCTION

1.1 Prelude

The proposed Wastewater Treatment Plant and Recycled Water Upgrades Project (Project) is the subject of this feasibility study, which supports a grant application for WaterSMART: Title XVI WIIN Act Water Reclamation and Reuse Projects for Fiscal Years 2023 and 2024 per Funding Opportunity Announcement No. R23AS00464. This study is structured to follow the Bureau of Reclamation Manual, Directives and Standards, "WTR11-01," which was intended for reclamation projects. The purpose is to evaluate Project feasibility under the terms of the U.S. Bureau of Reclamation (USBR) Water Reclamation and Reuse (Title XVI) program.

The Project evaluated by this study involves upgrading the existing Wastewater Treatment Plant (WWTP) at the City of Banning (City) to Title 22 standards for recycled water use.

At this time, effluent from the WWTP meets the effluent water quality discharge requirements. However, the WWTP will not be able to meet the impending discharge limits proposed by the Colorado River Basin Regional Water Quality Control Boad (RWQCB). In addition, many treatment facilities at the plant have reached the end of their useful life. WWTP effluent is currently discharged to percolation ponds that recharge into the Cabazon Groundwater Basin but is not entirely extracted by Banning - the percolated water flows to other water agencies located downgradient.

By replacing existing equipment with new facilities that can treat the water to tertiary disinfected recycled water standards, the WWTP effluent can be used to meet current and future non-potable water demands in the City. This allows the City to both meet the impending RWQCB requirements as well as benefit from their WWTP effluent. These benefits include reducing the City's reliance on imported water and improving the reliability of groundwater for drinking water purposes. Since the City is considered a Disadvantaged Community, a reliable local supply of water will also support City growth and economic development, which are dependent on the availability of water supplies.

1.2 Non-Federal Project Sponsor

The City of Banning is serving as the non-federal project sponsor. The City was incorporated as a Charter City in 1913, pursuant to the California Constitution Article XI and the California Government Code and is governed by an elected five-member council. It is a full-service city, providing water and wastewater services through its Water and Wastewater Utilities Department, under the purview of the City Council.

1.3 Study Area and Project Map

The City of Banning is in the northwestern portion of Riverside County, approximately 25 miles east of downtown Riverside and approximately 30 miles west of the City of Palm Springs. The City

is bounded by the San Bernardino Mountains to the north; Cherry Valley to the northwest; the City of Beaumont to the west and southwest; unincorporated County area to the south; the San Jacinto Mountains to the southeast; and the Morongo Band of Mission Indians and unincorporated community of Cabazon to the east. The City's total land area is 14,848 acres or 23.2 square miles. See Figure 1 on the following page for a map of the City boundaries.

The City's water service area comprises 100 percent of the population residing within the City limits, and a small unincorporated area of Riverside County. The City's Water Service Area comprises about 16,908 acres or 26.4 square miles.

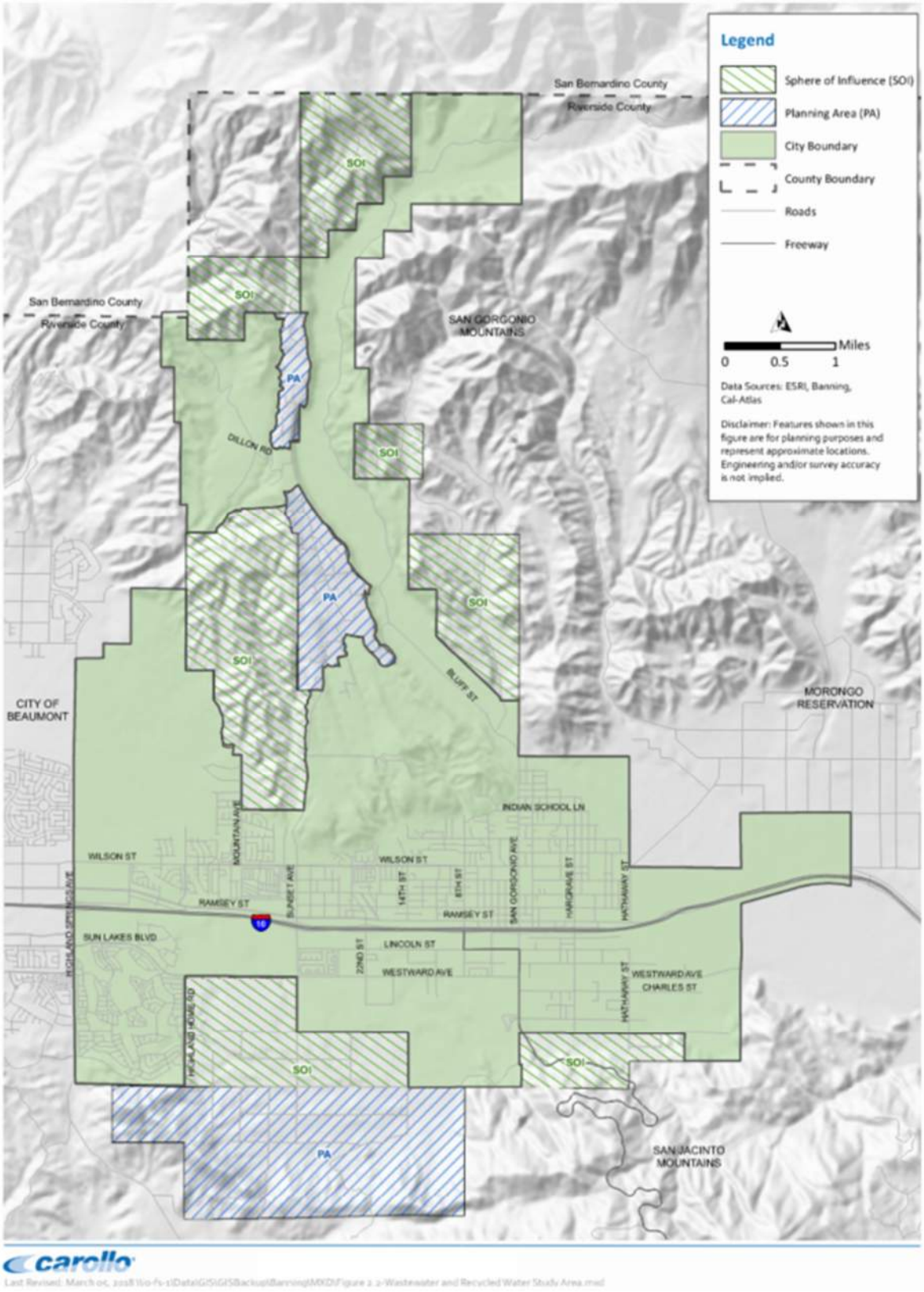
The City is a retail agency and within the San Gorgonio Pass Subbasin portion of the Coachella Valley Groundwater Basin. The City is a member of the San Gorgonio Pass Regional Water Alliance (Alliance). The Alliance was created to identify challenges in water supply and water quality in the region and to improve coordination and communication among local, state, and federal governments and water purveyors and other water resource stakeholders in the San Gorgonio Pass region.

Since 2015, the City has participated in the following two additional agreements:

1. San Gorgonio Integrated Regional Water Management Group, which includes: City of Banning, Banning Heights Mutual Water Company, Cabazon Water District, High Valleys Water District, Riverside County Flood Control and Water Conservation District (CFCWCD), and the San Gorgonio Pass Water Agency.
2. San Gorgonio Pass Subbasin Groundwater Sustainability Agency, which includes: the Desert Water Agency, Banning Heights Mutual Water District, Cabazon Water District, Mission Springs Water District, San Gorgonio Pass Water Agency and the City of Banning.
3. San Timoteo Groundwater Sustainability Agency, which includes: City of Banning, Beaumont-Cherry Valley Water District, City of Redlands, Yucaipa Valley Water District, San Gorgonio Pass Water Agency.

The City participates in the Beaumont Management Zone (BMZ) Maximum Benefits Program, which is under the oversight of the RWQCB and is intended to ensure the long-term sustainability of water quality in the BMZ. Yucaipa Valley Water District, Beaumont Cherry Valley Water District, and City of Beaumont also participate in the program.

Figure 1. City of Banning Project Map (courtesy of 2018 Integrated Master Plan (2018 IMP))



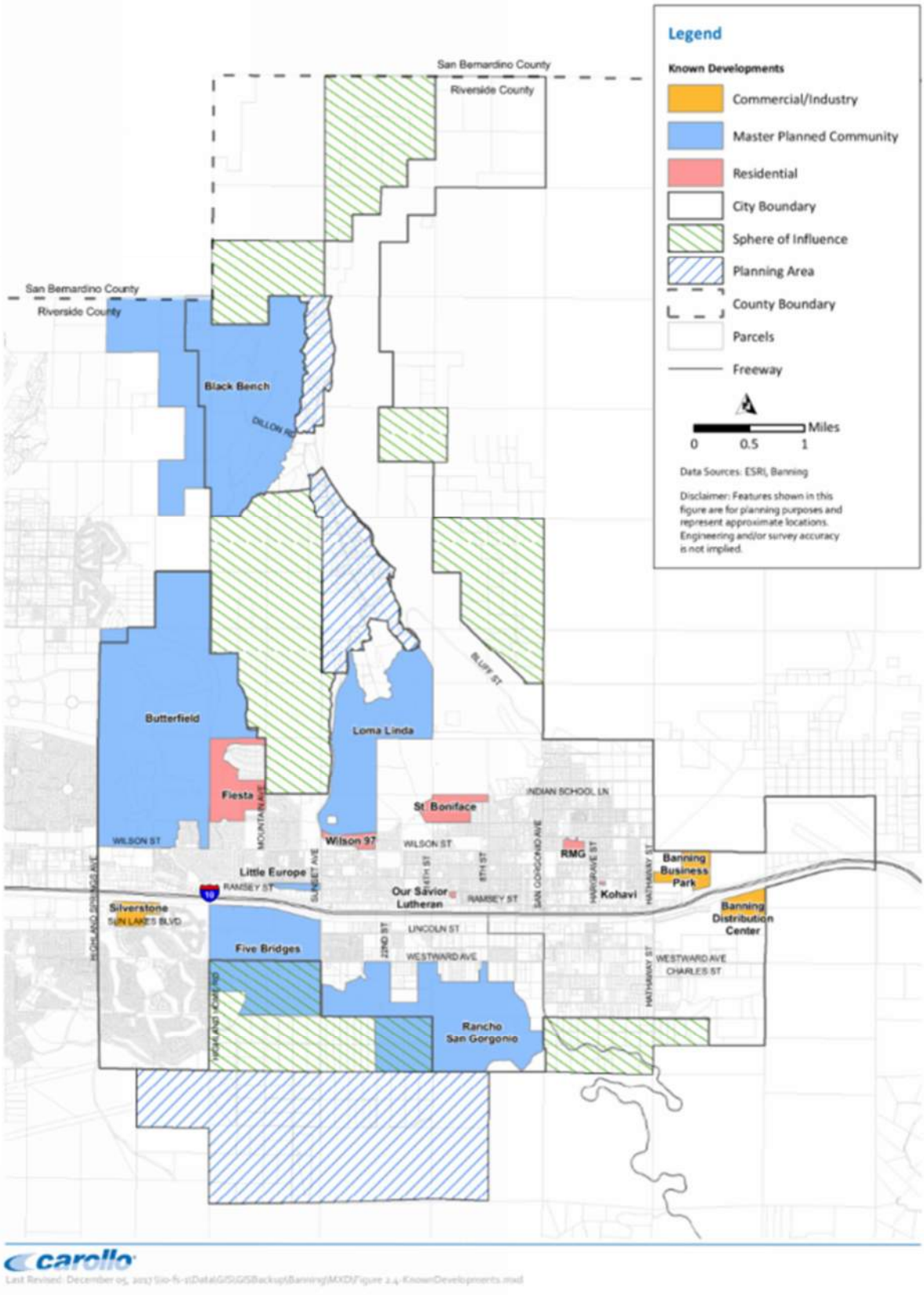
1.3.1 Land Use

The City includes a mixture of residential uses and equestrian estates, combined with more recently planned residential housing developments. The community focal point is an extended commercial downtown stretching along Ramsey Street. Ramsey Street largely parallels Interstate 10; consequently, one can find almost any type of restaurant, bank, or service station here - a wider variety than one would expect in a city of this size. Table 1 provides some basic statistics on current land use and economy for the County of Riverside and the City. Figure 2 on the following page shows the City's known developments, which includes the agricultural, open space, and community areas.

Table 1. Current Land Use & Economic Statistics for Riverside County and City of Banning Land

Item	Riverside County	Banning
Land Area (sq. miles)	7,206 sq. miles	23 sq. miles
Land Area (acres)	4,611,840 acres	14,720 acres
Agricultural Land	263,796 acres	1,200 acres
Developed Land	165,151 acres	428 acres
Population	2,470,546	31,125
Housing Units	857,148	10,991
Median Home Price	$350,100	$234,900
Owner Occupancy Rate	66.3%	65.9%
Employed (16yrs +)	59.7%	44.5%
Median Household Income	$67,005	$42,274
Percent in Poverty	11.3%	20.6%
Manufacturing	$15.1 Billion	$72.8 Million
Agriculture/Crops	$3.9 Billion	N/A
Retail & Wholesale Sales	$43.8 Billion	$248.7 Million

Figure 2. City of Banning – Known Developments (courtesy of 2018 IMP)



1.3.2 Climate

The City is located within the San Gorgonio Pass, which is a transitional zone where coastal climates transition to desert, resulting in significantly differing landscape and geology. The climate can best be characterized by hot, dry summers and short, mild winters. The region receives an average annual rainfall of approximately 19.7 inches, most of which takes place between December and March. Evapotranspiration (ETo) in the area ranges from 7.88 inches in July to 1.94 inches in December.

As the State of California and the Riverside County region has undergone a several-year drought, rainfall has been much lower in the City. Recent ETo and rainfall for the City is listed in Table 2.

Table 2. Recent Climate Characteristics (2022 – 2023)
CIMIS Station 239 (Hemet)
(cimis.water.ca.gov)

Month	Rainfall (in.)	Eto (in.)
Mar (2022)	0.69	2.30
Apr (2022)	0.27	3.15
May (2022)	0.00	4.21
Jun (2022)	0.02	6.14
Jul (2022)	0.00	7.89
Aug (2022)	0.00	7.70
Sep (2022)	0.17	9.16
Oct (2022)	0.25	8.34
Nov (2022)	1.77	6.47
Dec (2022)	1.18	4.65
Jan (2023)	0.91	2.87
Feb (2023)	0.69	2.13
Totals	**5.95**	**65.01**

1.3.3 Population

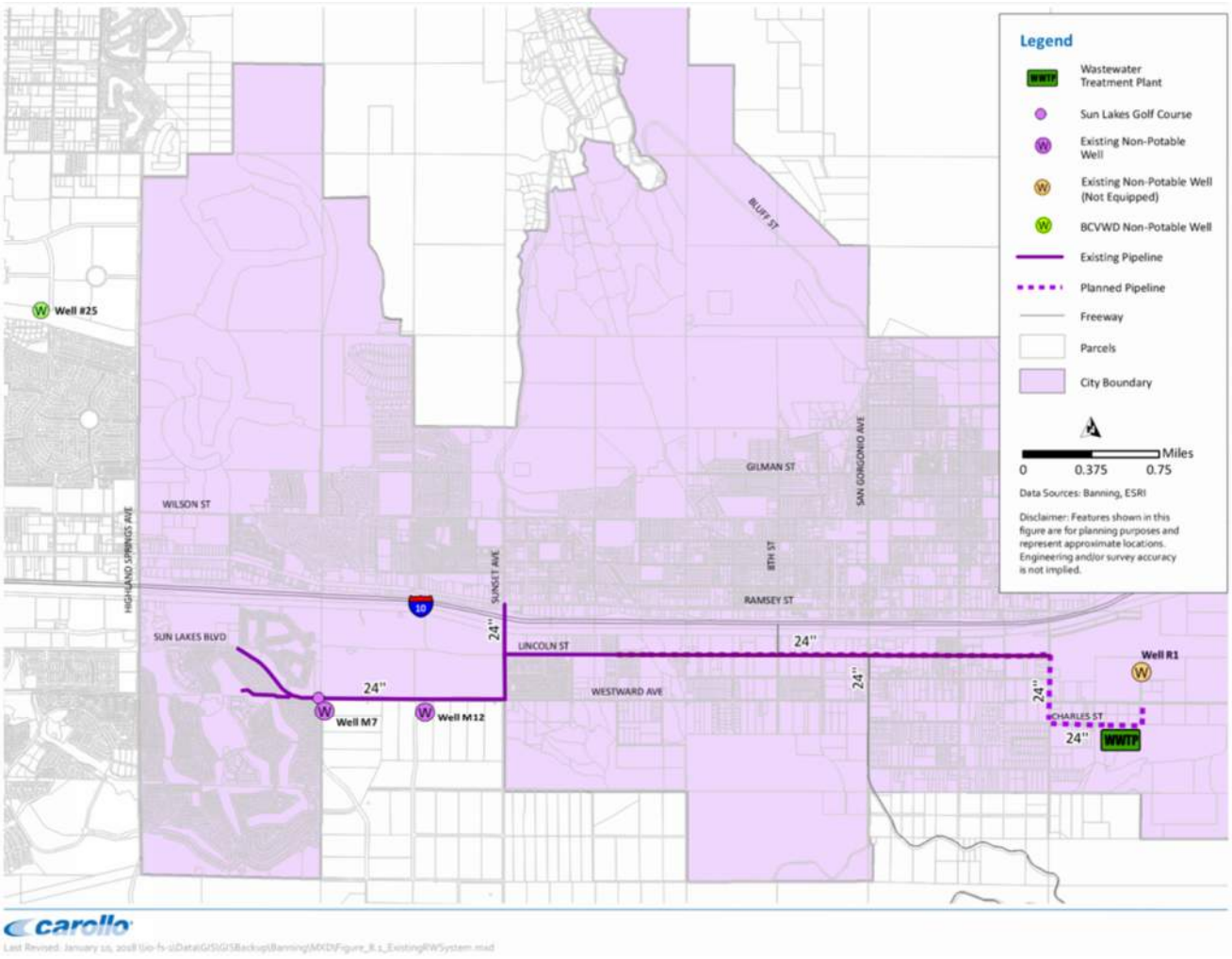
According to the 2020 Census Data, the resident population of the City is 29,528, and estimated to be 30,273 as of July 1, 2021. Since the City's water service area comprises 100 percent of the population residing within the City limits, the total current resident population served by the City's water system is approximately 31,125 persons, including those outside City limits. The City is currently experiencing a peak population, based on State of California Department of Finance estimates. Since the City is a commercial and government-services center for the region, daytime population increases demand for potable water beyond the City's resident population.

1.4 Reclaimed Water Area

There are no non-potable reclaimed water uses that have been implemented in Banning.

Currently, the City's existing non-potable water system delivers water from a non-potable groundwater well, Well M7, to Sun Lakes Country Club for irrigation use. The City has begun constructing a 24-inch diameter pipeline to connect the existing non-potable water pipe to the WWTP. The backbone pipeline is expected to be completed, tested, and accepted by the end of 2023. Once reclaimed water becomes available from the upgraded WWTP, the WWTP will replace Well M7 to serve Sun Lakes Country Club and other irrigation customers as part of this Project. The existing non-potable water system and planned backbone pipeline are shown in Figure 3 below.

Figure 3. City of Banning Reclaimed Water Area (courtesy of 2018 IMP)



2. STATEMENT OF PROBLEM AND NEEDS

2.1 Introduction

This section reviews the City's need for water reclamation, as well as short- and long-term recycled water demands and supplies. This section also includes discussions of sources of additional supplies and water quality concerns.

2.2 Need for Water Reclamation

With climate change bringing on more unpredictable and severe variations in weather which have recently been more frequent, and longer duration droughts in California and the entire Western United States, it is crucial for water agencies to engage in comprehensive planning to develop and implement sustainable sources of water. The effects of drought are clearly demonstrated with the Governor of California declaring a statewide State of Emergency due to drought. The Governor's State of Emergency declaration is accompanied by a call for all state residents to cut down on water use by 15%.

The last severe drought to affect the State occurred only a few years ago between 2012-2017 with 2013-2014 having extraordinarily dry conditions. The current drought may even be on a more dire path as the 2020 water year was the third driest water year on record in the last 127 years. With climate change resulting in hotter, drier summers and reduced precipitation, severe and prolonged droughts are forecast to be a normal part of California's future.

This water reclamation Project will generate sustainable supplies to the City's water supply portfolio that will help Banning better prepare for future water supply challenges.

In addition to drought preparation, water reclamation will help reduce the City's reliance on imported water. Currently, the City has access to imported water from the Sacramento-San Jaquin River Delta in Northern California through the San Gorgonio Pass Water Agency (SGPWA). The Bay Delta water system provides Southern California agencies with over 1 million acre-feet of water annually. According to the City's 2020 Urban Water Management Plan (2020 UWMP), the City purchased an average of 847 acre-feet per year (AFY) per year between 2010 – 2015, and an average of 752 AFY per year between 2015 – 2020 for groundwater recharge. By providing recycled non-potable water from the WWTP to irrigation customers, this will allow the City to rely less on imported water and depend on its local water supply to meet non-potable water demands.

2.3 Current Water Supplies

2.3.1 Water Sources and Supplies

The City currently uses potable water and non-potable water to meet the water needs of its service area. The City's water is obtained entirely from groundwater through nineteen (19) potable groundwater wells, one (1) non-potable groundwater well, and three (3) co-owned wells

with the Beaumont-Cherry Valley Water District (BCVWD). The City also has access to imported water from the Sacramento-San Joaquin River Delta in Northern California through the SGWPA and surface water from the Whitewater River. Both imported and surface water are used to recharge the groundwater aquifers.

Imported Water Sources

The SGPWA is one of 29 agencies in the State that have a State Water Project (SWP) Water Supply Contract with the Department of Water Resources (DWR). These agencies receive an allocation from the SWP each year. SGPWA also acquires water supplies through contracts with other agencies and annual water transfers and exchanges. Currently, as a wholesale agency, SGPWA distributes imported SWP water to three (3) member agencies: the City of Banning, BCVWD, and Yucaipa Valley Water District.

Table 3 shows the City's recent imported water purchases from 2015 to 2020 and compares them to the years 2010 to 2015. As shown in the table, the City purchased an average of 752 AYF per year from 2015 to 2020.

Table 3. Imported Water Purchases, courtesy of the 2020 Urban Water Management Plan (2020 UWMP)

Year	Purchases (AFY)
2015	686
2016	1,477
2017	1,350
2018	500
2019	250
2020	250
2015-2020 Avg.	**752**
2010-2015 Avg. (2015 UWMP)	847

Groundwater Sources

The City is within the boundaries of the Coachella Valley Hydrologic Unit, which encompasses several groundwater basins, including the Coachella Valley Groundwater Basin (Basin), within which the City is located. The Basin extends from Banning to the Salton Sea.

The City is underlain by the San Gorgonio Pass Subbasin (SGP Subbasin) portion of the Basin. The SGP Subbasin is divided into water storage units. The City extracts groundwater from the Banning

Storage Unit, the Banning Bench Storage Unit, the Cabazon Storage, the Beaumont Storage Unit, and the Banning Water Canyon Storage Unit.

Over the past five years of operation, groundwater extraction has averaged 7,513 AFY. Table 4 displays the City's groundwater supplies from 2015 to 2020.

Table 4. Imported Water Purchases, courtesy of the 2020 UWMP

Year	Production (AFY)
2015	6,723
2016	7,035
2017	7,576
2018	7,924
2019	7,226
2020	8,596
Average	**7,513**
2010 – 2015 Avg. (2015 UWMP)	8,246

Currently, the City does not utilize the entire capacity of all of its storage units. The maximum annual amount pumped by the City in the past 10 years is just under 9,000 AFY. Due to the projected developments, the City expects pumping to increase by 25% within 10 years and over 50% by the end of 2045. Table 5 below shows the City's projected water supplies and available volumes.

Table 5. Projected Water Supply Availability in AFY, courtesy of the 2020 UWMP

Year	2025	2030	2035	2040	2045
Basin	Projected (Available)	Projected (Available)	Projected (Available)	Projected (Available)	Projected (Available)
Beaumont Basin[1]	1,491 (1,491)	1,267 (1,267)	1,077 (1,077)	916 (916)	778 (778)
West Banning Basin	1,430 (1,430)	1,430 (1,430)	1,430 (1,430)	1,430 (1,430)	1,430 (1,430)
Cabazon Basin	853 (N/A)	960 (N/A)	1,054 (N/A)	1,136 (N/A)	1,208 (N/A)
Banning Bench	1,055 (1,330)	1,187 (1,330)	1,304 (1,330)	1,330 (1,330)	1,330 (1,330)
Banning Water Canyon	3,679 (3,730)	3,730 (3,730)	3,730 (3,730)	3,730 (3,730)	3,730 (3,730)
Imported Recharge into Beaumont Basin	250	500	1,000	1,750	2,500
Water Supply Deficit[2]	999	2,126	3,156	4,128	4,991

Total Available Local Groundwater Supply	**8,508**	**8,574**	**8,595**	**8,542**	**8,476**
Storage Banked in the Beaumont Basin	**42,169**	**38,422**	**30,291**	**19,510**	**7,622**

Notes:
(1) The City's appropriated water rights will continue to decrease over time due to overlying water rights or demand increases.
(2) The water supply deficit is currently covered by Beaumont storage.

Surface Water

The Whitewater Flume was built to provide water and power to the City and Banning Heights Mutual Water Company (BHWMC). BHWMC utilizes approximately 1,000 AFY of the Whitewater River diversions in the Flume, and the remainder of the diverted water flows into the San Gorgonio River below the Banning Heights Mutual Water Company (BHMWC) extraction point. A portion of the natural runoff and the Whitewater River diversions are diverted into spreading ponds located approximately one mile north of the Banning Bench in order to increase groundwater recharge.

Since 1913, surface water from the Whitewater River has been diverted into the Banning Water Canyon Storage Unit, with an average of 1,500 AFY diverted into Banning Water Canyon since 1961.

Rights to Groundwater

The City's rights to annual groundwater extraction are shown in Table 5. The City will pull the differential amounts between the "Projected" and "Available" from the Beaumont Basin Storage Account. Water recharged (i.e., imported water) in the Beaumont Basin will also be credited in the City's storage account, allowing the "Projected" volume to increase. The City also anticipates that it would recharge more during wet years so that water supply can be available during drought periods when local groundwater levels are impacted.

The amount of "Available" yield not produced in the Beaumont Basin by the Overlying Water Right holders is issued to the retail agencies, with the City of Banning receiving 31.43% of the "Available" yield. The amount of Unused Overlying Water from the Beaumont Basin that will be allocated to the City of Banning is projected to decrease by 15% every five years from 2024 on.

Planned Supply Projects

The City continually reviews practices that will provide its customers with adequate and reliable supplies. Trained staff continue to ensure the water quality is safe and the water supply will meet present and future needs in an environmentally and economically responsible manner. The City coordinates its long-term water shortage planning with SGPWA and other local agencies through the development of their respective UWMPs. The City also meets bi-monthly with the San

Gorgonio Pass Regional Water Alliance, which is comprised of thirteen (13) local water purveyors, to discuss local issues with different agencies.

Any new City water supply projects will be to add, replace, or upgrade wells to support population growth and new development. The projects that have been identified to improve the City's water supply reliability and enhance the operations of the City's facilities include replacement of water meters, fire hydrants, valves, and pipelines and construction of new storage reservoirs.

2.3.2 Wastewater Treatment Plant Flows

The City provides sewer service to the area within City limits and to unincorporated areas of Riverside County that surround the southeast portion of the City. The City of Banning is responsible for the collection, conveyance, treatment, and disposal of wastewater generated within its service area. Municipal wastewater in the City's service area is generated from residential, commercial, and institutional sewer discharges. The City does not currently have any major industrial sewer discharges (i.e., brine). However, there are some cannabis cultivation facilities that will be operational soon, which will need to be monitored and regulated.

The City's wastewater collection system drains primarily from west to east. The wastewater discharged from the City is collected from a network of 112 miles of gravity sewer mains. The local collector sewers discharge into larger sewer trunk mains, then to the Banning WWTP, located in the southeast corner of the City (see Figure 4 on Page 14).

The WWTP has a current capacity of 3.6 million gallons per day (MGD) and is designed to treat wastewater to secondary standards. The WWTP consists of preliminary treatment, primary treatment, secondary treatment, solids handling, disinfection (currently not in use), and evaporation/percolation ponds. The preliminary treatment system consists of a mechanical bar screen, compactor, grit removal system, and cyclone separator. Effluent from the preliminary treatment system is gravity fed to two primary clarifiers. Primary effluent is pumped to two Trickling Filters, each rated for 1.8 MGD. The Trickling Filter effluent is sent to two secondary clarifiers. Secondary effluent flows through a chlorine contact chamber and is then discharged to 10 unlined evaporation/percolation ponds which recharges the Cabazon Groundwater Basin. This recharge is provided only through surface percolation, and no injection wells are used by the City.

Primary and secondary sludge is processed via two primary anaerobic digesters. A second-stage digester is currently used as a sludge holding tank before thickened sludge is sent to the sludge drying beds. Sludge is allowed to dry and then is hauled offsite for final disposal. A gravity thickener was used to thicken secondary sludge but is currently not in service. An overall process schematic of the existing WWTP is shown in Figure 5 on Page 15.

The quantities of wastewater generated are proportional to the City' population and the water used by its residents. The wastewater flows are metered at the influent point to the WWTP. Total wastewater collected in the City between 2018 and 2022 is shown in Table 6.

Table 6. Wastewater Flows Collected in City

Year	Wastewater (AFY)	Wastewater (MGD)
2018	2,259	2.02
2019	2,234	2.00
2020	2,185	1.95
2021	2,226	1.99
2022	2,307	2.06
Average	**2,242**	**2.00**

Due to projected housing developments within the City's service area, wastewater flows are expected to significantly change. Based on review of available data, it was determined that the most accurate forecasting methodology for projected sewer flow included a combination of population and land use flow factors. Table 7 below shows the projected wastewater flows from the years 2023 through 2027:

Table 7. Projected Wastewater Flows Collected in City

Year	Flows (AFY)	Flows (MGD)
2023	2,352	2.10
2024	2,430	2.17
2025	2,520	2.25
2026	2,610	2.33
2027	2,700	2.41

Figure 4. City of Banning Reclaimed Wastewater Treatment Plant Location (courtesy of 2018 IMP)

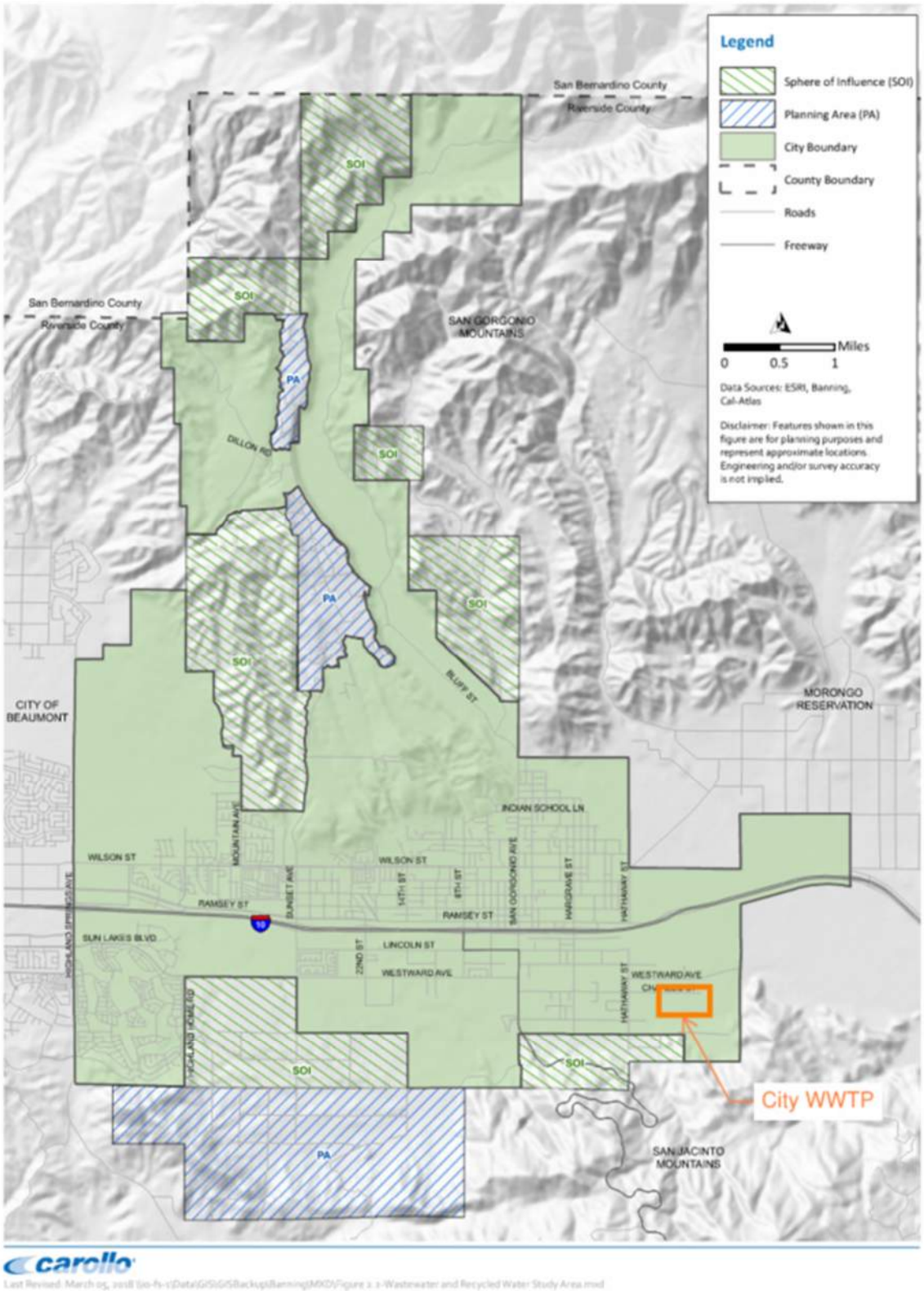
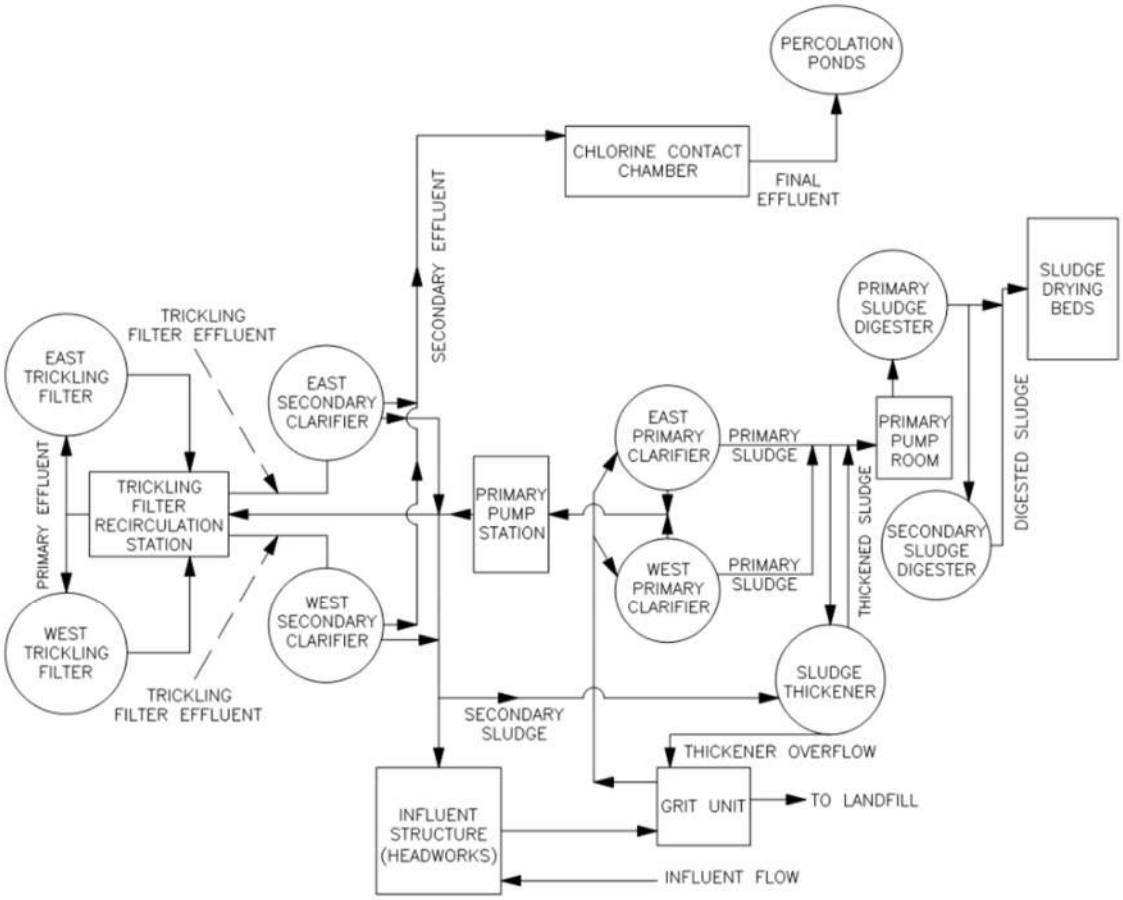


Figure 5. Process Schematic for Existing WWTP



2.3.3 Non-Potable Groundwater Well Capacities

The City has been operating one well (Well M7) and estimates that this well produces an average capacity of approximately 350 gpm. In addition, the City also started to operate a second well (Well M12) in mid-year 2017 with an estimated capacity of approximately 1,000 gpm. A third well (Well NP-1) is located near the WWTP, which was recently equipped. The status and capacities of the wells are summarized in Table 8.

Table 8. Existing City Non-Potable Groundwater Well Capacities

Well Number	Current Status	Future Status	Estimated Capacity (AFY)	Estimated Capacity (MGD)
Well M7	Operational	Potable	560	0.5
Well M12	Operational	Potable	1,568	1.4
Well NP-1	Recently Equipped	Non-Potable	1,344	1.2
Total			**3,472**	**3.1**

As listed in Table 8, the total estimated capacity of the three wells with the addition of Well NP-1 is approximately 3,472 AFY (3.1 MGD) of non-potable water. Although Wells M7 and M12 are both equipped, City staff plans to eventually convert Well M7 and Well M12 over to the potable water system by the end of year 2025 and year 2040, respectively, to supplement the potable water supply. Along with this conversion, it is assumed that Well NP-1 will supplement the recycled water system supply. With only Well NP-1 and Well M12 online by the end of year 2025, the groundwater well supply is estimated to provide up to 2,912 AFY (2.6 MGD) of non-potable water. By the end of year 2040, only Well NP-1 is assumed to be online, which results in a groundwater well supply of 1,344 AF (1.2 MGD). The capacities listed in MGD reflect the assumption that wells would be pumping 24 hours per day.

2.3.4 Recycled Water Production

As mentioned in Section 2.3.1, the Banning WWTP is the only wastewater treatment facility for the City. The WWTP currently provides only secondary treatment, and the treated wastewater does not meet Title 22 Standards. Further, the City does not use any recycled water produced by any other neighboring agencies. Thus, no wastewater has been "recycled" (re-used) within the City's service area from 2019 to 2023, as Table 9 indicates.

Table 9. Recycled Water Produced and/or Used in City

Year	Recycled Water Produced or Used (AFY)
2019	0
2020	0
2021	0
2022	0
2023	0

The amounts indicated in Table 9 above coincide with the projections in the City's 2020 UWMP. That is, the 2020 UWMP did not project any recycled water use through the year 2020.

2.4 Current and Projected Water Demands

2.4.1 Current Water Demands

Annual water consumption from 2016 to 2020 listed in Table 10 range from a high of 8,325 AF in 2020 to a low of 6,712 AF in 2016, with an average of 7,648 AF.

Table 10. City Recent Water Use

Year	Total Consumption (AFY)	Per Capita (GPCD)
2016	6,997	203
2017	7,381	213
2018	7,927	228
2019	7,297	209
2020	8,369	240
Average from 2016 to 2020		**219**

2.4.2 Projected Water Demands

Future water use projections must consider significant factors on water demand, such as development and/or redevelopment, and climate patterns, among other less significant factors that affect water demand. Climate conditions will continue to be a major influence on demand as drought conditions will increase demand at a time when these supplies are limited.

The City's projected water use for 2025-2045 is broken down by sector in Table 11 below.

Table 11. Projected Water Demand by Sector in AFY, courtesy of the 2020 UWMP

Sector	2025	2030	2035	2040	2045
Water Service Area Population	38,180	45,235	52,290	59,345	66,400
Consumption Rate (GPCD) *Including 1.0% Annual Passive Savings*	222	211	201	191	181
Demands					
Single Family Residential	4,505	5,071	5,569	6,004	6,382
Multi-Family Residential	92	103	114	123	130
Commercial	2,263	2,548	2,798	3,016	3,206
Industrial	195	220	241	260	276
Institutional/Governmental	26	29	32	35	37
Landscape Irrigation	977	1100	1208	1,302	1,384
Total Water Sales	**8,059**	**9,070**	**9,961**	**10,739**	**11,415**
Unaccounted for Water	1,448	1,630	1,790	1,930	2,052
Total Water Consumption (Total Supply into System)	**9,507**	**10,701**	**11,751**	**12,670**	**13,467**

2.4.3 Projected Recycled Water Demands

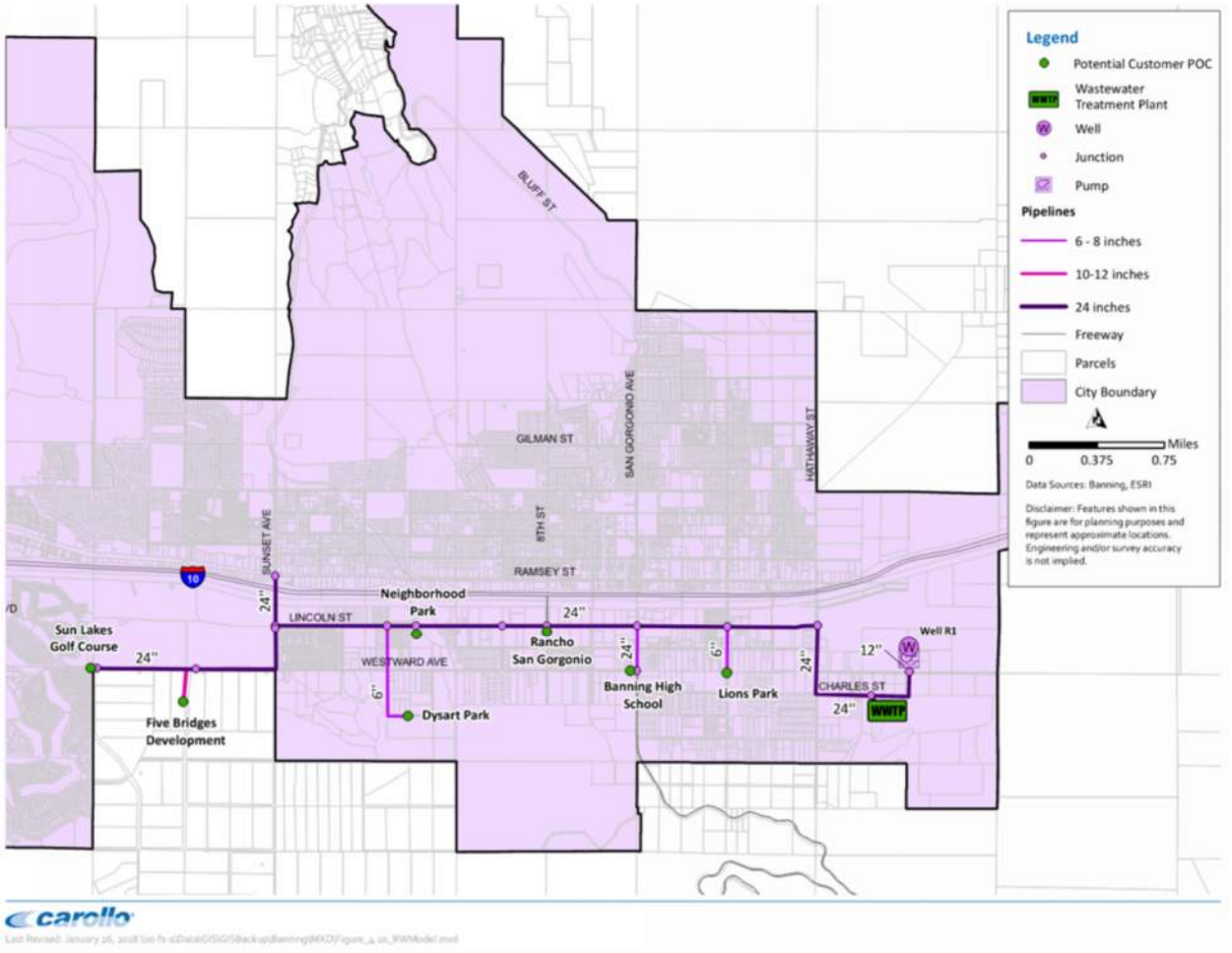
The City currently serves one customer, Sun Lakes Country Club, with non-potable water from Well M7 and Well M12. Typical annual demand for the Sun Lakes Country Club is 850 AFY (0.76 MGD). Since the Sun Lakes Country Club is located on the westerly end of the City, once the City constructs the recycled water backbone pipeline to reach the Sun Lakes Country Club, other potential customers would be within proximity to receive recycled water. Therefore, construction of recycled water facilities would prove feasible if the funding for recycled water improvements and pipeline infrastructure was covered, at least in-part, by developers, and an agreement was in place for the use of recycled water. The City would then be able to provide recycled water to its customers. The City's previous 2006 Recycled Water Master Plan (2006 RWMP) identified potential customers across the Interstate 10 Freeway. The methodology to determine these customers and their demands is described in Section 3.3. However, the 2018 Integrated Master Plan indicated that these potential customers were not feasible, due to the challenges to cross the 10 Freeway. The potential recycled water customers are listed in Table 12 below and shown in Figure 6 on the following page.

Table 12. Potential Recycled Water Users

Customer	Recycled Water Demand (AFY)	Recycled Water Demand (MGD)
Existing Customers Currently Using Potable Water or Ground Water from Non-Potable Wells		
Sun Lakes Country Club	850	0.76
Banning High School	175	0.16
Dysart Park	87	0.08
Lions Park	79	0.07
Subtotal	1,191[(1)]	1.07
Projected Future Developments		
Rancho San Gorgonio Development	217	0.19
Five Bridges Development	223	0.20
Neighborhood Park	35	0.03
Subtotal	475[(2)]	0.42
Total	**1,666**	**1.49**

Notes:
(1) Will serve in Phase I of the Project.
(2) Will serve in Phase II (future phase) of the Project.

Figure 6. City of Banning Potential Recycled Water Customers (courtesy of 2018 IMP)



2.4.4 Projected Water Supply and Demand Imbalances

Table 13 shows the imbalances between the projected water supplies and demands of the City. As shown in the table, demand continues to increase as supplies decrease. This indicates the need for a new, drought-proof local supply of water to meet the demands of the City.

Table 13. Projected Water Supply and Demand Imbalances

	2025	2030	2035	2040	2045
Total Available Local Groundwater Supply in AFY (see Table 5)	8,508	8,574	8,595	8,542	8,476
Total Water Consumption in AFY (Total Supply into System) (see Table 11)	9,507	10,701	11,751	12,670	13,467

Local Groundwater Supply Shortage in AFY Supplied by Storage Banked in Beaumont Basin	-999	-2,127	-3,156	-4,128	-4,991
Storage Banked in the Beaumont Basin in AFY (see Table 5)	47,169	43,422	35,291	24,510	12,622

2.5 Future Recycled Water Supplies

The City plans to upgrade the existing WWTP treatment to meet tertiary treatment standards and facilitate infrastructure to supply recycled water. This proposed expansion described in the 2018 IMP is also in accordance with the City's 2006 RWMP. The proposed WWTP upgrade will include enhancing biological treatment and constructing recycled water laterals along the backbone pipeline. Facilities to be constructed would include recycled water pipelines to transport recycled water to the recycled water customers.

Upon completion of the upgrades, approximately 4,035 AFY (3.6 MGD) – the total projected WWTP effluent – of recycled water will be available to recycled water customers. Assuming that the improvements would be completed by the year 2027, projected recycled water use would be as shown in Table 14 below.

Table 14. Projected Recycled Water Production and/or Use

Year	Phase	Recycled Water Produced / Used (AFY)	Recycled Water Produced / Used (MGD)
2025	N/A	0	0
2027	I	4,035/1,191	3.6/1.07

The projected quantities shown in Table 14 above show the recycled water produced and used in Phase I of the project (described further in Section 4.2). Once the WWTP upgrades are completed, 4,035 AFY (3.6 MGD) will be available for recycled water use. Phase I will serve the existing customers currently using potable water or ground water from non-potable wells (Sun Lakes Country Club, Banning High School, Dysart Park, and Lions Park) with a total demand of 1,191 AFY.

2.6 Water Quality Concerns

The main water quality concerns are the standards and regulations that the potential recycled water sources currently do not meet. These include the Regional Water Quality Board Order, Title 22 Requirements, and Beaumont Basin Plan requirements.

2.6.1 Regional Water Quality Control Board Order

On June 30, 2016, the RWQCB adopted Board Order R7-2016-0015 (Board Order), which describes the Waste Discharge Requirements (WDRs) and other terms and conditions of operation for the WWTP. The Board Order requires the WWTP to remove constituents that present the greatest risk to groundwater quality such as nitrogen, coliforms, and total dissolved solid (TDS). According to the United States Environmental Protection Agency (US EPA), the maximum contaminant level (MCL) for Nitrate as Nitrogen is 10 mg/L. Per the Board Order, it is assumed all nitrogen available converts to nitrate/nitrite so Total Nitrogen (TN) is used as the measurement of concern. The wastewater effluent limitations per the Board Order are outlined in Table 15.

Table 15. Banning WWTP Effluent Concentrations and Limitations

Parameter	Units	Impending Effluent Limits	
		30-Day Mean	7-Day Mean
Flow	MGD	3.6	N/A
20C BOD5	mg/L	30 mg/L	45 mg/L
TSS	mg/L	30 mg/L	45 mg/L
pH	--	6.0 – 9.0	
TDS	mg/L	Not to Exceed 300 mg/L of the Water Supply	
TN(1)	mg/L	10 mg N/L	

Notes:
(1) City does not need to comply with this limit at this time.

The WDRs identified TN and TDS as constituents of concern. Currently, the average TN concentration in the WWTP's effluent is 27 mg-N/L, well above the future TN limit of 10 mg-N/L specified in the Board Order. The two existing Trickling Filters used for secondary treatment at the WWTP are therefore not able to meet the impending water quality limits by the Board Order. Based on a recent structural condition assessment, both Trickling Filters are also nearing the end of their lifecycle. This Project therefore involves implementing a new biological treatment system with nitrification/denitrification (NDN) to ensure nitrogen levels in the WWTP's effluent meet the impending Board Order TN requirement. The selected system to replace the existing Trickling Filters is Membrane Bioreactor (MBR). Section 4.6 describes the analysis that was done to select MBR as the recommended biological treatment option for the City.

The WDRs also state that effluent TDS is not to exceed a level of 300 mg/L above the potable water supply "reasonably protects present and anticipated beneficial uses of groundwater in the area," (typical incremental addition of dissolved salts from domestic water usage is 150 to 380 mg/L.) The level of TDS in Banning's potable water supply is approximately 200 mg/L, which would result in an effluent TDS limit of approximately 500 mg/L. Currently, the average TDS in the treated wastewater is about 390 mg/L, so future TDS limits in an updated WDR would not require additional treatment.

2.6.2 Title 22 Requirements

In order for the WWTP effluent to be used as recycled water to meet the current and project non-potable irrigation water demands, it must meet tertiary disinfected recycled water standards. The current WWTP effluent does not comply with State Water Resources Control Board, Division of Drinking Water (DDW) water recycling criteria outlined in the California Code of Regulations Title 22 requirements. To comply with Title 22, the effluent must meet the following requirements for "Disinfected Tertiary Recycled Water":

- Average daily turbidity less than 2 nephelometric turbidity unit (NTU); approximately 3 – 5 mg/L TSS.
- Effluent cannot exceed 5 NTU more than 5% of the time.
- Effluent cannot exceed 10 NTU at any time.
- Coagulant must be added if the influent to the filter exceeds 5 NTU for more than 15 minutes, or 10 NTU at any time.
- The disinfection process must provide a chlorine residual that provides 450 milligram minutes per liter (mg-min/L) under minimal modal contact time (CT) of 90 minutes.
    - This corresponds to a residual of 5 mg/L or less, or any process that achieves 5-log virus removal.
- Total coliform cannot exceed the average most probable number (MPN) of 2.2 per 100 milliliters (mL).
- No more than one sample per month can exceed an MPN of 23 per 100 mL.

In order to supply recycled water, the City will be required to improve the removal efficiency of the existing WWTP to comply with the TN, turbidity, and disinfection requirements. The Project involves implementing MBR and chlorine disinfection at the WWTP. These proposed treatment systems ensure that the WWTP will comply with Title 22 requirements for disinfected tertiary recycled water.

2.6.3 Beaumont Basin Plan Requirements

In order to serve Sun Lakes Country Club, which is located above the Beaumont Basin, the WWTP and Well NP-1 must meet the Beaumont Basin maximum benefit objectives of 330 mg/L for TDS. Currently, the WWTP effluent and Well NP-1 have an average TDS of 390 mg/L and 430 mg/L, respectively. Therefore, neither source currently meets this limit. Due to this restriction, and potential stricter TDS limits for the San Gorgonio region in the future, a TDS treatment is required. The proposed TDS treatment for this Project is a two-stage reverse osmosis (RO) system to be implemented as the last step in the WWTP treatment process. Details about the RO requirements for the WWTP and Well NP-1 can be found in the RO Analysis Technical Memo in Appendix A**.**

3. WATER RECLAMATION, RECYCLING OPPORTUNITIES

3.1 Introduction

This section provides a discussion of the City's water reclamation and reuse opportunities including:

- Potential uses for reclaimed water and sources to be reclaimed
- Markets available to use the water produced
- Considerations that may prevent implementation of a water reuse project
- Water and wastewater agencies with jurisdiction and their facilities
- Current water reuse
- Water reclamation and reuse technology currently in use and opportunities for improvement

3.2 Uses for Reclaimed Water

The available market is the non-potable demand from the existing customers currently using potable water or ground water from non-potable wells as well as the future recycled water customers listed in Section 2.4 Table 12. These customers consist of parks, schools, and other landscape irrigation users. The market for water produced by Phase I of this Project (described further in Section 4.2) is expected to be 1,191 AFY (1.07 MGD).

Appendix B includes the Rancho San Gorgonio Water Supply Assessment, which states that the Rancho San Gorgonio Development must utilize recycled water for all common area irrigation demands (see Appendix B, Section 5 "Recycled Water System," pages 37-41 of the document, page 38-42 of the PDF). For the other customers, discussions have been initiated to obtain letters of intent.

3.3 Water Market Available to Utilize Reclaimed Water

The future recycled water demand projections listed in Section 2.4 Table 12 are based on a review of the identified potential customers in the 2006 RWMP. This section describes the methodology used to project the future demand potential.

It should be noted that the future demands described herein do not necessarily represent the actual future demands. This section is limited to identifying the future demand potential.

3.3.1 Methodology

As described in Section 2.4, the 2006 RWMP identified potential 18 recycled water customers based on the following three criteria:

1. Location shall be near a recycled water distribution pipeline or in proximity of other potential customers.
2. ADD exceeds 10,000 gpd. Potential customers with ADD less than 10,000 gpd may be eligible if their location is near a recycled water pipeline.

3. Location within City limits.

The list of potential recycled water customers was reviewed to determine the current irrigation status of each customer and the feasibility of tying into the recycled water system, resulting in an updated list of 15 customers.

3.3.2 Potential Customers

Since the 2006 RWMP, several customers, including Caltrans, Repplier Park, and Gilman Ranch Museum, have reduced demands due to changes such as drought tolerant landscaping. Based on an initial review of the recycled water system layout, connecting these customers was not considered cost effective. In addition, customers north of the Interstate 10 would require a second pressure zone, resulting in an additional pump, large lengths of pipeline, and additional storage to serve these customers. Since those customers were not large users, City staff decided to keep the recycled water system south of the Interstate 10. The customers that are included in this analysis and their demands are summarized in Section 2.4, and the location of the recycled water customers is shown in Figure 6.

3.4 Considerations That Will Prevent Implementing Water Reclamation

One consideration of concern is water quality, particularly TN and TDS levels of the WWTP. As mentioned previously in Section 2.5, the WWTP must comply with the Board Order, Title 22, and Beaumont Basin Plan requirements to supply recycled water. One of the main objectives of this Project is therefore to overcome these water quality limitations by implementing treatment systems that will effectively lower TN and TDS to allowable levels.

Another consideration is community push back for tertiary recycled water. With this in mind, the community will be involved with this Project through public meetings to voice their concerns. It is, however, expected that the reliability and high water quality of recycled water will help to stimulate recycled water demand and mitigate the public's concerns.

3.5 Agencies with Jurisdiction Over Sources of Reclaimed Water

The WWTP and groundwater wells are solely owned by the City.

3.6 Potential Sources to be Reclaimed

Effluent from the City of Banning WWTP and Well NP-1 are two potential sources to be reclaimed. Descriptions of the two sources are described in Section 2.3.

3.7 Description and Location of Source Water Facilities

Effluent from the City of Banning WWTP and Well NP-1 are two potential sources to be reclaimed. Descriptions of the two sources are described in Section 2.3.

3.8 Current Water Reclamation Taking Place in Study Area

As discussed in Section 1.4, there is no water reclamation taking place in the City of Banning.

3.9 Other Current and Projected Wastewaters and Disposal Options

If the WWTP does not get upgraded to Title 22 standards, the current disposal option will remain; the effluent from the WWTP will continue to percolate into the 10 unlined percolation ponds within the Cabazon Groundwater Basin, with no benefits to the City.

In order to meet the Board Order TN restriction, however, the biological treatment process at the WWTP would need to be upgraded regardless of whether the WWTP effluent was used for reclaimed water purposes.

3.10 Water Reclamation Technology Use in Study Area

As discussed in Section 1.4, there is no water reclamation taking place in the City of Banning.

4. DESCRIPTION OF ALTERNATIVES

4.1 Non-Federal Funding Condition

If Federal funding were not provided for the Project, the City would delay the project and continue to apply for funding under other opportunities as described in Section 9.5.

4.2 Specific Objectives Alternatives Are Designed to Address

The objectives of the proposed Project are to:

- Increase water supply availability, reliability, and drought resiliency by supplementing a local water supply, and
- Improve local water supply reliability by proactively planning for facilities needed to meet future demand.

There are three proposed potential recycled water project alternatives to achieve these objectives. These alternatives include:

- Alternative 1: Do Nothing
- Alternative 3: Non-Potable Reuse
- Alternative 4: Hybrid Non-Potable Reuse and Indirect Potable Reuse

4.2.1 Alternative 1 - Do Nothing

This alternative involves no recycled water upgrades of the WWTP. The existing facilities would remain at the WWTP, and effluent from the WWTP would continue to discharge to the percolation ponds near the WWTP site. Under this alternative, due to the WWTP's current high TN levels, the plant would not meet the impending Board Order requirements. In addition, the existing non-potable water customers would continue to be served by potable water or ground water from non-potable wells, and therefore Wells M7 and M12 would not be converted to the potable water system. In order to recharge the groundwater to serve these customers, the City would continue to purchase imported water from the Sacramento-San Joaquin Delta through SGPWA. However, with worsening climate change conditions, State water supplies are becoming scarcer. Because of this, competition for water allocations to water retailers will increase, making it more challenging for the City to receive imported water. Therefore, imported water should not be solely relied on to meet future demands that exceed the City's local supply.

The O&M costs for the "Do Nothing" alternative include the purchase of imported water and pumping costs to serve the existing non-potable water customers. The current estimated annual O&M cost to deliver imported water is estimated at $463,848 per year. This includes an average (based on 2015-2020) purchase of 752 AF of imported water at $399/AF, or $300,048, plus $163,800 for pumping, or $463,848 per year. The projected O&M cost for imported water in 2045 is $2,779,000 for purchase and $1,517,090 for pumping for a total of $4,296,090. This is based on a purchase of 2,500 AF of imported water (see Table 5 in Section 2.4) and a 5% price escalation rate of imported water purchases and pumping per year.

4.2.2 Alternative 2 - Non-Potable Reuse

Alternative 2 involves three phases. Phase I will begin early 2025 to meet the current demands of Sun Lakes Country Club. Phase II will begin by 2029 to meet the demands of the future remaining recycled water customers.

Phase I

Since Well M7 is planned to be converted to the potable water system by the end of 2025, Phase I involves using Well NP-1 to supply 850 AFY (0.76 MGD) to Sun Lakes Country Club in place of Well M7.

A recent Well NP-1 pump test shows an 800-gpm capacity, which exceeds the demand of the Sun Lakes Country Club. As a result, Well NP-1 will operate intermittently to satisfy the current recycled water demand.

Construction of the backbone pipeline along Lincoln Street to connect Well NP-1 to the Sun Lakes Country Club will be completed by the end of 2023. The design of the two reservoirs/forebays and booster stations needed to store the Well NP-1 supply and pump the water to the backbone pipeline, respectively, will be completed during the first quarter of 2024. The City is currently developing environmental documentation and will begin construction of the reservoirs/forebays and booster stations within the second quarter of 2024.

To meet Beaumont Basin requirements for TDS and TN, a 1 MGD RO system will be implemented at Well NP-1, and evaporation beds will be constructed for the RO brine. The RO permeate will travel through the backbone pipeline to Sun Lakes Country Club, with the forebay storing Well NP-1 supply and the booster station pumping the water from the forebay to the backbone pipeline.

Well NP-1 will continue to serve Sun Lakes Country Club until the WWTP upgrades are completed at the end of 2027.

The next step of Phase I is to upgrade the WWTP. The existing Trickling Filters and secondary clarifiers will be decommissioned, and a new 3.6 MGD MBR facility and chlorine disinfection tank will be installed to meet Title 22 recycled water standards. Other miscellaneous upgrades of the WWTP, including headworks, primary clarifier, and digester facilities, will also be implemented in this phase.

Laterals with pipeline diameters ranging from 6-12 inches will be constructed to connect the remaining customers currently using potable water or ground water from non-potable wells listed in Section 2.4 (Banning High School, Dysart Park, and Lions Park).

Once the construction of the WWTP upgrades is complete, the RO system and brine evaporation ponds used for Well NP-1 will be repurposed for WWTP effluent use. 1,191 AFY (1.07 MGD) of the WWTP effluent will serve the demands for Sun Lakes Country Club, Banning High School, Dysart Park, and Lions Park, and the rest will continue to discharge to the percolation ponds.

Since the WWTP effluent will be used to meet the recycled water demands, Well NP-1 will be used as a backup source.

Phase II

In Phase II, laterals will be constructed to connect the future recycled water customers, including Rancho San Gorgonio Development, Five Bridges Development, and Neighborhood Park to the main recycled water system.

In order to meet the Beaumont Basin requirements to serve these remaining customers, an additional RO module will be installed at the WWTP. The permeate from the RO modules will blend for a total of 1,666 AFY (1.49 MGD) of WWTP effluent to serve the recycled water customers. The remaining WWTP effluent will continue to discharge to the percolation ponds. Figure 6 in Section 2.4 shows the proposed layout of Alternative 2.

4.2.3 Alternative 3 – Hybrid Non-Potable Reuse and Indirect Potable Reuse

Alternative 3 is similar to Alternative 2 but incorporates an additional phase for indirect potable reuse. Instead of the WWTP effluent that is not used to meet recycled water demands discharging to the percolation ponds, in Alternative 3, the remaining effluent will flow to one of two groundwater aquifers for indirect potable reuse. By percolating to new basins upgradient of the Banning groundwater storage unit, this will keep groundwater recharge within the City's wells.

Options for recharge of groundwater aquifers via recharge basins include North Basin and Five Bridges. The requirements to recharge to North Basin and Five Bridges Basin are described in the sections below. Figure 7 on the next page shows the proposed layout of Alternative 3.

Due to the limited surface recharge capacity of the proposed groundwater basins, injection wells may be required to recharge groundwater in the targeted area. In order to allow for indirect potable reuse through injection wells, ultraviolet advanced oxidation (UVAOP) will be required. The current facility plan would include needed infrastructures (e.g., transformer size, space allocation, etc.) to facilitate this addition in the future when needed. The surface recharge at these basins will take into account ground water travel time to the nearest potable groundwater wells and appropriate monitoring wells for full compliance with Title 22 regulations.

North Basin

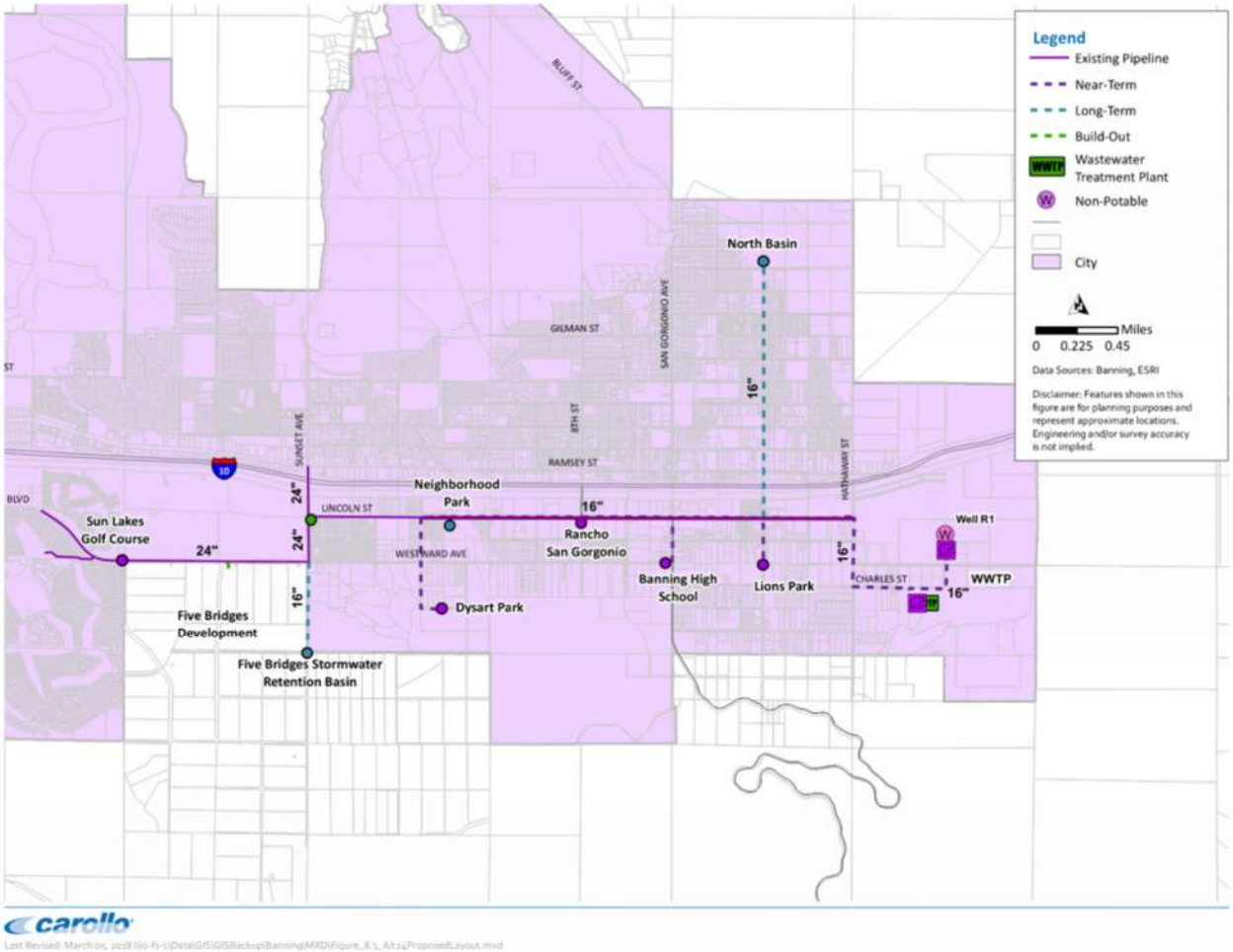
North Basin is in the northeastern part of the City boundary. This site is not owned by the City. Since the site has been mined and a large pit exists, it is assumed that minimal earthwork will be required. The site improvements included as part of this analysis include a berm on all four sides of the basin, a berm to create two cells for operational flexibility, basin piping, maintenance ramps, security, and monitoring equipment. Since the potential recharge basin is at a higher elevation than the WWTP, an 800 hp pump and 15,000 feet of 16-inch diameter pipeline will be

required to convey water from the WWTP to the recharge basin. The City will also need to add monitoring wells and lysimeters.

Five Bridges Basin

This option involves groundwater recharge at the future Five Bridges Recharge Basin, which is located at the southwest part of the City within the Five Bridges Development. The site will likely be owned by the City. Although the Five Bridges development is not anticipated to occur until the build-out phase, City staff believe that the basin can be constructed beforehand. It is anticipated that site improvements will include earthwork, berms on all four sides of the basin, a berm to create two cells for operational flexibility, maintenance ramps, security, and monitoring equipment. This alternative will require an approximately 2,000 feet of 16-inch diameter pipeline to convey water from the WWTP to the recharge basin. The City will also need to add monitoring wells and lysimeters.

Figure 7. Preliminary Site Layout for Alternative 3 (courtesy of 2018 IMP)



4.3 Description of the Proposed Water Reclamation Project

The selected alternative is Alternative 3. This alternative includes non-potable reuse with a total demand of 1,666 AFY (1.49 MGD). The remaining recycled water supply from the WWTP will be used for indirect potable reuse at either North Basin or Five Bridges. With the combination of both non-potable reuse and indirect potable reuse, the City will have seasonal flexibility and will be able to maximize the use of recycled water throughout the year. Since the City will be able to maximize the recycled water supply from the WWTP, the estimated net yield is 4,035 AFY (3.6 MGD).

This Project (i.e. Alternative 3) will be done in 3 Phases, however, only Phase I will be implemented at this time. Phases II and III are future phases that will be implemented in the long-term. The City has only requested funding for Phase I in the WaterSMART funding application but will seek additional funding for Phases II and III in the future at which time the City will develop updated feasibility studies to includes Phases II and III.

As mentioned in Section 4.2, Phase I involves constructing an RO system and brine evaporation ponds for Well NP-1, which will later be repurposed for WWTP use. A new 3.6 MGD MBR facility and chlorine disinfection tank will be installed to meet Title 22 recycled water standards, and other miscellaneous upgrades of the WWTP will also be implemented in this phase. Laterals will be built along the backbone pipeline to connect the WWTP to the existing customers currently using potable water or ground water from non-potable wells that can utilize recycled water to meet irrigation demands.

The preliminary cost estimates for Phase I of the proposed Project are summarized in Table 16 below. A breakdown of the capital costs and replacement costs (over a 50-year period – the expected lifecycle of the Project) associated with Phase I of the Project are shown in Tables 17 and 18, respectively. Lifecycle costs over the 50-year span of the Project can be found in Appendix C, and a preliminary detailed site plan and process flow diagram for the Project can be found in Appendix D.

Table 16. Preliminary Cost Estimate

	Estimated Annual Yield (AFY)	Capital Cost[(1)]	O&M Cost	Annual Cost ($/year)	Unit Cost ($/AF)
Phase I	1,191	$93,487,328	$3,500,000	$3,890,000	$3,668

Notes:
(1) Capital costs include a construction contingency of 25% and additional markups for mobilization (5%), general conditions (5%), contractor profit (5%), and escalation to-point of construction (5%). Cost estimates and cost assumptions are provided in detail in Appendix E.

Table 17. Cost Summary of Phase I of the Proposed Project, in 2023 dollars

Item	Cost
CEQA	
CEQA (Biological, Cultural, Air Quality, and IS/MND)	$180,000
Permitting	$120,000
Subtotal	**$300,000**
Design	
Preliminary Design	$1,409,808
Final Design	$5,639,232
Subtotal	**$7,049,040**
Construction	
RO system	$3,497,500
Brine Drying Beds and Evaporators	$5,256,100
MBR Facility (3.6 MGD)	$52,887,000
Primary Clarifier	$1,944,100
Chlorine Tank	$2,377,700
Upgrade Ferric Sulfate Feed/Storage System	$298,100
Digester Coating	$463,500
Replace Piping in Grit Chamber	$58,300
Replace TF Center Drives	$499,300
Replace East Primary Clarifier Center Drive	$99,900
Replace Existing PVC Digester Gas Piping	$16,700
Replace Digester Hot Water Boiler	$176,400
Replace TF Effluent Distribution Valves (4)	$174,800
Replace TF Recirculation Pumps (2)	$124,900
Replace Grit/Cyclone Unit	$299,600
Replace Two Old Grit Pumps	$174,800
Recycled Water Laterals	$2,141,700
Subtotal	**$70,490,400**
Construction Administration	
Construction Management and Inspection	$7,049,040
Environmental Monitoring and Support During Construction	$100,000
Subtotal	**$7,149,040**
Other	
Contingency	$8,498,848
Subtotal	**$8,498,848**
TOTAL ESTIMATED PROJECT COSTS	**$93,487,328**

Table 18. Replacement Costs, in 2023 dollars

Description of Replacement Requirement	Replacement Frequency	Year(s)	Cost
Civil/Structural, Mechanical, Electrical/Controls Replacements	Every year	Every Year from 2028 to 2077	$868,658.82
RO Membrane Replacement and MBR Membrane Replacement	Every 5 years	2032, 2037, 2042, 2047, 2052, 2057, 2062, 2067, 2072, 2077	$2,200,000.00

4.4 Estimated Costs of Alternatives

Estimated capital and annualized costs were developed for each of the project options and are summarized in Table 19.

Table 19. Monetary Analysis

	Estimated Annual Yield (AFY)	Capital Cost	O&M Cost	Annual Cost ($/year)	Unit Cost ($/AF)
Alternative 1	752 (from groundwater)	$0	$463,848	$493,848	$657
Alternative 3 (Phase I only)	1,191	$93,487,328	$3,500,000	$3,890,000	$3,668

As seen in Table 19, the proposed Project (Alternative 3 Phase I) has higher capital and annual costs than the "Do Nothing" Alternative. However, most of the benefits resulting from the implementation are difficult to quantify, as they include climate change and environmental impacts, as well as improved water supply quality and reliability.

4.5 Waste-Stream Discharge Treatment

The following waste streams will be involved in the Project: screenings, grit, primary sludge, secondary sludge and RO brine.

The WWTP currently has a mechanical bar screen and a grit chamber to remove debris and solid materials from the wastewater. These screenings and grit are then hauled offsite to a landfill.

Downstream of the headworks, there are two primary clarifiers that separate settleable solids from wastewater. After primary treatment, the effluent flows to the Trickling Filters then the secondary clarifiers, which separate biological floc from the treated wastewater. Sludge from the primary and secondary clarifiers is processed by two primary anaerobic digesters. A second-stage digester is used as a sludge holding tank before dewatered sludge is sent to the sludge drying beds. Sludge is allowed to dewater in these beds and is then hauled offsite for final disposal.

For Phase I of the Project, an additional primary clarifier will be added to the treatment process for redundancy in the system and to allow for peak flows in the WWTP influent. Additionally, the Trickling Filters will be replaced by MBR treatment, and the secondary clarifiers will be decommissioned. Therefore, the sludge from the primary clarifiers will combine with the waste activated sludge from the MBR system, rather than from the secondary clarifiers, to be processed by the digesters.

An additional waste stream that will be included in the Project is RO brine from the RO system. There is expected to be around 0.035 MGD of RO brine that will require approximately 15 acres of salt evaporation ponds and 10 evaporators. This amount will increase as recycled water demand increases and more RO modules are needed. The brine evaporation ponds will be constructed on the WWTP property near the existing percolation ponds.

4.6 Alternative Technologies

Four viable biological treatment options were selected for evaluation to treat the anticipated average daily flow of 3.6 MGD. The treatment alternatives include:

1. Return Flow from Trickling Filter Effluent to Primary Clarifier
2. Conventional Activated Sludge
3. Moving Bed Biofilm Reactor
4. Membrane Bioreactor

See Appendix F for the Nitrogen Removal and Plant Reliability Technical Memo comparing the four alternatives. Due to its high effluent water quality, operational ease, flexibility to meet more stringent permit regulations, and scalability, a Membrane Bioreactor was recommended in the Technical Memo to be considered for future implementation.

5. ECONOMIC ANALYSIS

5.1 Introduction

The following sections provide an economic analysis of the Project compared to other alternatives.

5.2 Economic Analysis

Currently, no non-potable water reuse is being practiced in the City, and the effluent from the City's WWTP is discharging to percolation ponds that Banning gains no benefits from. Producing reclaimed water would significantly enhance the City's drinking water reliability and increase its economic advantage because of the sustainable growth and profit from selling the WWTP effluent to irrigation customers. The City has taken significant steps in establishing a water recycling program in the City including:

- Identifying existing and future customers that can utilize recycled water
- Serving existing customers from non-potable groundwater wells
- Constructing 24-inch backbone pipelines that extend across the City with easy access to existing customers that can utilize recycled water and future recycle water customers

When the proposed facilities are complete (Phase I is constructed), the City will be able to convert all non-potable wells to potable, thus benefiting from the investments made in drilling and equipping these wells.

At this time, the City uses imported water for groundwater replenishment. By supplying these irrigation customers with a reclaimed local water supply instead of pumped groundwater (as is currently done), this will reduce the amount of required imported water for the City, thereby reducing the City's overall water costs.

Another economic benefit of the Project is its impact on City growth. City growth is dependent on the availability of water supplies to meet various demands for new City population. Increasing the reliability of drinking water will therefore allow the City to meet its needs for growth.

As mentioned in Section 2.6, there is a compliance order from RWQCB that limits the TN from the WWTP. MBR, the selected treatment system, will be a reliable process that would meet these requirements. Among the alternatives proposed in Section 4.6, MBR would produce the best water quality. With the addition of RO, effluent from the WWTP would consistently meet the Beaumont Basin Plan requirements as well, allowing the City to supply recycled water to Sun Lakes Country Club and the remaining customers with significant irrigation demand.

5.3 Cost Comparison of Alternatives that Would Satisfy Demand of Proposed Project

See **Section 4.4** for a cost comparison of the proposed alternatives.

5.4 Description and Benefits of Water Supply Alternatives

Table 20 below compares the non-monetary criteria of the three Alternatives.

Table 20. Non-Monetary Criteria

	Alternative 1	Alternative 3 (Phase I only)
Regulatory Compliance	1	5
Reliability/Process Robustness	2	5
Enhancement of Indirect Potable Reuse	1	2
Groundwater Quality Enhancement	1	5
Flexibility for Future Water Reuse	1	5
Operational Simplicity	5	4
Ease of Implementation/Funding	5	5
Total	**16**	**31**

As seen in Table 20, the proposed Project (Alternative 3 Phase I) has a higher ranking in terms of non-monetary criteria than the "Do Nothing" alternative (Alternative 1). Alternative 1 will keep the current WWTP system as is, keeping facilities that have reached their end of life, and therefore remaining non-compliant with the impending Board Order restrictions. Therefore, Alternative 1 is ranked the lowest in terms of regulatory compliance, enhancement of indirect potable reuse, groundwater quality enhancement, and flexibility for future water reuse. Alternative 3 (Phase I only) is ranked the highest for regulatory compliance, reliability/process robustness, groundwater quality enhancement, and flexibility for future water reuse, as this alternative involves upgrading the treatment from the existing Trickling Filters to MBR to meet Board Order requirements and Title 22 standards (with the addition of chlorine disinfection).

5.5 Alternative Most Likely to be Implemented in Absence of Project

The Alternative that would most likely be implemented in the absence of the Project is Alternative 1 – do nothing.

However, In order to meet the impending Board Order TN restriction which will exceed the WWTP treatment capacity, the biological treatment process at the WWTP would need to be upgraded regardless of whether the WWTP effluent was used for reclaimed water purposes.

5.6 Qualitative Benefits and Justification of Water Reclamation

The non-quantifiable benefits are numerous. The sustainable recycled water supply will be tolerant to drought and will benefit the City's customers through improved water supply reliability.

Another benefit is the reduction of reliance on imported water and the implementation of regional management of water supplies and groundwater quality.

Reclaiming treated wastewater also has environmental impacts. By using a local supply of water, energy is saved by not pumping imported water from the Bay Delta. By not using water resources imported from other regions, more water is available for environmental uses in those areas. Additionally, since onsite treatment systems and the existing WWTP do not effectively remove nitrate from wastewater, another benefit of this Project would be the reduction of the amount of nitrate that percolates into the groundwater. This would not only help the City meet the Board Order requirements, but also alleviate the rising nitrate levels observed in some wells in the Region.

6. SELECTION OF THE PROPOSED WATER RECLAMATION PROJECT

6.1 Introduction

This section describes the benefits of water reclamation for the City.

6.2 Justification of Water Reclamation as Selected Alternative

The Project meets the objective of providing a cost-effective non-potable water supply. The Project has numerous qualitative and environmental benefits. These benefits are as follows:

- Increases local supply of non-potable water,
- Improves non-potable water supply reliability,
- Environmental benefits,
    - Reduction of nitrate in the groundwater,
    - Energy savings from less imported water from the Sacramento-San Joaquin Delta,
    - Decreases demand on the regional wholesale water agency, SGPWA, which makes more water available for environmental uses from imported supply areas,
    - Reduces the use of existing diversions from natural watercourses. By implementing the Project, the City will reduce dependence on imported water supplies which are diverted from natural watercourses in the Sacramento-San Joaquin Delta

The proposed facilities do not pose significant impacts to the environment and the City does not anticipate opposition to the Project. No obstacles have been identified that would prevent implementation of the project.

6.3 Analysis of Water Reclamation

6.3.1 Reduction, Postponement, or Elimination of Development of New or Expanded Water Supplies and Reduction of Diversions of Natural Water Courses

To the extent that agencies like the City of Banning can develop local supplies, the wholesale agencies forego the need to expand their own supply sources or can reduce their reliance on other sources. Most of the imported supplies are obtained from diversions from natural water courses, including the Sacramento and San Joaquin Rivers. Local supply projects like this Project result in reduced development efforts by the wholesalers.

6.3.2 Reduction of Demand on Existing Federal Water Supply Facilities

The California State Water Project (SWP) and the federal Central Valley Project share the Sacramento-San Joaquin Delta as a water supply. The imported water supply utilized by the SGPWA and the City comes from the SWP facilities. Although the Project would not reduce demand on the federal facilities, it could indirectly reduce the demand on the shared state and federal supply.

6.3.3 Reduction, Postponement, or Elimination of new or Expanded Wastewater Facilities

This Project involves expansion of limited processes, including a new primary clarifier. Although the two existing primary clarifiers at the plant accommodate an average flow of 3.6 MGD, they do not allow for peak flow of redundancy. Therefore, a new primary clarifier will be installed to handle daily peak flow rate. The rest of the facilities at the plant are sized for the expected influent flow of 3.6 MGD and will not require expansion.

Expanding the primary treatment system and upgrading other systems at the WWTP, including headworks, secondary treatment, and digester facilities, will eliminate the need for a new wastewater facility.

7. ENVIRONMENTAL CONSIDERATIONS AND POTENTIAL EFFECTS

7.1 Introduction

This section describes the potential environmental impacts and effects of the proposed Project, the environmental analysis and documentation prepared to date, how the project will affect water supply and water quality, and a discussion of public outreach and regional cooperation. The governing laws are the State of California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA).

7.2 Potential Environmental Impacts and Effects

The City does not anticipate that the Project will have significant impacts on endangered or threatened species, public health or safety, hydrology and water quality, regulated waters of the United States, or cultural resources. The City does not anticipate that the Project will have significant environmental effects as defined by State and federal environmental laws. As such, the City will prepare a Negative Declaration to obtain CEQA coverage and expects that USBR will adopt a Finding of No Significant Impacts (FONSI) to obtain NEPA coverage for the Project. The City completed an Initial Study-Mitigated Negative Declaration (IS-MND) in October 2007. The IS-MND covered significant elements of the current proposed project. The findings of the October 2007 IS-MND were either "Less Than Significant Impact" or "No Impact". The City has identified the potential environmental impacts described in Table 21, along with best management practices (BMPs) and potential mitigation measures.

Table 21. Potential Environmental Impacts and Mitigation Measures

Potential Impact	Potential Mitigation
Air quality and greenhouse gases	An air quality analysis will be completed as part of the CEQA analysis. Project construction will comply with local air quality requirements. Typical dust control measures, such as watering and reducing off-road vehicle speeds, will be employed. Project operations will be evaluated for consistency with the State GHG reduction targets found in AB 32 and SB 32. Emissions from operation of the proposed facilities are not expected to exceed applicable significance thresholds.
Biological resources	Construction of the project facilities is not expected to impact biological resources. Biological resources will be surveyed prior to design and sensitive species and their habitats will be avoided in the project design. The Project is not expected to impact wetlands or waters of the U.S. as regulated by U.S. Army Corps of Engineers, RWQCB, and California Department of Fish and Wildlife. The Project will comply with adopted Habitat Conservation Plans and Natural Community Conservation Plans.

	Operation of the Project is not anticipated to affect biological resources as all O&M activities will be constrained to the WWTP and associated brine minimization and drying beds, Operation will be sustainable and will have no impact on riparian and aquatic habitats.
Cultural resources	No Cultural resources are known to exist on the Project site. Cultural resources will be surveyed prior to design and the Project will be designed to avoid any identified cultural sites. Onsite construction monitoring mitigation may be necessary to ensure that discovery of any previously unidentified archeological resources is handled appropriately. The City will comply with California Assembly Bill 52 regarding formal consultation with Native American tribes about the proposed Project.
Hydrology and water quality	The City will characterize the RO brine (concentrate) discharge to the evaporation (drying) beds to verify quality of the solids before final disposal. The proposed Project is not within the 100-year floodplain. During the design This conclusion will be confirmed. Hydrologic impacts, including erosion and siltation during construction of the proposed facilities would be minimized through compliance with existing regulations, including enrollment in an NPDES construction general permit, completion of a storm water pollution prevention plan, and implementation of required BMPs.
Groundwater levels, supplies, and recharge during operation	The Project will result in directing a portion of the WWTP effluent for non-potable water reuse. This will reduce the amount of WWTP effluent currently discharged to the percolation ponds. The Project will not impact any drinking wells.
Transport, use, and disposal of hazardous materials during construction and operation	The RO system will use a variety of chemicals typically used in water treatment, possibly including scale inhibitors, membrane cleaning solutions, chlorine, ammonia, and caustic soda. Some of the chemicals will be delivered to the plant while others may be generated on-site. Chemical storage will have full containment structures to prevent spills along with alarms. Proper handling of these chemicals will be incorporated into the Standard Operating Procedures. Compliance with existing regulations is expected to minimize impacts to a less than significant level.

Noise	Construction noise is considered a nuisance and is regulated by the City's Noise Ordinance. The majority of construction activities for the Project will be in the vicinity of the WWTP which is located in an isolated part of the City. Construction equipment will be fitted with approved mufflers and other measures may be utilized to comply with the existing regulations.
Traffic impacts during construction	Construction traffic associated with the proposed facilities construction will be temporary, and the impacts will be insignificant. Construction traffic controls will be employed to reduce public hazards.

7.3 Public Outreach

The majority of the proposed facilities will be within the footprint of the existing WWTP. As such the City does not anticipate any public opposition to this Project. Also, the City will add significantly needed upgrades to its WWTP, which would enhance its reliability. The City plans to implement more public outreach and enhance publicity for the proposed Project. The upgraded WWTP and non-potable reuse are expected to promote growth in this disadvantaged community.

The City has constructed a significant portion of the non-potable reuse conveyance system, and this Project would complement the completed facilities.

7.4 Effect of Historic Properties

The City does not anticipate that the project will have any adverse effects on historic properties. The majority of construction will be within the WWTP footprint.

7.5 Avoiding Public Health and Environmental Quality Issues Associated with Use of Reclaimed Water

The proposed treatment facilities for the WWTP upgrades including MBR and partial RO will result in a reliable high-quality effluent suitable for non-potable reuse for irrigation purposes. The effluent water quality will consistently meet all State Title 22 requirements.

The City will apply the treatment technologies described in Section 4.2 so that the product water will meet state and federal non-potable reuse water quality requirements for irrigation purposes. The primary requirements are outlined in the State Title 22 requirements. The City will work closely with the SWRCB the State's enforcement agency, in developing and permitting the Project. Typical steps include:

- Meetings and coordination,
- Submittal of the Project application,

- Review and approval of the preliminary design,
- Review and approval of the project plans and specifications, and operating plan,
- Inspection of plant construction and witness of start-up testing, and
- Amendment of the City's discharge permits.

Future phases of the Project include groundwater recharge of the Banning groundwater storage unit. The planned upgrades at the WWTP will incorporate space and hydraulic head for additional advanced treatments to be added in the future.

8. LEGAL AND INSTITUTIONAL REQUIREMENTS

8.1 Introduction

This section focuses on the legal and institutional requirements which must be considered prior to implementation of the Project. The following is a discussion of water and wastewater rights, legal and institutional requirements, interagency agreements, permitting requirements, unresolved issues, and wastewater discharge requirements.

8.2 Analysis of Water Rights Issues

There are no anticipated water rights issues potentially resulting from implementation of the proposed project. Through various adjudications and overlying water rights, the City owns and operates the sources of water supply (WWTP and groundwater wells).

8.3 Discussion of Legal and Institutional Requirements with Potential to Affect Implementation of Project

8.3.1 Department of Water Resources – Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) was passed by the California State Legislature in September 2014, establishing new requirements for groundwater management in medium and high priority groundwater basins. The act requires the development and implementation of Groundwater Sustainability Plans (GSPs) for each groundwater basin and subbasin. The GSP must contain objectives and actions to achieve and maintain groundwater sustainability and to avoid the undesirable results of overdraft. SGMA also requires the establishment of Groundwater Sustainability Agencies (GSAs) to oversee development and implementation of GSPs and provides authority to GSAs to sustainably manage groundwater. Local water authorities and counties have primary responsibility and authority for the development and implementation of GSPs and GSAs; however, the State has been given authority to intervene if specific requirements are not met.

8.3.2 Groundwater Sustainability Agencies

SGMA requires that high and medium priority groundwater basins, as designated by the California Department of Water Resources (DWR), create groundwater sustainability agencies by June 30, 2017. The bill authorizes any local agency or combination of agencies to become a GSA with the purpose of developing and implementing GSPs in order to meet the goals and standards of sustainable management of groundwater basins as described in SGMA. Multiple GSAs and GSPs in a single basin are allowed under the law; however, multiple GSPs within a basin must be coordinated and meet all requirements for achieving sustainable groundwater management within the entire groundwater basin or be subject to state intervention. A combination of agencies creating a GSA can be formed by a joint powers agreement, a memorandum of agreement, or other legal agreement.

8.3.3 Groundwater Sustainability Plans

SGMA requires that GSAs develop and implement groundwater sustainability plans. GSPs must be completed by January 31, 2020 for basins deemed by DWR to be in critical overdraft. For all remaining medium and high priority basins, GSPs must be completed by January 31, 2022. Implementation of the GSPs must result in groundwater quantity and quality sustainability within 20 years (by 2040 or 2042 based on the basin overdraft situation). DWR may grant up to two extensions of an additional five years to GSAs to achieve sustainability upon a showing of good cause. If the GSPs are not completed within the above timeframe, or if the SWRCB, in consultation with DWR, determines that groundwater sustainability is not being achieved in the time given, authority for developing and implementing a GSP will be designated to the RWQCB.

8.3.4 San Gorgonio Pass Subbasin

The SGP Subbasin (DWR Basin 7-021.04) is located in Southern California between the San Bernardino Mountains to the north, the San Jacinto Mountains to the south, Coachella Valley to the east and San Bernardino Valley to the west. The SGP Subbasin adjoins the San Timoteo Groundwater Subbasin to the west and the Indio Subbasin to the east. The SGP Subbasin boundaries generally correspond to the DWR's California's Groundwater Bulletin 118.

The San Gorgonio Pass (SGP) Subbasin (7-021.04) is one of several alluvial basins and subbasins identified by the California Department of Water Resources (DWR) as being in a medium-priority subbasin in Bulletin 118 (2003). Beginning in 2015, GSAs within the SGP Subbasin formed to address the long-term reliability of groundwater through the development a single GSP. The SGP Subbasin GSP (SGP GSP) was developed in a coordinated fashion by the Desert Water Agency GSA, San Gorgonio Pass GSA, and Verbenia GSA with the goal of achieving sustainability for the SGP Subbasin as a whole. The SGP GSP was adopted by the respective GSAs and submitted to DWR on January 25, 2022, ahead of the January 31, 2022, deadline.

The SGP GSP jurisdiction includes the Desert Water Agency GSA, San Gorgonio Pass GSA, and Verbenia GSA. Desert Water Agency GSA consists of the Desert Water Agency. San Gorgonio Pass GSA consists of Banning Heights Mutual Water Company (MWC), the City of Banning, Cabazon Water District (WD) and San Gorgonio Pass Water Agency (SGPWA). Verbenia GSA consists of Mission Springs WD and SGPWA. The SGP Subbasin GSAs are not required to develop a Coordination Agreement. Despite this, the GSAs entered into a cooperative Memorandum of Agreement for development of the GSP and grant funding. The three GSAs have cooperatively worked together to coordinate SGP GSP development. The SGP Subbasin includes a portion of an adjudicated area, known as the Beaumont Basin, that resides outside the Plan Area. Since it was previously adjudicated, the portion of the Beaumont Basin located in the SGP Subbasin is not subject to SGMA regulations.

8.3.5 Santa Ana River Basin Plan

An updated Water Quality Control Plan for the Santa Ana River Basin (Basin Plan) was adopted by the Regional Board on March 11, 1994, approved by the State Water Resources Control Board (SWRCB) on July 21, 1994, and approved by the Office of Administrative Law (OAL) on January 24, 1995. The Basin Plan identifies the Region's ground and surface waters, designates beneficial uses for those waters, establishes water quality objectives for the protection of those uses, prescribes implementation plans and establishes monitoring and surveillance programs to assess implementation efforts. Amendments to the Basin Plan to incorporate a revised Total Dissolved Solids and Nitrogen Management Plan (Salt Management Plan) into the 1995 Basin Plan were approved by the Regional Board on January 22, 2004, by the State Water Resources Control Board on October 1, 2004 and by the Office of Administrative Law on December 23, 2004. The surface water standards provisions of the amendments were approved by the U.S. Environmental Protection Agency on January 20, 2007. This amendment included revised groundwater subbasin boundaries (now called management zones), revised TDS and nitrate-nitrogen (nitrate-N) groundwater quality objectives, revised TDS and nitrogen waste load allocations, revised reach designations, and revised TDS and nitrogen objectives and beneficial uses for specific surface waters.

Antidegradation water quality objectives set forth by the Basin Plan amendment restricted the use of recycled water for irrigation and groundwater recharge for certain groundwater management zones, including the Beaumont Management Zone (BMZ) and the San Timoteo Management Zone (STMZ). In particular, the ambient TDS concentrations of these management zones exceeded the antidegradation objectives, meaning that no assimilative capacity existed for which the Regional Board could allocate the use of the City's recycled water within the BMZ or STMZ. Under the antidegradation objectives, the use of recycled water would require mitigation even though the reuse would not materially impact future TDS concentrations or impair beneficial uses. Thus, alternative maximum-benefit objectives were specified for the BMZ and the STMZ. The maximum-benefit objectives were established based on demonstrations by the involved agencies that antidegradation policies were satisfied.

Discharge of recycled water over the BMZ by the City of Banning as a result of the project will be in full adherence to the requirements set forth in the Basin Plan.

8.4 Discussion of Need for Multi-Jurisdictional or Interagency Agreements

As the sole retail supplier of water in the service area, and the agency responsible for wastewater processing, the City of Banning is able to produce recycled water for distribution within its service area without agreements with any other agency.

8.5 Discussion of Permitting Procedures Required

The following permits will be required for the Project:

1. DDW Title 22 Permit

2. California State Water Resources Control Board General Permit (combining Non-Discharge National Pollutant Discharge Elimination System [NPDES], Waste Discharge Requirement [WDR], and Waste Recharge Requirements [WRR])
3. AQMD
4. CEQA (IS-MND)

A Title 22 Engineering Report is required to be submitted for approval by DDW for meeting water quality requirements of the treated recycled water and groundwater recharge requirements. After the WWTP's design documents are finalized, the City will submit the necessary reports, analyses, and applications to obtain required permits from both DDW and the RWQCB.

As described in Section 7, the City will prepare a Negative Declaration to obtain CEQA coverage for the Project in parallel with Project design.

8.6 Discussion of Unresolved Issues Associated with Implementing Proposed Project

There are no unresolved issues associated with implementing the proposed project.

8.7 Identification of Current and Proposed Discharge Requirements

The current discharge requirements for the WWTP are laid out in the RWQCB Board Order, which describes the WDRs and other terms and conditions of operation for the WWTP.

The Board Order can be found in Appendix G.

8.8 Rights to Wastewater Discharges

The City's rights to groundwater extraction are in Table 5 in Section 2.3.

9. FINANCIAL CAPABILITY OF SPONSOR

9.1 Introduction

The City has developed an implementation schedule and general funding plan that demonstrates that at the Feasibility Study stage, the City has the financial capability if the project moves to construction.

9.2 Schedule

The proposed schedule for the Project includes three phases, however only Phase I will be implemented in the near term. In Phase I, the RO system for Well NP-1 and WWTP upgrades will be installed, as well as the recycled water laterals for Banning High School, Dysart Park, and Lions Park.

The preliminary and final design of Phase I is expected to be completed by the 2nd quarter of 2026. Design includes initiating the necessary permits, completing CEQA/NEPA documentation, completing design, going out to bid, obtaining the authority to award the construction contracts, awarding contracts, and issuing notices to proceed.

The first step of construction for Phase I will be installing the Well NP-1 upgrades, including the RO system and brine evaporation ponds, and WWTP upgrades, including the new MBR facility, primary clarifier, chlorine tank, and lab and control building. Once easements have been obtained for the recycled water laterals, construction of the laterals will occur in parallel with construction of the WWTP upgrades. Development and testing of the new facilities will follow. Phase I is estimated to be completed in 3 years by the 4th Quarter of 2027, as shown in Table 22 on the following page.

Table 22. Project Schedule – Phase 1

Project Component	Duration	2024				2025				2026				2027			
		Q1	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Well NP-1 RO System and Brine Evaporation Ponds	12 months																
Predesign	3 months																
Final design	3 months																
Bidding	3 months																
Construction/startup	3 months																
WWTP Upgrades	33 months																
Predesign	6 months																
Final design	6 months																
Bidding	3 months																
Construction/startup	18 months																
Recycled Water Laterals	24 months																
Easements	6 months																
Bidding	3 months																
Design	6 months																
Construction/development	6 months																
Testing	3 months																

9.3 Willingness and Capability of the City of Banning to Fund the Project

The Project will be funded through the City's capital replacement and operating budgets, as well as development activity revenues via the City's local development impact fee program. The City also has the capability to fund projects through debt issuance.

9.4 Project Funding Plan

9.4.1 Operating Budgets

The City owns and manages both a water utility and wastewater utility as individual self-supporting enterprises. Therefore, the utilities must develop financial plans that provide sufficient revenues to meet all operation and maintenance expenses, water purchases, wastewater treatment, debt service requirements, capital improvements funded from current revenues, and other expenditures.

In 2022, the City Council of the City of Banning approved a Water and Wastewater Rate Study (Rate Study). The Rate Study developed financial plans that projected operating revenue, expenses, and capital financing costs for the utilities over a five-year planning period beginning July 1, 2022 and ending June 30, 2027. The financial plans projected future rate revenues under existing rates, operation and maintenance (O&M) expenses, principal and interest expense on debt, transfers, and capital improvement program (CIP) requirements.

For the water utility, the Rate Study identified:

- **Operation and Maintenance Expenses:** The O&M expenses increase from $7.9M in FY 2023 to $10.0M in FY 2027.
- **Debt Service:** There is an existing revenue bond with an annual payment of $2.0M. There is no future debt planned.
- **Capital Improvements**: The CIP identified an average of $6.2M per year in capital projects from FY 2023 to FY 2027.
- **Reserves:** Continue to maintain the operating fund reserve level. The operating fund reserve is designed to help cover fluctuations in day-to-day expenses. The new target, consistent with industry reserve guidelines, will be 90 days of O&M expenses, a change from the existing 10% of O&M expenses and debt service payments.

For the wastewater utility, the Rate Study identified:

- **Operation and Maintenance Expenses:** The O&M expenses increase from $3.7M in FY 2023 to $4.6M in FY 2027; increases in cost to operate and maintain the proposed Wastewater Treatment Plant and Recycled Water Upgrades Project are included as part of the Rate Study projections.

- **Debt Service:** There is an existing revenue bond with an annual payment of $290k associated from a 2019 Refunding Revenue Bond. The City anticipates a net debt issuance of $25.0M in FY 2025, which will add an annual payment of $1.9M starting in FY 2025. The primary expense for the new debt issuance is for the Wastewater Treatment Plant and Recycled Water Upgrades Project. The Rate Study ensures the appropriate level of debt service coverage.
- **Capital Improvements**: The CIP identified an average of $12.1M per year in capital projects from FY 2023 to FY 2027.
- **Reserves:** Continue to maintain the operating fund reserve level. The operating fund reserve is to help cover fluctuations in day-to-day expenses. The scheduled target will be 90 days of O&M expenses, a change from the existing 10% of O&M expenses and debt service payment.

The revenue requirements listed above for the water and wastewater utilities set the basis for the development of suitable rate schedules to produce revenues adequate to meet financial needs while recognizing customer costs of service. In November of 2022, City Council held a public hearing resulting the approval of the rate increases for a period of five years as shown in Table 23.

Table 23. Rate Increases

Fiscal Year	Effective Month	Water Utility	Wastewater Utility
FY 2022-2023	January	10.75%	40.00%
FY 2023-2024	July	0.00%	25.00%
FY 2023-2024	January	10.75%	25.00%
FY 2024-2025	January	10.75%	3.00%
FY 2025-2026	January	10.75%	3.00%
FY 2026-2027	January	10.75%	3.00%

There is a current fund balance in the Water Operations Fund of $17.5M and a fund balance in the Wastewater Operations Fund of $3.7M.

In addition to operating and capital revenues related to rates, the City has continued to charge a monthly Tertiary Surcharge of $2.72/month per account to fund capital improvements at the wastewater treatment plant. The Wastewater Tertiary Fund has a fund balance of $7.7M of which $7M would be allocated to the Proposed Project.

Additionally, the City has the capability to fund projects through either cash payment or debt issuance.

9.4.2 Development Impact Fees

In 2018 the City Council of the City of Banning completed and approved an Integrated Master

Plan (2018 IMP) that evaluated the performance and condition of the City's potable water, wastewater and recycled water system (future) systems under current and future conditions through year 2040. The 2018 IMP includes a capital improvement plan (CIP) to guide the City in the planning and development of facilities required to meet system performance for existing and future customers.

In September 2019, the City Council approved new and updated the development impact fees, including impacts fees to cover the costs for water, recycled water, and wastewater facilities.

The Water Impact Fee fund balance is approximately $3.3M of which $1.5M would be allocated to the Proposed Project.

The Wastewater Impact Fee fund balance is approximately $10.8M of which $7.5M would be allocated to the Proposed Project.

The City of Banning is currently witnessing a significant amount of growth in the residential sector. It is expected the available funding in the utility impact fee funds will continue to increase allowing for additional allocations to the Proposed Project.

The City has the capability to fund projects through either cash payment or debt issuance.

Over time, staff will present updated rate studies to City Council in order to ensure that rate revenues are sufficient to cover ongoing operations, maintenance, replacement costs and debt service coverage obligations.

9.5 Other Funding Sources

The City is also considering, as possible funding sources, the Water Infrastructure Finance Innovation Act (WIFIA) and Clean Water State Revolving Fund (CWSRF).

10. RESEARCH NEEDS

The proposed water reclamation Project includes basic research needs and will solely use proven technologies and conventional system components. Further research to implement the proposed water reclamation project will not be necessary.

11. REFERENCES

Carollo Engineers, Inc. 2*006 Recycled Water Master Plan*. 2006.

Carollo Engineers, Inc. 2*018 Integrated Master Plan*. March 2018.

West Yost & Associates Engineering, Inc. and John Robinson Consulting, Inc. *2020 Urban Water Management*. June 2021.

Appendix A
RO Analysis Technical Memo

City of Banning

WWTP Upgrade OA Service

Draft Reverse Osmosis Analysis

Technical Memo

November 22, 2023









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EXECUTIVE SUMMARY

There are two potential sources of recycled water for the City of Banning, the Banning Wastewater Treatment Plant (WWTP) and a non-potable well (NP-1), however neither currently meets the Beaumont Basin Plan requirements for TDS and TN. In order to lower the TDS and TN at either source, a reverse osmosis (RO) treatment will need to be implemented. To recover around 1 MGD of available reuse water and obtain TDS and TN concentrations lower than the Beaumont Basin Plan requirements, the WWTP would require a 0.5 MGD RO system and the non-potable well would require a 0.8 MGD RO system.

The recommended approach is to treat NP-1 with RO now, since construction of the WWTP upgrades is not expected to finish for another 3 years. Once the WWTP is upgraded to tertiary standards, the RO system can be converted to treat the WWTP effluent, or a second RO system can be built and the RO-treated NP-1 and WWTP effluent can blend to serve recycled water customers.

1. BACKGROUND AND PURPOSE

The City's existing non-potable water system delivers recycled water from Well M7 to the Sun Lakes Country Club. The City has served an average of 0.76 MGD from Well M7 to the Sun Lakes Country Club in the years 2012 through 2014. However, the City eventually plans to convert Well M7 and Well M12 (another operational non-potable well) over to the potable water system by the end of year 2025 and year 2040, respectively, to supplement the potable water supply.

According to the 2018 San Gorgonio Integrated Master Plan, the existing potential recycled water demand for the City of Banning is around 1.49 MGD: 0.76 MGD average day demand (ADD) from Sun Lakes Country Club, 0.20 MGD ADD from Five Bridges Development, 0.03 MGD ADD from Neighborhood Park, 0.08 MGD ADD from Dysart Park, 0.19 MGD ADD from Rancho San Gorgonio, 0.16 MGD ADD from Banning High School, and 0.07 MGD ADD from Lions Park. Based on recent discussions with the City, the aim will be to serve Sun Lakes Country Club first, and Banning High School, Dysart Park, Lions Park, Rancho San Gorgonio, Neighborhood Park and Five Bridges Development in the near-future.

In order to meet these recycled water demands, the City has plans to upgrade the existing wastewater treatment plant (WWTP) to meet tertiary standards. The City has already begun constructing an additional 3.4 miles of pipeline to connect the existing recycled water pipes to the wastewater treatment plant (WWTP) and to NP-1 located adjacent to the WWTP.

In addition to these standards, in order to serve Sun Lakes Country Club, which is located over the Beaumont Basin, the WWTP effluent must also meet the Beaumont Basin maximum benefit objectives of 330 mg/L for TDS and 5 mg/L for TN. With a current average TDS of 390 mg/L and an expected TN of 7.74 mg/L, once secondary treatment at the plant is upgraded to MBR, the WWTP effluent does not meet either of these objectives.

Near the WWTP is a non-potable well, NP-1, that may be able to supply water to these irrigation customers in place of the WWTP until the plant is upgraded to tertiary standards. The capacity of the well is 800 gal/min, or 1.15 MGD, and is expected to be fully operational within the next few months. Like the WWTP, the water quality of the well does not meet the Beaumont Basin maximum benefit objectives. Based on an analytical report from August of 2023, the average TDS and TN of NP-1 is 430 mg/L and 17 mg/L, respectively.

The purpose of this technical memo is to determine the best strategy for supplying recycled water to the City of Banning.

2. TDS AND TN MASS BALANCES

In order to reduce TDS and TN levels at either the WWTP or NP-1, the most effective treatment method is reverse osmosis (RO). This section describes the RO treatment systems and final effluent quality at each location. In order to meet the current recycled water demand for Sun Lakes Country Club, the assumed output goal for available reuse water for both the WWTP and NP-1 is around 1 MGD.

Various recovery rates were analyzed for the proposed RO treatment system, including 75%, 80%, and 93%. Based on expected costs of brine treatment for each of the recovery rates, it was determined that maximizing RO recovery is the most cost beneficial. At this time, 93% recovery for a two-stage RO system is feasible based on the source water quality, and therefore TDS and TN mass balances in the following section assume a 93% recovery rate.

For both options, the proposed RO systems were sized to treat the final combined effluent to just below the Beaumont Basin Plan requirement (i.e., Beaumont Basin maximum benefit objective) for TN. For lower final combined effluent TN concentrations, additional RO treatment capacity can be added to the systems.

2.1 Option 1

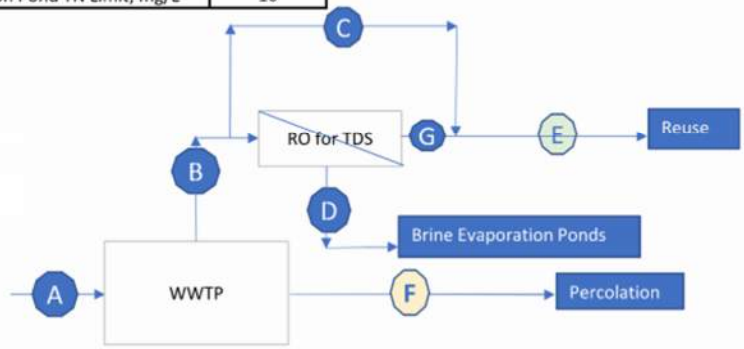
This first option involves treating a percentage of the WWTP effluent with RO for recycled water irrigation use. Since the WWTP must meet tertiary standards in order to be recycled, an MBR, chlorination tank, and RO system would all need to be implemented for this alternative. Therefore, this process involves sending 1 MGD of the approximately 3.6 MGD WWTP influent through the MBR from the primary clarifiers, then to the chlorination tank; the remaining 2.6 MGD will continue discharging to the percolation ponds.

After disinfection, 0.5 MGD of this 1 MGD flow will be sent to the two-stage RO system and the remaining 0.5 MGD will blend with the RO permeate. Assuming 93% recovery, around 0.035 MGD of the RO treated 0.5 MGD will be converted into brine. This brine will be sent to mechanical evaporators and salt evaporation ponds that will be located near the RO facility. These salt evaporation ponds will require around 8 acres of surface area and will be designed to meet the Title 27 requirements described in Section 2.4. The 0.47 MGD RO permeate will combine with the 0.5 MGD WWTP effluent for a total of 0.97 MGD available for reuse.

The TDS and TN of the 0.97 MGD reuse water will be about 207 mg/L and 4.4 mg/L, respectively, meeting the Beaumont Basin Plan requirements of 330 mg/L for TDS and 5 mg/L for TN. The water quality of the remaining WWTP effluent that will discharge to the percolation ponds will remain unchanged, with a TDS of 390 mg/L TDS and TN of 7.5 mg/L. These concentrations are both below the California Regional Water Quality Control Board, Colorado River Basin Region's (RWQCB) Board Order R7-2016-0015 (Board Order) percolation limits of 440-490 mg/L for TDS and 10 mg/L for TN. See Figure 1 for the detailed mass balance of this option, including the evaluated available reuse water for 93%, 80% and 75% RO recovery.

Figure 1. WWTP TDS Mass Balance

Target TDS for reuse; mg/L	330
Percolation Pond TDS Limit; mg/L	440-490
Target TN for reuse; mg/L	5
Percolation Pond TN Limit; mg/L	10



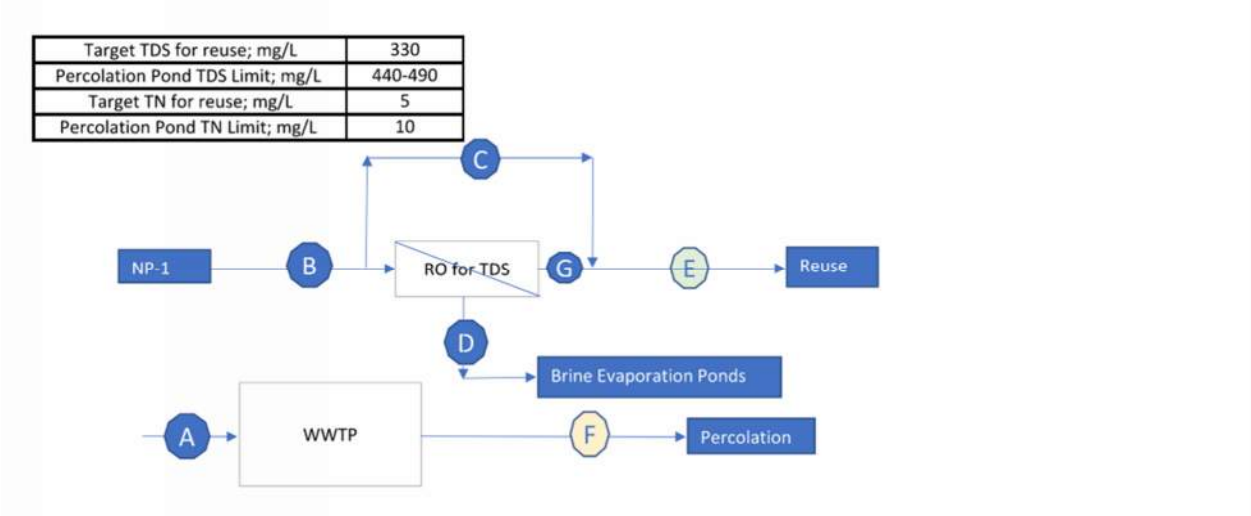
RO Recovery			A	B	C	D	E	F	G
93		Flow, mgd	3.6	1	0.5	0.04	0.97	2.60	0.47
		TDS, mg/L	390	390	390	5438.57	207	390	10
		TN, mg/L	7.5	7.74	7.74	99.78	4.4	7.5	1
80		Flow, mgd	3.6	1	0.50	0.10	0.90	2.60	0.40
		TDS, mg/L	390	390	390	1910	221	390	10
		TN, mg/L	7.5	7.74	7.74	35.45	4.7	7.5	1
75		Flow, mgd	3.6	1	0.50	0.13	0.88	2.60	0.38
		TDS, mg/L	390	390	390	1530	227	390	10
		TN, mg/L	7.5	7.74	7.74	28.52	4.8	7.5	1

2.2 Option 2

The second alternative involves treating NP-1 with RO for recycled water irrigation use. For this option, 1 MGD will be pumped from NP-1. Of this 1 MGD, 0.8 MGD will flow to the two-stage RO system, and 0.2 MGD will blend with the RO permeate. Assuming 93% recovery, there will be approximately 0.056 MGD of RO brine, which will be sent to mechanical evaporators and salt evaporation ponds located near the RO facility. These salt evaporation ponds will require around 15 acres of surface area and will be designed to meet the Title 27 requirements described in Section 2.4. The 0.74 MGD RO permeate will blend with the 0.2 MGD non-treated water from the well for a total of 0.94 MGD available for reuse.

The final TDS and TN of the 0.94 MGD recycled water will be about 99 mg/L and 4.0 mg/L, respectively, below the Beaumont Basin Plan requirements. The water quality of the WWTP effluent that discharges to the percolation ponds will remain unchanged, with a TDS of 390 mg/L TDS and TN of 7.5 mg/L, both below the RWQCB Board Order percolation limits. See Figure 2 for the detailed mass balance of this option, including the evaluated available reuse water for 93%, 80%, and 75% RO recovery.

Figure 2. NP-1 TDS Mass Balance



RO Recovery			A	B	C	D	E	F	G
93		Flow, mgd	3.6	1	0.2	0.06	0.94	3.6	0.74
		TDS, mg/L	390	430	430	6010	99	390	10
		TN, mg/L	7.5	16	16	217.78	4.0	7.5	1
80		Flow, mgd	7.5	1	0.20	0.16	0.84	3.6	0.64
		TDS, mg/L	390	430	430	2110	110	390	10
		TN, mg/L	7.74	16	16	76.75	4.4	7.5	1
75		Flow, mgd	3.6	1	0.20	0.20	0.8	3.6	0.60
		TDS, mg/L	390	430	430	1690	115	390	10
		TN, mg/L	7.74	16	16	61.56	4.6	7.5	1

2.3 RO Facility Siting

Among the potential recycled water demands, the Sun Lakes Country Club with a demand of 0.76 MGD is the only one located over the Beaumont Basin. As such, an RO facility can be sized for the demand by the Sun Lakes Country Club and be located near the service connection. Brine from the RO facility would be discharged back into the sewer and treated at the WWTP.

The capital costs for this option would be smaller than siting the RO facility near the WWTP and NP-1 well. However, locating the RO facility at the service connection has significant drawbacks including:

1. The remote O&M will result in higher operations costs.
2. The brine flow will be discharged to the sewer and treated again at the WWTP. If treatment Option 1 is pursued, the return brine will result in gradual increase in the WWTP TDS level.
3. If lower TDS levels become important for the other potential users, it would be much harder to implement in the future.
4. Having the location by the WWTP allows for future brine management such as evaporation ponds.

Because of these drawbacks, it is recommended that the RO facility be located near the WWTP.

2.4 Title 27 Requirements

The discharge of the RO to the brine evaporation ponds is subject to regulation under the California Code of Regulations, Title 27 Environmental Protection (27 CCR), Division 2 Solid Waste. This liquid-designated waste must be contained in a Class II surface impoundment constructed with a double liner and a leachate collection and removal system (LCRS) per CCR, Title 27. As part of the CCR, Title 27 requirements, the Discharger is also required to monitor the surface impoundments, including the vadose zone and groundwater beneath the site.

In order to comply with this regulation, the design of the evaporation ponds will include several layers of protection and monitoring capabilities. The uppermost layer will consist of a 60-mil textured HDPE primary liner, which will prevent leachate from migrating below the ponds. A second 60-mil HDPE drain liner will make up the bottom of the LCRS. The bottom liner is defined as the free-draining vadose zone monitoring system (VZMS).

This LCRS system will be designed to detect any leaks and collect any moisture that may develop in the LCRS. The bottom liner will capture any liquid that leaks through the upper primary liner, with the liquid being collected in a sump area for collection and removal. The sump will be continuously monitored using a level switch that will be installed in the monitoring tube of the LCRS sump.

3. COST ESTIMATE

3.1 Option 1

The order of magnitude costs for Option 1 are detailed below. The capital costs required for the WWTP effluent to meet tertiary standards include MBR, disinfection, an RO system, as well as brine evaporation ponds and mechanical evaporators.

WWTP	
MBR – 3.6 MGD	$52,887,000
Chlorination Tank – 3.6 MGD	$2,377,700
RO System – 0.5 MGD	$1,619,000
Brine Evaporation Ponds and Mechanical Evaporators	$5,256,100
TOTAL	**$62,139,800**

3.2 Option 2

The order of magnitude cost for Option 2 is detailed below. The capital costs required for NP-1 to meet non-potable standards are an RO system as well as brine evaporations ponds and mechanical evaporators.

NP-1	
RO System – 0.8 MGD	$3,497,500
Brine Evaporation Ponds and Mechanical Evaporators	$2,948,000
TOTAL	**$6,445,500**

4. RECOMMENDATIONS

It is recommended to implement Option 2 now and Option 1 once the upgrade of the WWTP is complete. The time of construction to upgrade the WWTP, including building the new MBR and chlorination tank, is estimated to take approximately 3 years. Therefore, in order to serve the current recycled water demands from Sun Lakes Country Club within these 3 years, a 1 MGD RO system for NP-1 can be built now. Once the construction for the upgrades of the WWTP is finished, depending on the recycled water demand at this time, either the RO system used for NP-1 can be converted for WWTP effluent use or a second 1 MGD RO system can be built for the WWTP effluent. If a second RO system is installed, the NP-1 and WWTP effluent, post RO-treatment, will blend to satisfy the recycled water demands, thereby keeping NP-1 in commission.

Appendix B
Rancho San Gorgonio Water Supply Assessment

JAN 23 2015
RC

WATER SUPPLY ASSESSMENT

RANCHO SAN GORGONIO SPECIFIC PLAN

CITY OF BANNING

COUNTY OF RIVERSIDE

STATE OF CALIFORNIA

PREPARED BY:

MADOLE & ASSOCIATES, INC.

Engineering Communities for Life

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Mark Bertone, President

Encompass Associates, Inc.
5699 Cousins Place
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909-684-0093
Aaron Skeers, P.E.

Prepared for:

Rancho San Gorgonio, LLC

January 26, 2015

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1. Executive Summary

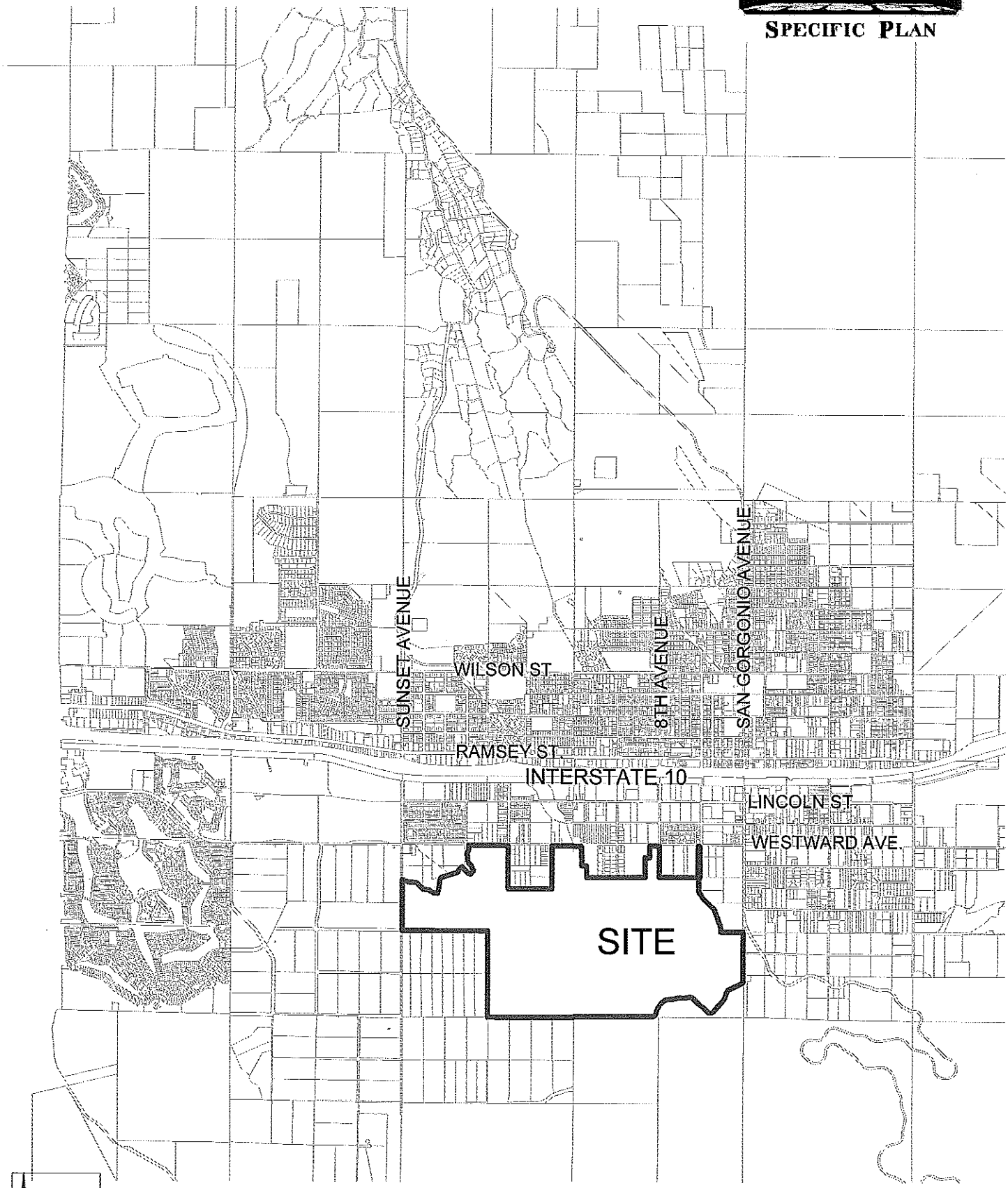
Rancho San Gorgonio is a master planned community proposed in the city of Banning, Riverside County, California. Located on approximately 831 acres on the south side of the city, including approximately160 acres to be annexed from the county, up to 3385 residences are anticipated, among other uses and amenities.

Due to the size of the project, state law requires a Water Supply Assessment be prepared to ensure there will be an adequate supply of water for the project and the city over the next twenty years.

The city had an Urban Water Management Plan prepared, last updated in 2010, that describes in detail the various sources of water, the confidence in long-term reliability of those sources, the quality of those sources, and the projected demand for water within the city from now until buildout of the city.

The UWMP was the primary resource and was used as a basis for this WSA. Based on information provided in the UWMP, an assessment is made herein of the change this project will have on what was anticipated with the UWMP. Planning ahead to a built-out condition, there will be an estimated increase in population of 5243 due to this project, resulting in an increase in demand for water of 1,583 acre-feet/year.

As outlined in the UWMP and supporting reports, the city has a solid source of water, and due to a growing water account balance within the underground water basin, it is determined by this WSA that there will be an adequate supply of water to serve the project and city based on existing and projected supply and demand calculations.



Vicinity Map

2. Water Supply Assessment

2.1. Introduction

A Water Supply Assessment (WSA) is mandated by state law, SB 610, in general for any project proposing 500 or more new residences. SB 610 stipulates when and how WSA's are needed and completed. As the city of Banning is both the land use agency and the water supplier for the proposed Rancho San Gorgonio Master Planned Community, and accompanying Specific Plan, the city is responsible for ensuring the WSA is prepared in accordance with SB 610. Madole & Associates, Inc., and Encompass Associates, Inc., were contracted to prepare the WSA by Rancho San Gorgonio, LLC, for the benefit of the city of Banning.

This WSA is based upon the City of Banning Urban Water Management Plan (UWMP), which is anticipated to have final approval this year. Data pertaining to historical supply and demand is taken from the UWMP. Projections can then be made for the increase in demand from the proposed Rancho San Gorgonio development.

Per SB 610, this WSA "must address whether the projected supply for the next 20 years - based on normal, single dry, and multiple dry years - will meet the demand projected for the project plus existing and planned future use..." The following three issues must be addressed:

1. Assess water received in prior years from (and provide supporting documentation):
    a. Water supply entitlements
    b. Water rights
    c. Water service contracts
2. If no water received in prior years, identify other water suppliers
3. If the source includes groundwater, follow the related guidelines as applicable.

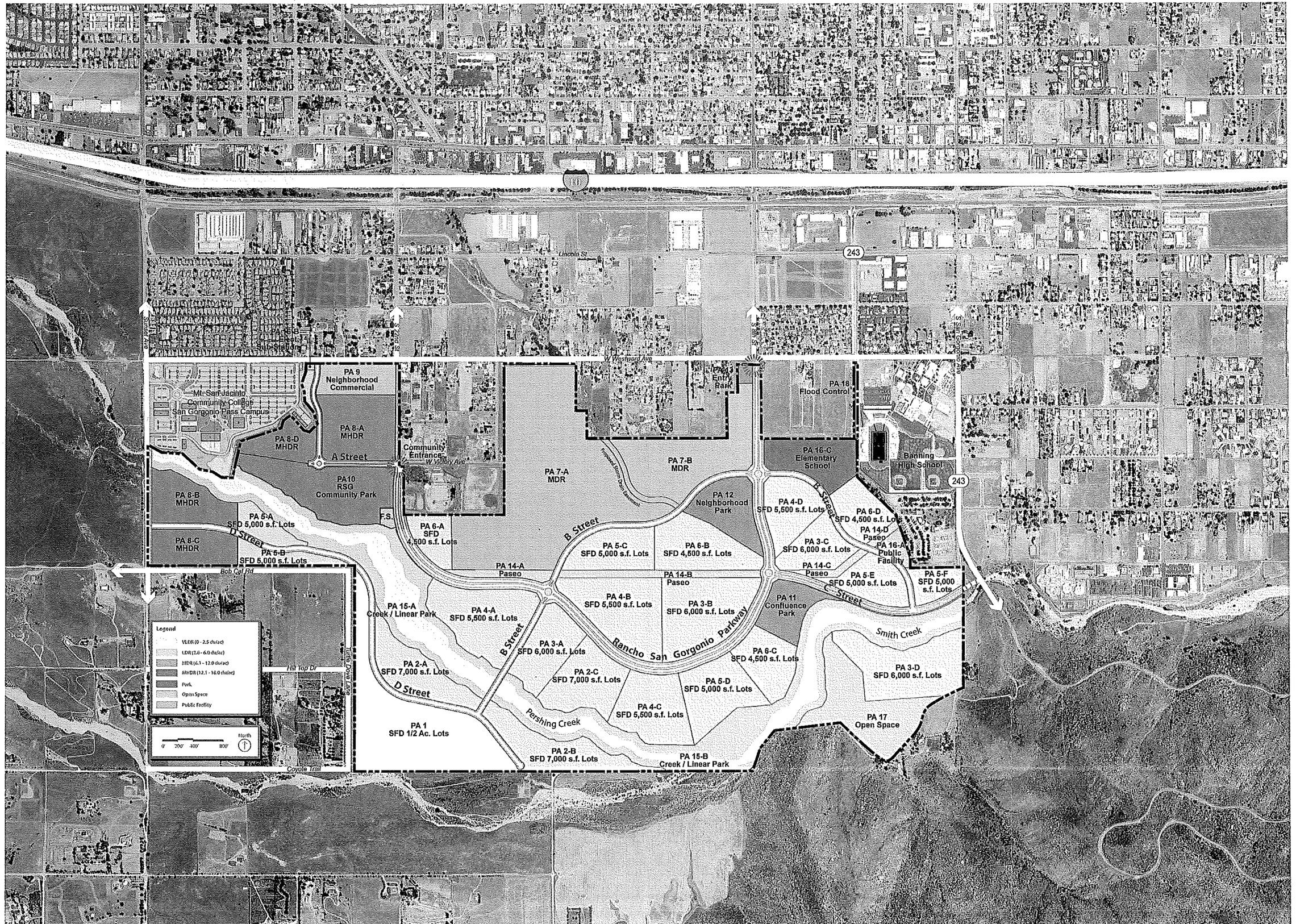
From these three inquiries, the city of Banning can determine if there is sufficient water supply for the proposed project. If there is insufficient supply, the WSA must set forth plans to acquire the necessary supply, including the estimated cost thereof, the permits required, and the estimated timeframe for supply acquisition.

2.2. Proposed Project Description

Rancho San Gorgonio is a master planned community proposed in the city of Banning, California, comprising approximately 830.8 acres. The site is south of Interstate 10, generally situated between Sunset Avenue and San Gorgonio Avenue, south of Westward Avenue. A portion of the property is in unincorporated Riverside County, and will be annexed into the city limits as part of the development process.

The proposed project will consist of up to 3385 dwelling units, almost 49 acres of neighborhood and community parks, over 160 acres of paseos and open space, and 81 acres of right-of-way and utility easements. (Exhibit 2-1)

A mix of residential properties is proposed, including single-family detached in a variety of lot sizes up to half-acre lots, as well as multi-family residences. Numerous parks are planned throughout, with amenities anticipated to include a community center, picnic areas, pedestrian, bicycle and equestrian trails, and athletic fields. See Table 2-1 for a breakdown of land uses, dwelling units, and acreages.


10
Lincoln St
243
Sunset Ave
Soboba Rd
W Westward Ave
PA 9
Neighborhood
Commercial
Mt San Jacinto
Community College
San Gorgonio Pass Campus
PA 8-A
MHDR
PA 8-D
MHDR
A Street
Community
Entrance
W Victory Ave
PA10
RSG
Community Park
PA 8-B
MHDR
PA 8-C
MHDR
PA 6-A
SFD
4,500 s.f. Lots
PA 6-B
SFD 5,000 s.f. Lots
D Street
Bob Cat Rd
PA 7-A
MDR
PA 7-B
MDR
PA 12
Neighborhood
Park
PA 4-D
SFD 5,500 s.f. Lots
PA 16-C
Elementary
School
Banning
High School
PA 18
Flood Control
B Street
PA 5-C
SFD 5,000 s.f. Lots
PA 6-B
SFD 4,500 s.f. Lots
PA 14-A
Paseo
PA 14-B
Paseo
PA 14-C
Paseo
PA 14-D
Paseo
PA 16-A
Public
Facility
PA 3-C
SFD 6,000 s.f. Lots
PA 6-D
SFD 4,500 s.f. Lots
PA 5-E
SFD 5,000 s.f. Lots
PA 5-F
SFD 5,000
s.f. Lots
C Street
PA 15-A
Creek / Linear Park
PA 4-A
SFD 5,500 s.f. Lots
PA 4-B
SFD 5,500 s.f. Lots
PA 3-B
SFD 6,000 s.f. Lots
PA 11
Confluence
Park
Rancho San Gorgonio Parkway
PA 3-A
SFD 6,000 s.f. Lots
PA 6-C
SFD 4,500 s.f. Lots
Smith Creek
PA 3-D
SFD 6,000 s.f. Lots
PA 2-A
SFD 7,000 s.f. Lots
PA 2-C
SFD 7,000 s.f. Lots
PA 5-D
SFD 5,000 s.f. Lots
PA 4-C
SFD 5,500 s.f. Lots
Pershing Creek
PA 17
Open Space
PA 1
SFD 1/2 Ac. Lots
PA 2-B
SFD 7,000 s.f. Lots
PA 15-B
Creek / Linear Park
Hill Top Dr
Coyote Trail
Legend
VLDR (0 - 2.5 du/ac)
LDR (2.6 - 6.0 du/ac)
MDR (6.1 - 12.0 du/ac)
MHDR (12.1 - 16.0 du/ac)
Park
Open Space
Public Facility
0' 200' 400' 800'
North

1402

Planning Area	Land Use	Density Range	Target Density	Acreage	DU
PA 1	VLDR - Single Family Detached 1/2 Acre Lots	0-2.5	2.0	47.05	94
PA 2-A	LDR - Single Family Detached 7000 Lots	2.6-6.0	3.4	15.51	53
PA 2-B	LDR - Single Family Detached 7000 Lots	2.6-6.0	3.4	17.57	60
PA 2-C	LDR - Single Family Detached 7000 Lots	2.6-6.0	3.4	16.33	56
PA 3-A	LDR - Single Family Detached 6000 Lots	2.6-6.0	3.8	13.96	53
PA 3-B	LDR - Single Family Detached 6000 Lots	2.6-6.0	3.8	23.81	90
PA 3-C	LDR- Single Family Detached 6000 Lots	2.6-6.0	3.8	10.63	40
PA 3-D	LDR - Single Family Detached 6000 Lots	2.6-6.0	3.8	24.00	91
PA 4-A	LDR - Single Family Detached 5500 Lots	2.6-6.0	4.4	23.19	102
PA 4-B	LDR - Single Family Detached 5500 Lots	2.6-6.0	4.4	23.11	102
PA 4-C	LDR - Single Family Detached 5500 Lots	2.6-6.0	4.4	17.73	78
PA 4-D	LDR - Single Family Detached 5500 Lots	2.6-6.0	4.4	12.34	54
PA 5-A	LDR - Single Family Detached 5000 Lots	2.6-6.0	5.2	5.90	31
PA 5-B	LDR - Single Family Detached 5000 Lots	2.6-6.0	5.2	6.50	34
PA 5-C	LDR - Single Family Detached 5000 Lots	2.6-6.0	5.2	12.60	66
PA 5-D	LDR - Single Family Detached 5000 Lots	2.6-6.0	5.2	16.43	85
PA 5-E	LDR - Single Family Detached 5000 Lots	2.6-6.0	5.2	10.41	54
PA 5-F	LDR - Single Family Detached 5000 Lots	2.6-6.0	5.2	5.87	31
PA 6-A	LDR - Single Family Detached 4500 Lots	2.6-6.0	6.0	7.26	44
PA 6-B	LDR - Single Family Detached 4500 Lots	2.6-6.0	6.0	16.83	101
PA 6-C	LDR - Single Family Detached 4500 Lots	2.6-6.0	6.0	11.72	70
PA 6-D	LDR - Single Family Detached 4500 Lots	2.6-6.0	6.0	10.05	60
PA 7-A	MDR - 6.5	6.1-12.0	6.5	85.36	555
PA 7-B	MDR - 6.5	6.1-12.0	6.5	30.58	199
PA 8-A	MHDR - 18	12.1-18.0	18.0	18.50	333
PA 8-B	MHDR - 18	12.1-18.0	18.0	12.90	232
PA 8-C	MHDR - 18	12.1-18.0	18.0	11.70	211
PA 8-D	MHDR - 18	12.1-18.1	18.0	8.60	154
PA 9	Neighborhood Commercial (MHDR-18 Residential Overlay)	12.1-18.0	18.0	9.33	168
PA 9	Neighborhood Commercial (0.25 FAR)				
PA 10	RSG Community Park			25.00	
PA 11	Confluence Park			10.15	
PA 12	Neighborhood Park			12.70	
PA 13	Entry Park			1.08	
PA 14-A	Village Paseo			3.25	
PA 14-B	Village Paseo			6.01	
PA 14-C	Village Paseo			2.26	
PA 14-D	Village Paseo			1.03	
PA 15-A	Creeks / Creek Edge Linear Parks (100' Width)			54.83	
PA 15-B	Creeks / Creek Edge Linear Parks (100' Width)			67.17	
PA 16-A	Public Facility			2.42	
PA 16-B	Electrical Sub-station			0.20	
PA 16-C	Elementary School LDR SFD 4,500SF Overlay		6.0	14.00	84
PA 17	Open Space			25.70	
PA 18	Flood Control			1.10	
	Fire Station			1.00	
	Right-of-Way (Include Landscape Corridor)			77.17	
	TOTAL			**830.84**	**3,385**

Land Use	Acreage	DU	% of Total Ac.
VLDR	47.05	94	6%
LDR	301.75	1355	36%
MDR	115.94	754	14%
MHDR	51.70	930	6%
Neighborhood Commercial with Residential overlay*	9.33	168	1%
Elementary School with Residential Overlay**	14.00	84	2%
Parks & Open Space	209.18		25%
Right-of-way	77.17		9%
Public Facility	2.62		0%
Flood Control	1.10		0%
Fire Station	1.00		0%
TOTAL	**830.84**	**3,385**	**100%**

Distribution of Product Type	Density Range	Target Density	Acreage	DU	% of Total DU
Single Family Detached 1/2 Acre Lots	0 - 2.5	2.0	47.05	94	3%
Single Family Detached 7000 Lots	2.6 - 6.0	3.4	49.41	169	5%
Single Family Detached 6000 Lots	2.6 - 6.0	3.8	72.40	274	8%
Single Family Detached 5500 Lots	2.6 - 6.0	4.4	76.37	336	10%
Single Family Detached 5000 Lots	2.6 - 6.0	5.2	57.71	301	9%
Single Family Detached 4500 Lots	2.6 - 6.0	6.0	45.86	359	11%
Age Qualified	6.1 - 12.0	6.5	115.94	754	22%
Multi-Family Attached-18 *	12.1 - 18.0	18.0	61.03	1098	32%
TOTAL			**525.77**	**3,385**	**100%**

** 168 dwelling units (9.33 ac.) are dedicated to the residential overlay within PA 9.*

** * 84 dwelling units (14 ac.) are dedicated to the residential overlay within PA 16-C.*

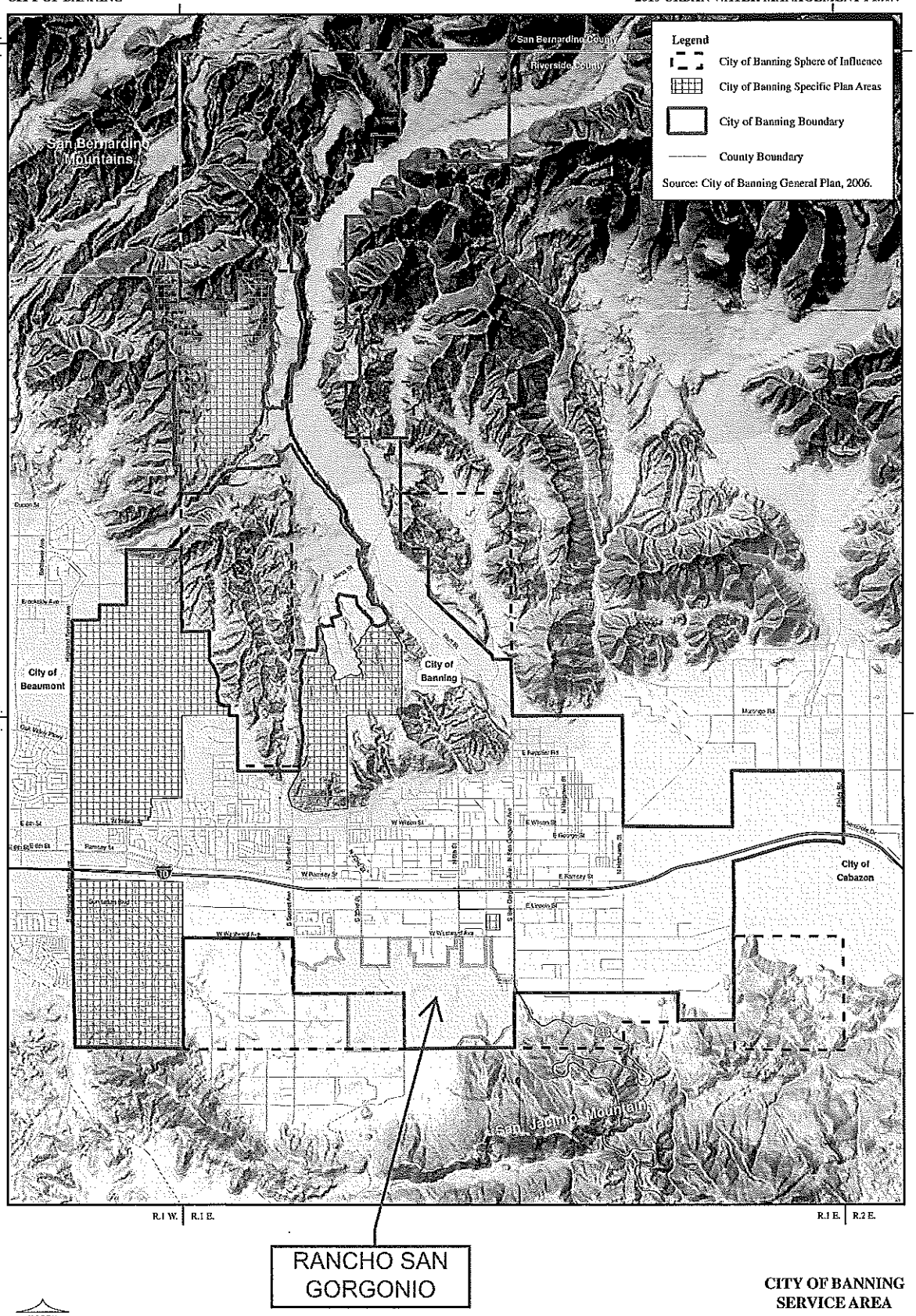
Table 2-1: Proposed Land Use with Maximum Buildout Density				
Type	Zoning Density	Target Dwelling Units per Acre	Acres	Maximum Dwelling Units
Single-Family Residential**	0.5-6	2-6	362.8	1533
Multi-Family Residential	12.1-18.0	18	51.7	930
Age-Qualified Residential	6.1-12.0	6.5	115.94	754
Mixed Use *	12.1-18.0	18	9.33	168
Parks & Open Space	n/a	n/a	209.18	0
Right-of-way	n/a	n/a	77.17	0
Public Facility	n/a	n/a	3.62	0
Storm Drain Easement	n/a	n/a	1.1	0
Future Development Area	n/a	n/a		0
			830.84	3385
			Increase:	**1986**
(see Table 4-2 below: 75% of currently projected buildout)				

*Neighborhood Commercial with Residential Overlay (9.33 ac dedicated to MFR)
**84 du (14 ac) are dedicated to the residential overlay within PA 16-C

3. Existing Water System and Supply

3.1. City of Banning Water System

The city of Banning is the utility provider of water and sewer services throughout the city, including areas outside city limits, within the sphere of influence (see Exhibit 3-1). All water is pumped from the various underground water basins via a network of wells. The pipeline system connects these wells and tank reservoirs together, broken up naturally by actual elevation differences and with pressure regulating devices into four pressure zones in order to serve all parts of the city (see Exhibit 3-2)



CITY OF BANNING SERVICE AREA

22-Jul-11

Prepared by: DWB. Map Projection: UTM 1927, Zone 11.

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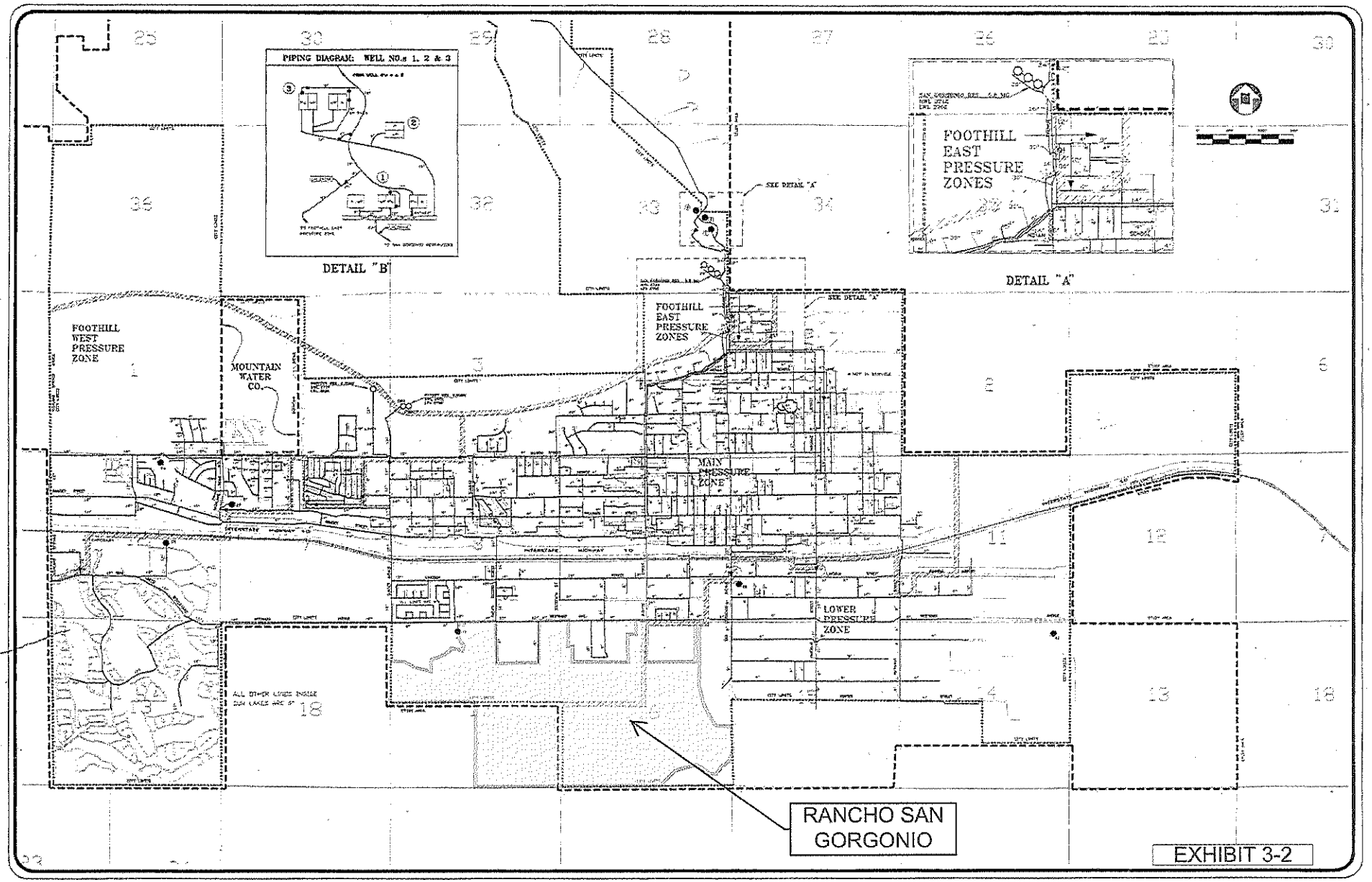
EXHIBIT 3-1

Figure 2-1



NBS LOWRY

EXISTING WATER SYSTEM

SOUTH AREA

LEGEND

- STUDY AREA BOUNDARY
- CITY LIMITS
- WATERLINE (WITH DIAMETER)
- RESERVOIR (WITH VOLUME, HIGH AND LOW WATER LEVELS)
- WELL
- SECTION LINE
- SECTION NO.
- PELTON WHEEL
- WELL PUMP
- MOTOR
- GENERATOR
- PRESSURE REDUCING VALVE (POINTS IN DIRECTION OF FLOW)
- VALVE (NORMALLY CLOSED)
- CHECK VALVE (DIRECTION OF FLOW INDICATED)

PLATE A

1407

3.2. Current Sources of Water

All water enters the city system via pumping operations from the underground basins. All groundwater basins are geologic formations that, in one way or another, collect and retain water that percolates into the ground. There are different means of replenishing the underground water basin storage. Surface water naturally percolates into the ground during rainfall events, snow melt from the surrounding mountains and higher elevations, and from urban sources, "return flows", such as excess irrigation runoff. The city also purchases State Water Project (SWP) water through the San Gorgonio Pass Water Agency (SGPWA). Finally, the city has plans to utilize recycled water for nonpotable, irrigation demands, and by doing so, will free up the water supply for additional potable needs.

Table 4-1 from the UWMP summarizes current and future water supplies, and that table is replicated here. The various sources will be discussed further below, as summarized from Section 4 of the UWMP.

Table 3-1 - Current and Projected Water Supplies (Table 4-1 from the 2010 UWMP) [acre-ft]						
Water Supply Source	2010*	2015	2020	2025	2030	2035
Banning Storage Unit[1]	1218	1130	1130	1130	1130	1130
Banning Bench Storage Unit[1]	1472	1960	1960	1960	1960	1960
Banning Canyon Storage Unit[1]	3726	4070	4070	4070	4070	4070
Beaumont Storage Unit[2]	1372	2514	2514	2514	2514	2514
Cabazon Storage Unit[3]	565	1185	1405	1648	1916	2212
Recycled Water Supply[4]	0	1680	1680	1680	1680	1680
Return Flows from Recycled Water Irrigation[5]		420	420	420	420	420
Return Flows from Potable Residential Irrigation[6]	0	9	18	28	38	48
SWP Table A Entitlement[7]	1200	2595	2595	2595	2595	2595
Total	9552	15563	15792	16045	16323	16628

* 2010 values are actual supplies utilized by the City in 2010. The DWR Guidebook requires inclusion of 2010, however as the deadline for submittal of the UWMP has been extended to 2011, all 2010 values are not projections or estimates, but are actual values.

1) Maximum Perennial Yield Estimates for the Banning and Cabazon Storage Units, and Available Water Supply from the Beaumont Basin,Geoscience 2011.

2 City of Banning average annual production from City of Banning Wells within the Beaumont Storage Unit since the basin was adjudicated in 2004

3) Cabazon production supply includes approximately 710 acre-ft/yr, which has been the average annual production from the City of Banning Well C-6, and additional water which may be utilized by the City as described in Maximum Perennial Yield Estimates Report, Geoscience, 2011 (see Appendix F). See Section 4.2.7 for explanation of estimates. These values assume that Phase I of the WWTP Expansion will be completed by 2014, and 1,680 acre-ft/yr will be treated to Tertiary standards and used to offset potable demand, therefore the 1,680 acre-ft/yr is excluded from these estimates.

4) Values from Initial Study/Mitigated Negative Declaration, Wastewater Treatment Plant Expansion and Phase I Recycled Water System, May2008 prepared by the City of Banning Water/Wastewater Utilities Department. Assumes WWTP Phase I will be completed by 2015. It is assumed that supply will increase by 1.5 MGD/ 1,680 AFY every ten years.

5) Values include 25% return flow from all irrigation purposes inside and outside the BMZ for Phase I and Phase II WWTP expansion project assumes Phase I will be completed in 2014.

6) Values include 25% return flow from all irrigation purposes where potable water is used (50% of residential water use is used for landscape irrigation). Returns flows for Beaumont Storage Unit are not counted, as the City has an allotment of the Safe Yield. All return flows within the Beaumont Basin from imported water are dedicated for overdraft mitigation. Return flows in the Banning Storage Units are considered for developments projected for construction which will add new recharge to the storage units (total of 1,044 EDUs at build out - assumed to be 2061) along with 20X2020 conservation.

7) Assumes 60% SGPWA SWP average reliability per DWR's Final Reliability Report 9/27/10; Assumes Banning's allocation of available SWP water is 25% of SGPWA Allotment, assumes EBX-II is on line by 2014.

3.2.1. Groundwater

The project and the city of Banning, among other cities in the area, are situated over the San Gorgonio Pass Ground Water Basin. The basin is broken down into five sub-units, which are not totally independent from each other (see Exhibit 3-3).

3.2.1.1. Banning Storage Unit

The Banning Storage Unit is located substantially within the city limits, comprising the downtown area and beyond on both sides of Interstate 10. It is about 3.9 square miles in size, with an average thickness of 600 feet and up to 240,000 acre-feet of capacity (Geoscience 2011).

The city of Banning has exclusive pumping rights to the Banning Storage Unit. With the four wells currently installed within this unit, the city has pumping capacity up to 3,500 gpm, or 5,646 acre-ft/year. The Geoscience study (2011) determined the safe yield to be 1,130 acre-ft/year, which is what the UWMP includes for future production projections.

3.2.1.2. Banning Bench Storage Unit

The Banning Bench Storage Unit is located north of the Banning Storage Unit, mostly within the city limits, up to Banning Canyon. It is approximately 5.9 square miles in size, with an average thickness of 30 feet and up to 1500 acre-feet of capacity (Geoscience 2011).

The city of Banning also has exclusive pumping rights to the Banning Bench Storage Unit. Three wells within this unit produce 3,650 gpm, or 5,888 acre-ft/year. The safe yield was determined to be 1,960 acre-ft/year.

3.2.1.3. Banning Canyon Storage Unit

Extending a few miles north from Banning Bench, the Banning Canyon Storage Unit comprises the canyon area of the city. About 1.6 square miles, it has an average thickness of 161 feet and can store up to about 13,500 acre-feet (Geoscience 2011).

The Banning Canyon Storage Unit is the largest source of water for the city. The San Gorgonio River, and a diversion system from the Whitewater River, provide recharge for Banning Canyon. Eight wells within this unit produce 8,600 gpm, or 13,873 acre-ft/year. The safe yield has been determined to be 4,070 acre-ft/year.

3.2.1.4. Cabazon Storage Unit

Underlying the eastern portion of the city, the Cabazon Storage Unit extends easterly to the city of Cabazon. The Cabazon Storage Unit is about 27 square miles in size, has an average thickness of 350 feet, and can store up to 1,000,000 acre-feet.

The city does not have exclusive pumping rights for the Cabazon Storage Unit. One well within this unit can produce 900 gpm, or 1,452 acre-ft/year. However, the city is not producing from this well, as the WWTP currently discharges wastewater treated to a secondary standard, which does not meet domestic, potable water quality requirements. The city is anticipating utilizing the Cabazon Storage Unit to supplement the recycled water production capacity of the WWTP.

3.2.1.5. Beaumont Storage Unit

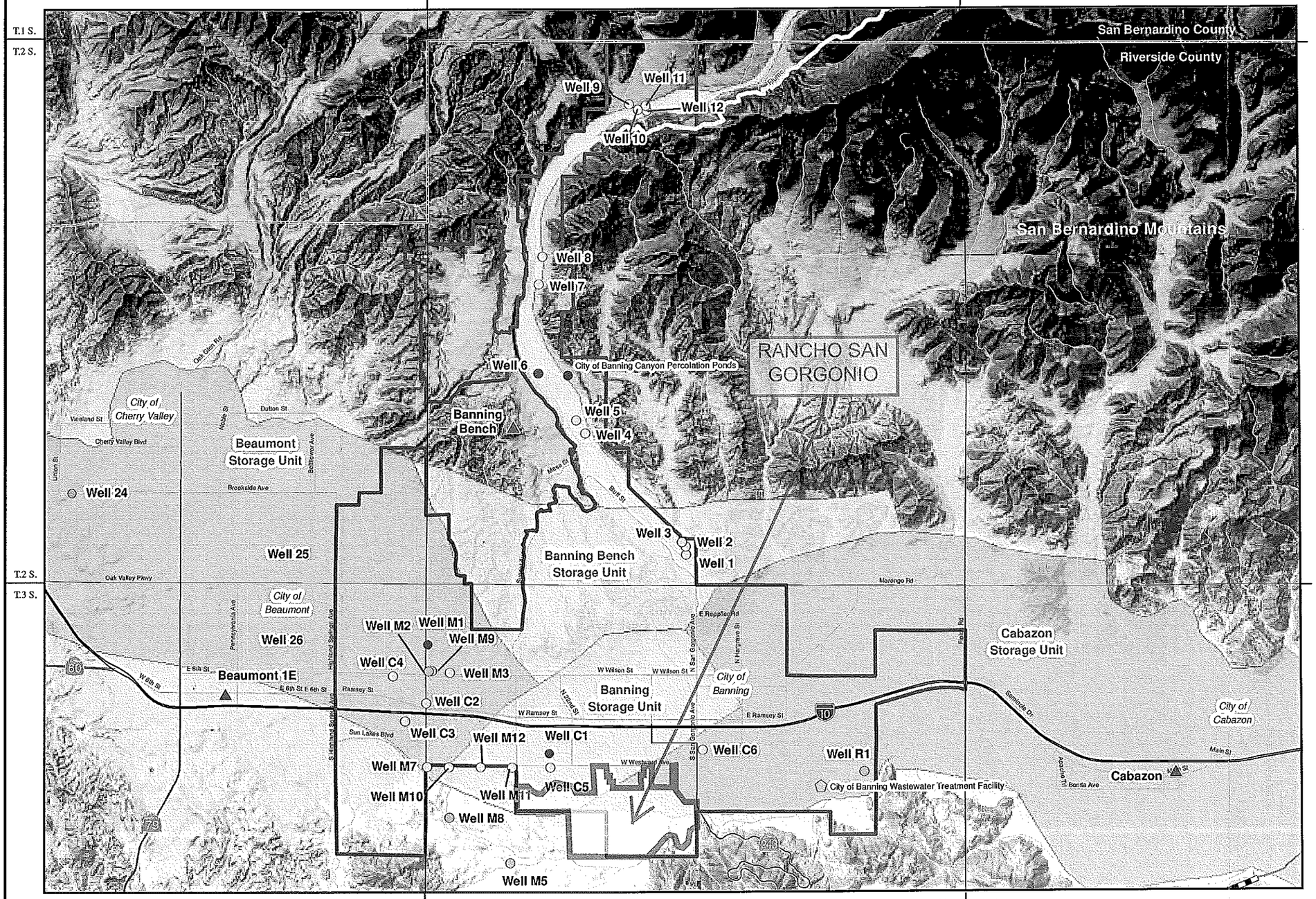
Located in mostly in the city of Beaumont, part of the Beaumont Storage Unit underlies the western portion of the city of Banning. It is approximately 20 square miles in size (2010 UWMP).

Extraction of water from the Beaumont Storage Unit has been adjudicated (see Section 6), with rights shared amongst the city of Banning, the Beaumont Cherry Valley Water District, the South Mesa Water District, and the Yucaipa Valley Water District.

Five wells within this unit, plus the city's share of three additional wells, produce 7,650 gpm, or 12,340 acre-ft/year. The judgment has given the city the right to pump 5,910 acre-feet annually through the year 2014. The basin Watermaster is required by law to re-evaluate the safe yield from the storage unit every ten years, and is due for a re-evaluation in 2014.

A summary of the historical well production, broken down by year and by Storage Unit, is included in Section 4.2.2 and Table 4-3 of the UWMP.

Currently, the city does not pump all of what is allotted, and therefore maintains a water account balance. Table 4-4 in the UWMP summarizes this account, and that table is included below.



CITY OF BANNING WELL LOCATIONS

EXPLANATION

City of Banning Well Classification

- Active Well
- Active Wells Co-Owned by the City of Banning and Beaumont Cherry Valley Water District
- Inactive Well
- Abandoned Well
- Destroyed Well

Cabazon — Riverside County Flood Control and Water Conservation District Weather Station

City of Banning Boundary

Colorado River Aqueduct

San Jacinto Tunnel

SCE Trans-Basin Diversion from the Upper Whitewater River Watershed

Ground Water Storage Unit Boundary (Source: USGS, 2006)

- Banning Bench
- Banning
- Beaumont
- Cabazon

NORTH

0 0.5 1 Miles

22-Jul-11

Prepared by: DWB. Map Projection: UTM 1927, Zone 11.

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EXHIBIT 3-3

Figure 4-3

UWMP Table 4-4 - Ground Water in Storage within the Beaumont Basin (Production Right) [acre-ft]						
Year	Appropriative Rights After Overlying Producers[1]	Controlled Overdraft of Annual Operating Yield[2]	Recharge of SWP[3]	Banning Production from Beaumont Storage Unit[4]	Transfers Among Appropriators[5]	Estimated Total Water in Storage[6] (Production Right)
2004	0	5,029	0	3,605		1,424
2005	0	5,029	0	1,879		4,575
2006	0	5,029	0	2,012	1,500	9,092
2007	0	5,029	0	2,962		11,159
2008	0	5,029	0	3,417		12,771
2009	1,492*	5,029	1,200	2,355		18,138
2010	1,645	5,029	1,200	1,372		24,640
2011	1,659	5,029	1,298	2,514		30,111
2012	1,618	5,029	1,298	2,514		35,541
2013	1,830	5,029	1,298	2,514		41,184
2014	1,805	0	2,595	2,514		43,069
2015	1,805	0	2,595	2,514		44,955
2016	1,805	0	2,595	2,514		46,841
2017	1,805	0	2,595	2,514		48,726
2018	1,805	0	2,595	2,514		50,612
2019	1,805	0	2,595	2,514		52,498
2020	1,635	0	2,595	2,514		54,214
2021	1,613	0	2,595	2,514		55,907
2022	1,591	0	2,595	2,514		57,579
2023	1,569	0	2,595	2,514		59,229
2024	1,547	0	2,595	2,514		60,856
2025	1,478	0	2,595	2,514		62,415
2026	1,456	0	2,595	2,514		63,952
2027	1,434	0	2,595	2,514		65,466
2028	1,411	0	2,595	2,514		66,958
2029	1,389	0	2,595	2,514		68,428
2030	1,328	0	2,595	2,514		69,837
2031	1,306	0	2,595	2,514		71,223
2032	1,284	0	2,595	2,514		72,588
2033	1,262	0	2,595	2,514		73,931
2034	1,240	0	2,595	2,514		75,251
2035	1,194	0	2,595	2,514		76,526

*It should be noted that there is a discrepancy between the reported City of Banning unused overlying water right allocation in 2009 as reported by the Sixth Annual Beaumont Basin Watermaster Report (1,405 acre-ft) and the value of 1,492 acre-ft as listed in the Draft Beaumont Management Zone Maximum Benefits Program Modeling Scenarios, 2011 Appendix A-3.

[1] Projected allocation of pumping rights per Appendix A-3 ("Projected Allocation of Pumping Rights for the 2004 Beaumont Basin Judgment") of the Draft Beaumont Management Zone Maximum Benefits Program Modeling Scenarios, prepared by Wildemuth Environmental, Inc. dated
March 18, 2011.

[2] Controlled overdraft assigned by the Beaumont Basin Judgment for the ten year period 2004 through 2012 (see Appendix G).

[3] State Water Project purchases reported by Watermaster for 2009 year. Values for purchases for 2010 year provided by the City of Banning. Projected Purchases (2011-2035) assumed to be 25% of annual delivery to SGPWA anticipated by the SWP Reliability Report (60% of the
maximum annual delivery of 8,650 acre-ft per year until 2013, when EBXII is assumed be online, SGPWA full Table A entitlement of 17,300 will be accessible).

[4] City of Banning production as reported by the City of Banning for years 2004-2010, production includes water received from BCVWD. For years 2011 through 2020, City of Banning pumping is assumed at the average annual pumping value of 2,514 acre-ft/yr.

[5] Transfer reported by Watermaster in the Sixth Annual Report of the Beaumont Basin Watermaster dated 2010, by the City from South Mesa

Mutual Water Company.
[6] Sum of columns 1, 2, 3 and 5 minus column 4, the product is added to the previous year Estimated Total Water in Storage. It should be noted that water in storage values differ from that of the 6th Annual Watermaster report due to fiscal vs. calander yeah reporting (i.e. 2009 values in the 6th Annual Report are as of September 30th 2009 and 2009 values shown in this table are as of December 31, 2009).

This account balance is included in the supply projections for the proposed project in Section4 below.

The project lies over the Banning and Cabazon Storage Units. The project is planning to implement various techniques that will increase percolation and recharge opportunities within the project area, which at a minimum will limit the decrease in percolation due to development. Conversely, the proposed infiltration basins, pervious pavement and other storm water quality best management practices could very well constitute an increase in recharge, as storm runoff will be captured and retained.

Natural percolation from large storm events is not generally very high in relation to the volume of runoff, however when a significant portion of that runoff is captured and retained, recharge will be enhanced. An estimate of the average volume of runoff that could be recharged is included in Section 3.2.2 below.

It should be noted that the excess pumping capacity in all five storage units provides the city with safeguards in case of emergencies and system maintenance.

3.2.2. Surface Water

As stated previously, surface water naturally recharges the underground water basin across the region, and most directly by the San Gorgonio River and the Whitewater River diversion. The Rancho San Gorgonio master planned community will further augment surface water recharge, through the network of infiltration and detention basins, that will capture not only small and large storm runoff, but "return flows" from irrigation overspray and other urban uses.

An estimate of the volume of stormwater recharge is included in Tables 3.2.2-1 and 3.2.2-2 below. The amount of infiltration that naturally occurs prior to the development of Rancho San Gorgonio is first estimated from the hydrology calculations included in the project Master Plan of Drainage (see calculation summary sheet at the rear of this report). The result of the analysis shown in Table 3.2.2-1 represents an average percentage of rainfall that will be infiltrated.

Table 3.2.2-1: 100-year 6-hour Storm within the limits of Rancho San Gorgonio		
Area	849.6	ac
Total rainfall (6-hr)	3.200	in
Peak rainfall volume (6-hr)	2,719	ac-in
Existing Condition		
Peak (volume) runoff (6-hr), from hydrology	103	ac-ft
	1,241	ac-in
Infiltration (total rainfall volume - runoff volume)	1,478	ac-in
Total Infiltration per in of rainfall, 1478 / 3.2 =	462	ac-in per in
Infiltration Yield per in of rainfall, 462 / 849.6 =	54%	

Next, it is assumed that the full average annual rainfall will either infiltrate as part of typical runoff or be captured by the infiltration basins proposed throughout the project. The infiltration basins are designed to contain the full 100-year 3-hour storm, which is a significant event and represents runoff in excess of typical, "average" storm events.

An average annual rainfall of 17.77 inches was used in this analysis, per the 2010 UWMP (page 12). As discussed above, this average rainfall quantity will be fully captured in the developed condition, however the increase in recharge due to the project is reduced by that which would occur naturally prior to development. The estimated increase in recharge is therefore 579 acre-feet per year per the table below.

Table 3.2.2-2: Estimation of Stormwater Recharge		
Annual Rainfall		
Average annual rainfall = total developed infiltration and capture = See 2010 UWMP (page 12)	17.770	in
Existing condition infiltration based on Annual Rainfall		
Existing condition infiltration, 0.54 x 17.77 =	9.596	in
Estimation of additional infiltration due to development		
Net additional infiltration due to development, 17.77 - 9.596 =	8.174	in
	579	ac-ft (per yr)

Surface water is not listed as a separate source in Table 3-1 above because it merely recharges basin storage unit pumping production.

3.2.3. State Water Project Water

The SGPWA currently purchases water from the SWP, and sells it to the cities in the region as needed. The city purchases water for the sole purpose of recharging the basin storage units.

The SGPWA has a contract for 17,300 acre-ft/year, but currently only has facilities that can deliver 8,650 acre-ft/year. Table 3-1 above includes the amount of SWP water the city expects to purchase from SGPWA in the future, based in part on long-term delivery reliability estimates, established by the Department of Water Resources.

3.2.4. Recycled Water

The city of Banning currently has no facilities to provide recycled water, however such facilities are under construction and anticipated to be in service in the next couple of years. The city anticipated a phased approach to providing recycled water, with the first phase providing 1,650 acre-ft/year, with similar capacities being added roughly every ten years thereafter, as demand increases.

Use of recycled water displaces what would have been domestic, potable water demand, and therefore is treated as a supply, up to the limit of the demand displacement.

3.3. Water Quality

Section 5.9 of the UWMP summarizes historical water quality data, and makes the conclusion that current water quality is excellent, and that there are no known reasons to expect future water quality to be any less so.

3.4. Water shortage/emergency contingencies

The city has adopted a Water Storage Contingency Plan in order to address emergency and disaster planning as related to water supply and fire suppression. Details are discussed in Sections 5.4 through 5.6 of the UWMP.

3.5. Current and Projected Demand

The methodology used to determine city-wide water demand in the UWMP was followed in this WSA. Table 3-8 in the UWMP defines the projected water use through 2035, broken down by land use type, as was determined based upon historical data.

Projected demand in UWMP is based on population growth and estimated per capita water use. The current city General Plan projects buildout in 2061, with a population of 80,226. This reflects a 2% population growth rate.

Current (2010) city water usage is calculated to be 229 gallons per capita per day. The projections follow state guidelines, which calculates to 315 gallons per capita per day (UWMP, page 37). However, state law currently in effect will require a 20% reduction in water use by the year 2020. Therefore, projected water use is reduced by 10% for 2015, and by 20% by 2020 and thereafter.

Table 3-2 Current Projected City-wide Water Demand - Based on Land Use Factors (Table 3-8, 2010 UWMP, with 20x2020 factored)

Water Use Sectors	Average % Use of Water Supply 2005-2010	2010	2015	2020	2025	2030	2035
Population		29603	32684	36086	39842	43989	48567
Per Capita Water Use [gpcd]		229	283	252	252	252	252
Single Family Residential	56.2%	4412	5833	5724	6320	6978	7704
Multi-family Residential	2.3%	120	240	236	260	288	317
Commercial/Institutional	26.2%	1908	2720	2669	2947	3254	3593
Industrial	1.2%	95	121	119	131	145	160
Irrigation	11.9%	939	1233	1211	1337	1476	1629
Other	1.1%	31	113	111	122	135	149
Sales to other Agencies	1.1%	82	116	113	125	138	153
Total [acre-ft/yr]		7586	10376	10183	11243	12413	13705

3.6. Assessment of Current Supply and Demand

Table 3-3 below is a summary of Tables 3-1, 3-2 and UWMP Table 4-4, providing an analysis of the city's projected surplus, as determined in the UWMP. Based on the current plan and projections, the city can meet future water needs.

Table3-3: Supply and Demand (20x2020) Comparisons - Current City UWMP with Water Basin Account Balance

	Average Water Years					
	2010	2015	2020	2025	2030	2035
Total Supply*	34,192	60,518	70,006	78,460	86,160	93,154
Total Demand**	7,586	10,376	10,183	11,243	12,413	13,705
Supply Surplus	**26,606**	**50,142**	**59,823**	**67,217**	**73,747**	**79,449**

*Total Supply equals the account balance from the Beaumont Basin (per Table 4-4 in the UWMP, as provided in Section 3.2.1.5 above) plus the Supply from Table 4-1 of the UWMP (Table 3-1 above).

**Total Demand is from Table 3-8 of the UWMP (Table 3-2 above).

4. Proposed Project

4.1. Proposed Project Buildout Estimate

Given current market conditions, which are subject to change, project buildout is anticipated to occur in 6 phases, one phase every three years, for a total duration of 18 years. With construction estimated to commence in 2016, buildout would occur by 2034. Table 4-1 below reflects a linear buildout trend, with an average of 2.64 persons per dwelling, as per the city General Plan.

Table 4-1 - Forecasted Project Buildout

Year	Dwelling Units	Population
2016	0	0
2017	188	496
2018	376	993
2019	564	1489
2020	752	1985
2021	940	2482
2022	1128	2978
2023	1316	3474
2024	1504	3971
2025	1692	4467
2026	1880	4963
2027	2068	5460
2028	2256	5956
2029	2444	6452
2030	2632	6948
2031	2820	7445
2032	3008	7941
2033	3196	8437
2034	3385	8936

4.2. Current UWMP Demand Comprising Project Area

The land comprising this proposed community is included in the current UWMP, including the 160 acres to be annexing into the city from the county (see Exhibit 3-1), however at lower densities than are proposed. Therefore, per Section 5 of SB 610, it must first be determined if the existing 20-year projections can meet the proposed increased demands. This WSA relies upon the UWMP and will only address the changes proposed with this master planned community.

Listed in Table 4-2 below is a summary of the land use zones that currently constitute the property being developed, from the city General Plan (see Exhibit 4-1). The total number of projected dwelling units will then be compared with what is proposed, and the increase in dwelling units is what will be used to assess the ability of the water supply, with future projections, to serve the proposed development. Note that as the City's General Plan assumes actual development will occur at about 75% of the maximum density, so too are the projected densities adjusted accordingly.

Table 4-2 - Existing Land Use with Projected Buildout Density

Type	Zoning Density	Dwelling Units per Acre	Acres	Maximum Dwelling Units	75% of Max. Density*
Ranch/Agriculture**	10 ac min.	0.10	149.49	8	6
Rural SFR	0-1 du/ac	1	26.78	26	20
Very Low SFR***	0-2 du/ac	2	545.57	1067	800
Low SFR	0-5 du/ac	5	0	0	0
Medium SFR	0-10 du/ac	10	14	140	105
Very High MFR	19-24 du/ac	24	26	624	468
Park	0 du/ac	0	0	0	0
Open Space (Resources)	0 du/ac	0	69	0	0
			848	1865	**1399**

*The City General Plan assumes 75% of maximum density for buildout conditions

**This Type is comprised of 8 parcels, all less than 20 acres, therefore only 8 units max

***Maximum units calculated by parcel, not by gross acreage

In order to determine the change in projected water demand due to the proposed project, an estimate of the change in dwelling units, or population, is first required. Table 4-3 below shows an evaluation of the change in dwelling units.

Table 4-3: Proposed Land Use with Maximum Buildout Density				
Type	Zoning Density	Target Dwelling Units per Acre	Acres	Maximum Dwelling Units
Single-Family Residential**	0.5-6	2-6	362.8	1533
Multi-Family Residential	12.1-18.0	18	51.7	930
Age-Qualified Residential	6.1-12.0	6.5	115.94	754
Mixed Use *	12.1-18.0	18	9.33	168
Parks & Open Space	n/a	n/a	209.18	0
Right-of-way	n/a	n/a	77.17	0
Public Facility	n/a	n/a	3.62	0
Storm Drain Easement	n/a	n/a	1.1	0
Single-Family Residential**	0.5-6	2-6	362.8	1533
			830.84	**3385**
			Increase over current zoning:	**1986**
(see Table 4-2 above: 75% of currently projected buildout)				

*Neighborhood Commercial with Residential Overlay
(9.33 ac dedicated to MFR)

Table 4-4 below provides a comparison of current versus proposed population, broken down in 5 year increments for inclusion in the calculations below.

Table 4-4 - Change in Population						
Year	2015	2020	2025	2030	2035	2061
Current	0	328	739	1149	1559	3693
Proposed	0	752	1692	2632	8936	8936
Increase	0	424	953	1483	7377	5243

4.3. Proposed Water Demand Factors

The UWMP establishes 315 gallons per day per capita as the baseline water demand for dwelling units. The baseline figure is prior to the impacts of the "20x2020" requirement.

Therefore, the project will be required to comply accordingly, and so a 10% reduction is included for 2015 (283 gpd), and the full 20% reduction by 2020 and thereafter (252 gpd).

These targets will be achieved in part through landscape and irrigation design standards included in the project Specific Plan. Furthermore, landscaping, irrigation, and building plumbing requirements will be enforced by the city at building permit issuance. As stated in the UWMP, the city has determined that current city ordinances, along with the building codes, will achieve a 20% reduction in water use.

The project also proposes to utilize recycled water for landscape irrigation in common areas throughout the project. As shown in Section 5.7 below, there is a projected irrigation demand of 218 acre-feet per year at buildout, which will be supplied by nonpotable water. Further, it is anticipated that the project will generate 470 acre-feet per year (Section 5.5 below) in sewage, with the excess capacity of 252 acre-feet per year either contributing to recycled water demand throughout the city or being recharged back into the groundwater basins for reuse.

4.4. Proposed Project Demands

From Table 4-3 above, the estimated increase in dwelling units is 1986. Per the city of Banning Water Master Plan (WMP, 1994), persons per dwelling is estimated at 2.64 across all residential density types. Therefore, the projected population increase at buildout will be 5243, changing the city-wide estimated buildout population to 85,513, or 2.1% growth rate.

However, as the project is anticipated to be built out in 18 years, this population increase, as shown in Table 4-1 above, is utilized in the calculations.

Table 4-5 shows the estimated project demand. The same Land Use Factors and Buildout rate are used as per the UWMP.

Table 4-5 - Project Water Demand - Based on Land Use Factors (with 20x2020 factored)

Water Use Sectors	Average % Use of Water Supply 2005-2010	2015	2020	2025	2030	2035
Population		0	752	1692	2632	8936
Per Capita Water Use [gpcd]		283	252	252	252	252
Single Family Residential	56.2%	0	119	269	418	1417
Multi-family Residential	2.3%	0	5	11	17	58
Commercial/Institutional	26.2%	0	56	125	195	661
Industrial	1.2%	0	3	6	9	30
Irrigation	11.9%	0	25	57	88	300
Other	1.1%	0	2	5	8	28
Sales to other Agencies	1.1%	0	2	5	8	28
Total [acre-ft/yr]		0	212	478	743	2522

Table 4-6 shows proposed, city-wide water demand, based on Table 3-8 from the UWMP, and shown above in Table 3-2, adjusted for the projected increase in population due to the proposed project. Land use factors, as determined in the UWMP, are not to be confused with the proposed project land uses. Historical city-wide demand has been appropriated by land use based on actual usage data which has been maintained by the city, which provides a means of determining the impact new development will have on city-wide water demand.

Table 4-6 - Proposed Projected City-wide Water Demand - Based on Land Use Factors (with 20x2020 factored)							
Water Use Sectors	Average % Use of Water Supply 2005-2010	2010	2015	2020	2025	2030	2035
Population		29603	32684	36510	40795	45472	55944
Per Capita Water Use [gpcd]		229	283	252	252	252	252
Single Family Residential	56.2%	4412	5833	119	269	418	1417
Multi-family Residential	2.3%	120	240	5	11	17	58
Commercial/Institutional	26.2%	1908	2720	56	125	195	661
Industrial	1.2%	95	121	3	6	9	30
Irrigation	11.9%	939	1233	25	57	88	300
Other	1.1%	31	113	2	5	8	28
Sales to other Agencies	1.1%	82	116	2	5	8	28
Total [acre-ft/yr]		7586	10376	10306	11515	12836	15792

*Total demand is calculated by multiplying Population with Per Capita Water Use, and applying a unit conversion factor to translate from gpcd to acre-ft/yr.

Note that projections in this WSA will follow the time horizon used in the UWMP for consistency. The UWMP projects supply and demand beyond the required 20-year period required for this project.

4.5. Evaluation of UWMP to meet Project Demand

Current supply projections are included in the UWMP (Table 5-9), based on past record data, with projections based on the trends established by that actual data. Those projects have been modified to include the Water Basin Account Balance, as per the table on page 42 of "Maximum Perennial Yield Estimates for the Banning and Cabazon Storage Units, and Available Water Supply from the Beaumont Basin", Geoscience Support Services, Inc., 2011.

The basin account balance represents surplus water, annually, that the city does not draw but which it has the right to pump. The city has not been drawing its full allotment, therefore the water account balance has been increasing, and is projected to increase over time.

Table 4-7: Supply and Demand (20x2020) Comparisons - Current City UWMP - Without Project (UWMP Table 5-9)						
Average Water Years						
	2010	2015	2020	2025	2030	2035
Total Supply	9,552	15,563	15,792	16,045	16,323	16,628
Total Demand	7,586	10,376	10,183	11,243	12,413	13,705
Supply Surplus	**1,966**	**5,187**	**5,609**	**4,802**	**3,910**	**2,923**
Single-dry Water Years						
Total Supply	N/A	12,043	12,314	12,608	12,928	13,235
Total Demand	N/A	9,821	9,638	10,642	11,749	12,972
Supply Surplus	**N/A**	**2,222**	**2,676**	**1,966**	**1,179**	**263**
Multiple-dry Water Years						
Total Supply	N/A	12,784	13,038	13,316	13,619	13,926
Total Demand	N/A	8,184	8,032	8,868	9,791	10,810
Supply Surplus	**N/A**	**4,600**	**5,006**	**4,448**	**3,828**	**3,116**

With the proposed project, the table above has been revised below to include the project demands.

Table 4-8: Supply and Demand (20x2020) Comparisons - Current City UWMP - With Project						
Average Water Years						
	2010	2015	2020	2025	2030	2035
Total Supply	9,552	15,563	15,792	16,045	16,323	16,628
Total Demand	7,586	10,376	10,306	11,515	12,836	15,792
Supply Surplus	**1,966**	**5,187**	**5,486**	**4,530**	**3,487**	**836**
Single-dry Water Years						
Total Supply	N/A	12,043	12,314	12,608	12,928	13,235
Total Demand	N/A	9,821	9,754	10,899	12,149	14,947
Supply Surplus	**N/A**	**2,222**	**2,560**	**1,709**	**779**	**-1,712**
Multiple-dry Water Years						
Total Supply	N/A	12,784	13,038	13,316	13,619	13,926
Total Demand	N/A	8,184	8,129	9,083	10,125	12,456
Supply Surplus	**N/A**	**4,600**	**4,909**	**4,233**	**3,494**	**1,470**

Table 4-8 demonstrates that there will be sufficient supply to support the proposed project in all cases except for Single-dry Water Years starting in 2035. Table 4-9 provides a comparison of the projected water account balance with the Single-dry Water Year shortfalls, indicating that there is a substantial surplus of water.

Table 4-9: Single-dry Water Year Surplus or Shortfall and Water Account Balance - With Project

	Single-dry Water Years					
	2010	2015	2020	2025	2030	2035
Supply Surplus	N/A	2,222	2,560	1,709	779	(1,712)
Water Account Balance	24,640	44,955	54,214	62,415	69,837	76,526
Sufficient Water Account Balance	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**Yes**

This analysis reflects projected supplies that the city has physical access to and the legal right to acquire and provide.

An additional assessment is required to determine if the city has the current capacity, in terms of well production, to meet these demands on a daily basis. Table 4-2 of the UWMP summarizes the current system well capacity. The historical low capacity of 28,754 acre-feet per year exceeds the total city demand of 14,215 acre-feet per year in 2035. Therefore, there is current system pumping capacity.

4.6. Proposed Source of New Supply

As shown in Section 4.5 above, new sources of supply are not required to support the project. This is in due largely to the following:

(1) As stated above, the city has taken measures to comply with the state-mandated "20 by 2020" water reduction program. The various water conservation measures taken by the city come into effect and are enforced during the building construction process. This is included in the projections made in this WSA.

(2) The pending completion of the State Department of Water Resources' (along with SGPWA) East Branch Expansion Phase II project, which will bring additional capacity for State Water Project water to the area. This capacity is included in the projections made in this WSA.

(3) The proposed use of recycled water for common area irrigation for the project. As shown above, the project will be able to generate more recycled water than will be utilized for irrigation. The fact that potable water will not be used for common area irrigation is included in the projections made in this WSA, however the benefit provided due to the surplus recycled water, whether it is used elsewhere in the city, or by being recharged into the groundwater basin, is not included in the projections herein, and thereby adds a level of conservation to the supply calculations.

(4) Integrated Storm Water Quality provisions are proposed throughout the Rancho San Gorgonio master planned community. The primary concept is for all storm runoff to be conveyed to a system of infiltration basins prior to discharge to the creek system. These infiltration basins not only capture storm runoff, but every day nuisance water as well, and in turn recharge the underlying groundwater basins. Per the project Preliminary (Storm) Water Quality Management Plan, the basin system has been designed for a volume of 316,681 cubic feet, or 7.3 acre-feet.

4.7. Permits Required for New Supply

As shown in Section 4.5 above, new sources of supply are not required to support the project.

4.8. Estimate of the Cost and Schedule for New Supply

As shown in Section 4.5 above, new sources of supply are not required to support the project.

4.9. Proposed Project Water System

A system of water main pipelines will be installed throughout the project, with larger lines serving as the backbone infrastructure, which in turn will serve smaller local waterlines distributed throughout the various planning areas.

There will be at a minimum two points of connection to the existing city water system. It is anticipated that the project will connect to the city's "Main" pressure zone in Sunset or Westward, at the westerly or northwesterly portion of the project. A second main connection will likely be on San Gorgonio Avenue, which is in the city's "Lower" pressure zone. It is anticipated that a pressure reducing valve will be required with at least the connection to the "Main" pressure zone in order to safely and efficiently serve the project. At this time, this new zone is titled "Rancho San Gorgonio".

The project "Master Plan of Water" report estimates the size of the various pipelines, and assesses the need for emergency storage and fire suppression capacities.

An independent recycled water system is a proposed alternative to traditional irrigation from potable water sources for this master planned community. See Section 5 for a description of the recycled water system.

RANCHO SAN GORGONIO

SPECIFIC PLAN

LINCOLN AVENUE

WESTWARD AVE

WESLEY AVE

PORTER AVE

BOBCAT RD.

22ND STREET

8TH STREET

SAN GORGONIO AVE.

SUNSET AVE

TURTLE DOVE LN

A STREET

B STREET

C STREET

D STREET

RANCHO SAN GORGONIO PARKWAY

CITY OF BANNING

COUNTY OF RIVERSIDE

PROP. 24" BY OTHERS
EX. 12"

NODE 450

NODE 405

NODE 715
EX. WELL C5

EX. 10"

NODE 385

NODE 386

NODE 387

NODE 389

NODE 320

NODE 323

NODE 210

NODE 220

EX. 8"

EX. 10"

12" WATER

POINT OF CONNECTION

LINE A

LINE B

LINE C

LINE D

LINE E

PA 16-B

PA 9

PA 8-A

PA 8-D

PA 10

PA 8-B

PA 8-C

PA 5-A

PA 5-B

PA 6-A

PA 15-A

PA 14-A

PA 4-A

PA 2-A

PA 1

PA 3-A

PA 2-B

PA 15-B

PA 2-C

PA 4-C

PA 7-A

PA 7-B

PA 5-C

PA 6-B

PA 4-B

PA 3-B

PA 5-D

PA 6-C

PA13

PA 12

PA11

PA 16-C

PA 4-D

PA 3-C

PA 6-D

PA 16-D

PA 16-A

PA 14-B

PA 14-C

PA 5-E

PA 5-F

PA 3-D

PA 17

LEGEND

PROPOSED WATER LINE (8", OR AS NOTED)

EXISTING WATER LINE

0' 800' 1600'

Encompass Associates, Inc.

Conceptual Potable Water Master Plan

EXHIBIT 4.9

5. Recycled Water System

5.1. Introduction

The city is requiring that the Rancho San Gorgonio project utilize recycled water for all common area irrigation demands. This includes median and parkway landscape areas along the major streets within the project, as well as at the various parks and community centers throughout the master planned community. Landscaping on private property at residences will still be irrigated with domestic, potable water.

A recycled water system would reduce the amount of potable water required to serve the proposed project, while at the same time reducing the impact to the existing sewer system and waste water treatment facility. There would be an added expense due to the additional facilities required to support a recycled water system.

5.2. Proposed (City) Recycled Water System

At present, the city is constructing a centralized recycled water system. Pipelines are being installed in Westward Avenue west of Sunset, northerly on Sunset Avenue, and then easterly in Lincoln Avenue, eventually reaching the wastewater treatment plant. Expansion of the WWTP is anticipated, but work has not yet begun.

City of Banning
Recycled Water Master Plan

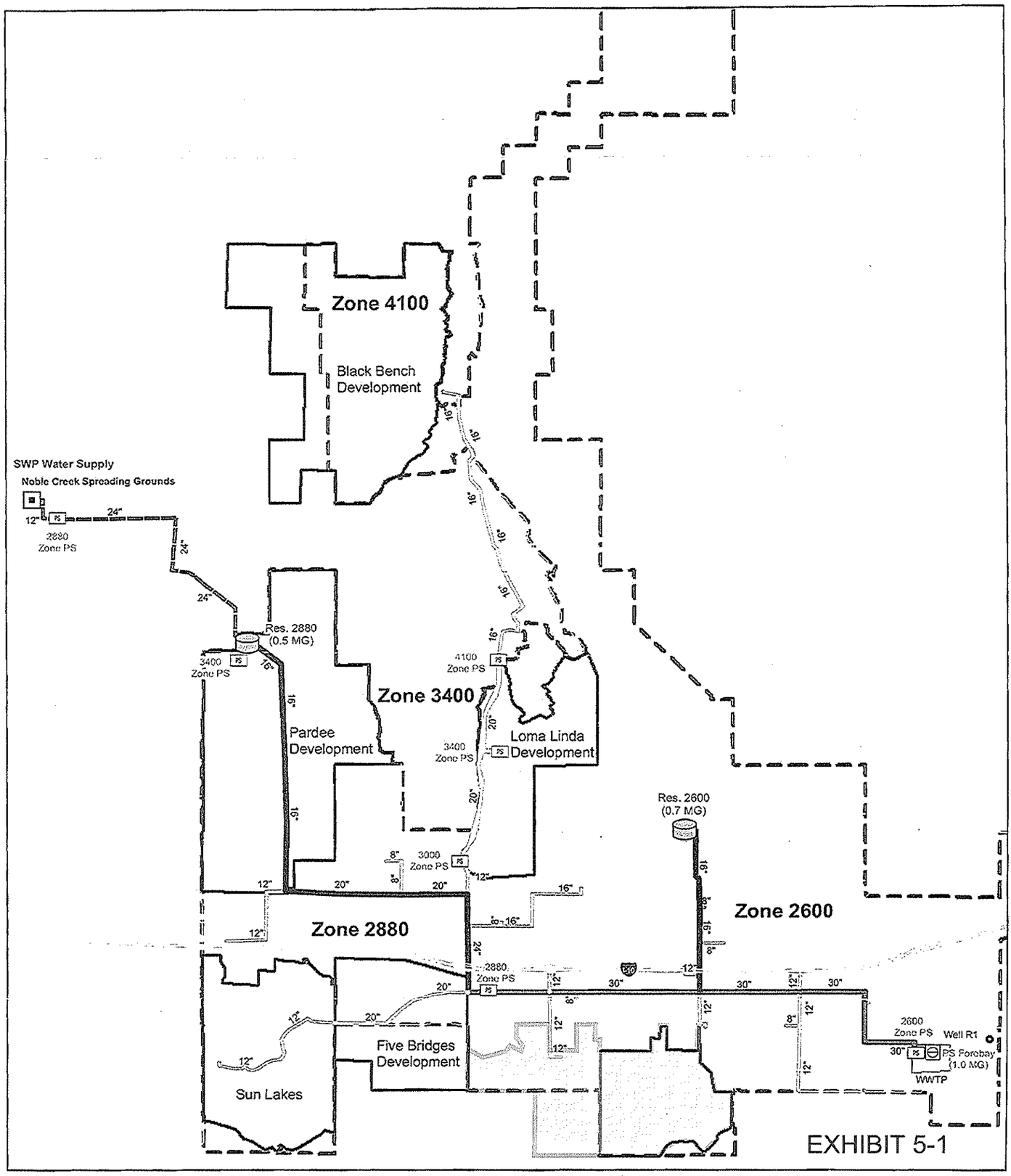


Figure 6.3 - Proposed Recycled Water System

Pipelines (Type)
- State Water Project Pipeline
- Reservoir Feedlines
- Lincoln Street Backbone
- Distribution System Pipelines
- Existing Pipe

Pressure Zones (Zone)
- 4100
- 3400
- 2880
- 2600

- Gravity Reservoirs
- Noble Creek SG
- Pump Stations
- PS Forebay
- Well R1
- I-10
- Streets
- Banning WWTP
- City Boundary

N

Note:
1. This map contains data from the City of Banning GIS.
2. This map is intended for display and planning purposes only.

0 1,650 3,300 6,600 Feet

carollo engineers

5.3. Recycled Water Delivery Options

A likely option is for a satellite package plant to be constructed, either somewhere within the limits of the community, such as PA 16-A, or at a strategic location nearby. One of the primary end-users of recycled water within the city is the Sun Lakes Golf Course.

Alternatively, a connection could be made to the pipeline the city is currently constructing. The recycled water would be produced at the upgraded city WWTP. Connections could be made at Westward and Sunset Avenues, or up to Lincoln Avenue via 8th or 22nd Streets.

Regardless of the ultimate source of recycled water, a system of pipelines will be required throughout the project. See Exhibit 5-2 for the proposed location of the on-site recycled water system, as well as the location of the points of connection anticipated at this time.

5.4. Projected Collection of Sewage available for Recycled Water

Based on figures outlined in the city's Sewer Master Plan (2006), the project is estimated to generate 0.839 MGD of sewage, or a peak amount of 1.4 MGD.

Table 5.4-3: Estimated Increase In Required Sewer Capacity

Land Use	Factor	Unit	Existing "Buildout" DU	MGD	Proposed DU or AC	MGD
Residential	194	Gal/Capita/Day	1399	0.271406	3385	0.65669
Commercial	1500	Gal/Acre/Day				
Industrial	1000	Gal/Acre/Day				
Airport	250	Gal/Acre/Day				
Public Park	182448	Gal/day based on Fixture Units			1	0.18245
Prison (Rehab. Center)	2000	Gal/Acre/Day				
		Total Average Flow		0.271406		0.83914
		Total Peak Flow*		0.46139		1.42653
		Increase			0.96514	

Note: Park area includes PA 10, PA 11 and 12 only.
*Peaking factor is from SSS (see Section 3.1 of the MPS for the formula, dry weather)

5.5. Estimated amount of Recycled Water available for Landscape Irrigation

Per Section 5.4 above, the project could provide 0.839 MGD of sewage for treatment and conversion to recycled water. A membrane bioreactor (MBR) wastewater treatment plant is proposed and discussed in detail in the project MPS. With a conservative yield of 50%, the plant could generate at least 470 acre-feet per year (50% of 0.839 MGD converted to acre-feet per year) of recycled water for common area landscape irrigation use.

As the peak demand for irrigation does not generally coincide with the peak generation of sewage, storage capacity would likely be required to accommodate peak irrigation needs. Alternatives to storage would be to supplement with domestic water as needed, tie into an off-site source of recycled water, or tie into an off-site sewerline to draw wastewater as needed.

5.6. Estimated demand for Recycled Water

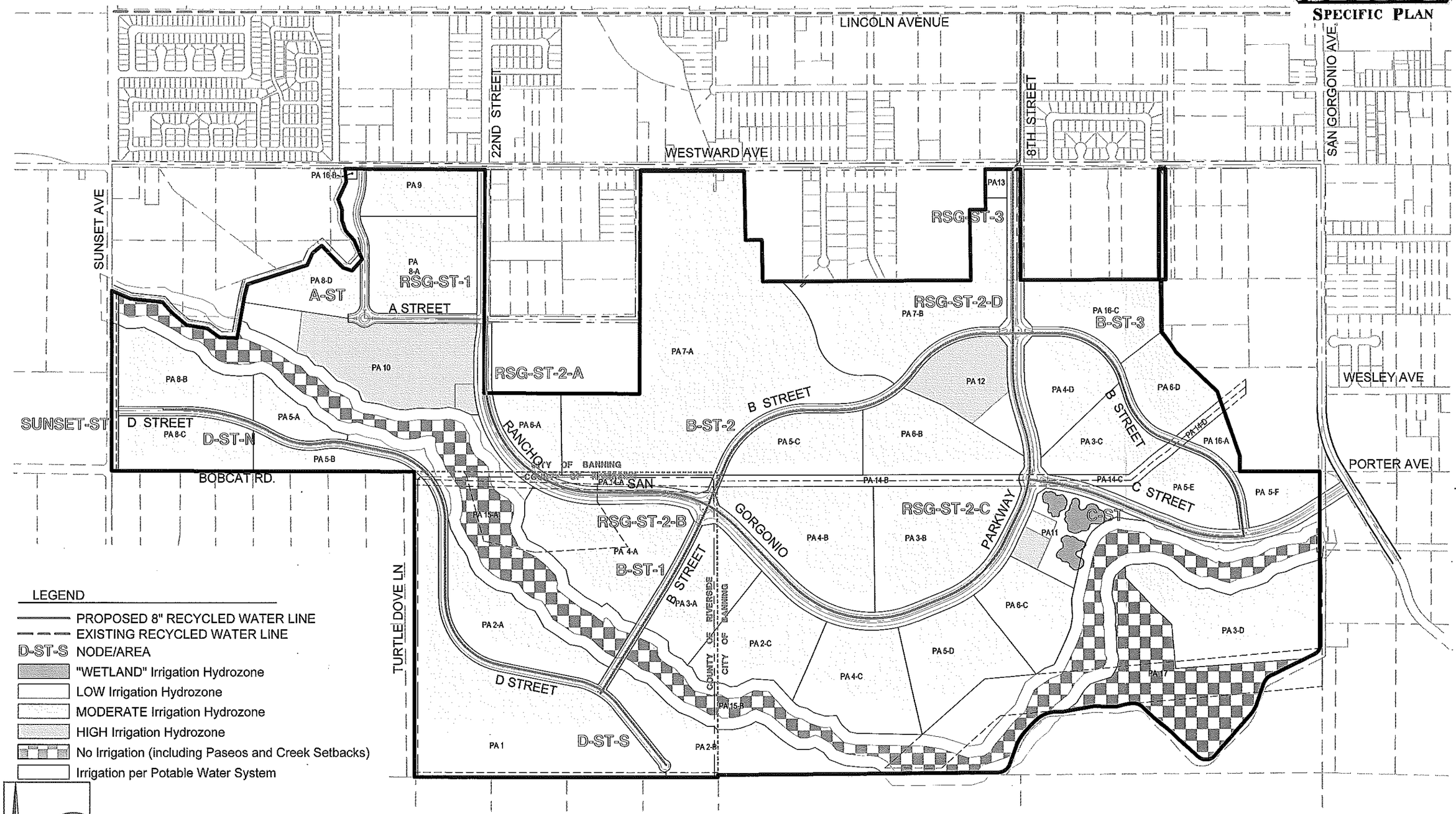
Based on preliminary calculations in the project Master Plan of Water, there are approximately 218 acres of common area landscaping for which recycled water is anticipated to be utilized for irrigation. Those areas include street parkways and medians, Paseos and creek setback areas, and significant portions of the large proposed parks. There will be a mix of turf and drought-tolerant landscaping watered with recycled water. Per the MPW, an average demand of 194,356 gallons per day is estimated, or 218 acre-feet per year.

5.7. Projected Reduction in Potable Water Demand

A detailed study would be required to determine if all of the available wastewater could be used for irrigation purposes, depending on how the recycled water system is configured ultimately. It is assumed herein that all of the wastewater generated could be recycled into water for irrigation use (with a yield of 50%), therefore there would be a reduction of 470 acre-feet year in potable water demand for the city, and approximately 218 acre-feet year from the project, at buildout.

RANCHO SAN GORGONIO

SPECIFIC PLAN



LEGEND

- PROPOSED 8" RECYCLED WATER LINE
- EXISTING RECYCLED WATER LINE
- D-ST-S NODE/AREA
- "WETLAND" Irrigation Hydrozone
- LOW Irrigation Hydrozone
- MODERATE Irrigation Hydrozone
- HIGH Irrigation Hydrozone
- No Irrigation (including Paseos and Creek Setbacks)
- Irrigation per Potable Water System

0' 800' 1600'

Conceptual Recycled Water Master Plan

Encompass Associates, Inc.

EXHIBIT 5-2

6. References

California Code of Regulations. California Water Code Division 6, Part 2.6. Urban Water Management Planning. 2010.

Carollo Engineers. City of Banning Recycled Water Master Plan Study, Final. September 2006.

Geoscience Support Services, Inc. City of Banning 2010 Urban Water Management Plan. July 22, 2011.

Geoscience Support Services, Inc. Maximum Perennial Yield Estimates for the Banning and Cabazon Storage Units, and Available Water Supply from the Beaumont Basin, Prepared for: City of Banning. March 29, 2011.

MWH, Inc. City of Banning Water System Hydraulic Modeling Report - Final Report. May 2002.

NBS/Lowry, Inc. Final Water Master Plan - City of Banning. March 1994.

NBS/Lowry, Inc. Final Sewer Master Plan - City of Banning. March 1994.

RBF Consulting, Inc., & Brownstein Hyatt Farber Schreck. Water Supply Assessment for Butterfield Specific Plan. December 2011.

	Total Area	Portion in RSG		Total Volume	Prorated Volume
Subarea	AC	AC	%	Ac-Ft	Ac-Ft
SmithCreek_S7	268	19.3	7%	31.6	2.28
SmithCreek_S4	83	22.9	27%	8.9	2.45
SmithCreek_S3	1298	1.1	0%	141.6	0.12
SmithCreek_S5	56	16.7	30%	6.2	1.86
SmithCreek_S8	232	36.1	16%	25.3	3.94
SmithCreek_S9	297	14.7	5%	34.1	1.68
Gilman_G3	116	68.1	59%	15.5	9.11
SmithCreek_S7	268	217.4	81%	31.6	25.62
Pershing_P3	372	309.3	83%	45.3	37.61
Montgomery_M4	179	144.2	80%	23.3	18.75
Totals		**849.6**	**389%**	**363.40**	**103.41**

100-year 6-hour Storm
within the limits of Rancho San Gorgonio

Area	849.6	ac
Total rainfall (6-hr)	3.200	in
Peak rainfall volume (6-hr)	2,719	ac-in

Existing Condition

Peak (volume) runoff (6-hr), from hydrology	103	ac-ft
	1,241	ac-in
Infiltration (total rainfall volume - runoff volume)	1,478	ac-in
Total Infiltration per in of rainfall, 1478 / 3.2 =	462	ac-in per in
Infiltration Yield per in of rainfall, 462 / 849.6 =	54%	

Estimation of Stormwater Recharge

Annual Rainfall

Average annual rainfall = total developed infiltration and capture	17.770	in
See 2010 UWMP (page 12)		

Existing condition infiltration based on Annual Rainfall

Existing condition infiltration, 0.54 x 17.77 =	9.596	in

Estimation of additional infiltration due to development

Net additional infiltration due to development, 17.77 - 9.596 =	8.174	in
	579	ac-ft (per yr)

ORIGINAL COPY

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Attorneys for Plaintiff, SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY

NO FILING FEE REQUIRED PER GOVERNMENT CODE, SEC. 6103

FILED
SUPERIOR COURT OF CALIFORNIA
COUNTY OF RIVERSIDE

FEB - 4 2004

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF RIVERSIDE, RIVERSIDE COURT

SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY, a public agency,

Plaintiff,

vs.

CITY OF BANNING, a municipal corporation; BEAUMONT-CHERRY VALLEY WATER DISTRICT, an irrigation district; YUCAIPA VALLEY WATER DISTRICT, a county water district; PLANTATION ON THE LAKE LLC, a California limited liability company; SHARONDALE MESA OWNERS ASSOCIATION, an unincorporated association; SOUTH MESA MUTUAL WATER COMPANY, a mutual water company; CALIFORNIA OAK VALLEY GOLF AND RESORT LLC, a California limited liability company; OAK VALLEY PARTNERS LP, a Texas limited partnership; SOUTHERN CALIFORNIA SECTION OF THE PROFESSIONAL GOLFERS ASSOCIATION OF AMERICA, a California corporation; SUNNY-CAL EGG AND POULTRY COMPANY, a California corporation; MANHEIM, MANHEIM & BERMAN, a California General Partnership; WALTER M. BECKMAN, individually and as Trustee of the BECKMAN FAMILY TRUST dated December 11, 1990; THE ROMAN CATHOLIC BISHOP of San Bernardino,

CASE NO. RIC 389197

STIPULATION FOR ENTRY OF JUDGMENT ADJUDICATING GROUNDWATER RIGHTS IN THE BEAUMONT BASIN

a California corporation; MERLIN PROPERTIES, LLC; LEONARD M. STEARNS and DOROTHY D. STEARNS, individually and as Trustees of the LEONARD M. STEARNS FAMILY TRUST OF 1991; and DOES 1 through 500, inclusive,

Defendants.

I. STIPULATING PARTIES IDENTIFIED

The following parties, and each of them, agree to the terms of this Stipulation:

Plaintiff:

SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY

Overlying Defendants:

1. SHARONDALE MESA OWNERS ASSOCIATION, an unincorporated association
2. CALIFORNIA OAK VALLEY GOLF AND RESORT LLC, a California limited liability company
3. OAK VALLEY PARTNERS LP, a Texas limited partnership
4. SOUTHERN CALIFORNIA SECTION OF THE PROFESSIONAL GOLFERS ASSOCIATION OF AMERICA, a California corporation
5. SUNNY-CAL EGG AND POULTRY COMPANY, a California corporation
6. MANHEIM, MANHEIM & BERMAN, a California general partnership
7. WALTER M. BECKMAN, individually, and as Trustee of the BECKMAN FAMILY TRUST dated December 11, 1990
8. THE ROMAN CATHOLIC BISHOP of San Bernardino, a California corporation
9. MERLIN PROPERTIES, LLC
10. LEONARD M. STEARNS and DOROTHY D. STEARNS, individually and as Trustees of the LEONARD M. STEARNS FAMILY TRUST OF 1991
11. PLANTATION ON THE LAKE LLC, a California limited liability company

Appropriating Defendants:

1. CITY OF BANNING, a municipal corporation
2. BEAUMONT-CHERRY VALLEY WATER DISTRICT, an irrigation district
3. SOUTH MESA MUTUAL WATER COMPANY, a mutual water company
4. YUCAIPA VALLEY WATER DISTRICT, a county water district

///

KLUWI... KI
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(909) 682-5480

II. RECITALS

WHEREAS, plaintiff is a joint powers public agency, formed in 2001 for the purpose, among others, of preparing and implementing a Water Resources Management Plan for the San Timoteo Watershed and the waters tributary thereto, including the Beaumont Basin, in order to conserve local water supplies, improve surface and subsurface water quality and quantity, and to protect and enhance groundwater storage, for the benefit of the public;

WHEREAS, the Beaumont Basin, also known as the Beaumont Storage Unit, is the common source of water supply for appropriative water uses within the communities of Banning, Beaumont, Cherry Valley and Calimesa, and for various overlying uses including, but not limited to, golf courses and related facilities and agricultural production, including egg production and related agricultural irrigation uses;

WHEREAS, the maximum quantity of water which can be produced from the Beaumont Basin, at safe yield, is currently estimated to be 8650 acre feet per year, and the total groundwater production from the Beaumont Basin has exceeded and continues to exceed its safe yield;

WHEREAS, much of the land area within and adjacent to the Beaumont Basin is proposed to be intensively developed with residential, commercial and industrial uses, which will place additional demands on local water resources;

WHEREAS, it is estimated that the Beaumont Basin has the capability of storing more than 200,000 acre feet of water for overlying and appropriative use by water users within and

adjacent to the Beaumont Basin;

WHEREAS, the plaintiff proposes to invest substantial public funds to construct facilities that will enable the storage of water within the Beaumont Basin, in addition to the storage that occurs naturally;

WHEREAS, the Overlying and Appropriating Defendants wish to secure the provision and availability of a reliable, affordable, long-term water supply for the area within plaintiff's jurisdiction, making reasonable and beneficial use of the native groundwater in the Beaumont Basin, and other local water resources, promoting the importation of water into the area, and storage of such water, and local surface waters, in the Beaumont Basin;

WHEREAS, the Overlying Defendants believe that it is in their best interest to enter into this Stipulation and be subject to the attached Judgment, rather than continue to litigate the safe yield of the Beaumont Basin, the quantity of their overlying rights, both historical and unexercised, the rights they may have to use the storage volume existing beneath their respective lands, and other issues;

WHEREAS, in order to protect existing overlying and appropriative uses and to justify and protect the public investment necessary to utilize the available groundwater storage capacity in the Beaumont Basin, it is necessary to adjudicate the Beaumont Basin and to define the respective water rights of the overlying and appropriative producers of groundwater.

NOW, THEREFORE, the undersigned parties, and each of them, hereby agree to the following Stipulated Terms.

3403 TENTH ST, SUITE 610
RIVERSIDE, CALIFORNIA 92501
(909) 682-5490

III. STIPULATED TERMS

1. Form of Judgment: Judgment may be filed and entered in the form attached hereto as Exhibit "1" and made a part hereof.

2. Fees and Costs: Each party shall bear its own costs, attorneys fees and litigation expenses arising out of this adjudication.

3. Waiver: Notice of entry of judgment, the right to trial, stay of execution and appeal, is hereby waived, except as expressly set forth in the Judgment.

4. Binding Effect: This Stipulation and all obligations herein, shall be binding on and shall inure to the benefit of the heirs, executors, administrators, successors and assigns of the parties hereto.

5. Construction and Interpretation: No adverse construction or interpretation of this Stipulation shall be made under the Civil Code simply because the parties drafted or participated in the drafting of this Stipulation. The terms of the Judgment shall be interpreted to further the purposes of this Stipulation.

6. Jurisdiction and Venue: The Superior Court of California in and for the County of Riverside shall have jurisdiction of this matter. In the event of any litigation arising out of this Stipulation, venue shall conclusively be deemed to lie in the County of Riverside.

7. Advice of Counsel: The undersigned each have had the opportunity to consult with or have consulted with their own legal counsel regarding this Stipulation and all matters set forth herein, or have knowingly waived the right to do so.

...ET, SUITE 610
RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

8. Authority: Each person executing this Stipulation on behalf of any of the undersigned has been fully empowered to execute this Stipulation and that all necessary action for the execution of this Stipulation has been taken.

IT IS SO STIPULATED:

SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY

Dated: 1/6/04

By _____
President, Board of Directors

CITY OF BANNING

Dated: 12/23/03

By _____
Mayor

BEAUMONT-CHERRY VALLEY WATER DISTRICT

Dated: _____

By _____
President, Board of Directors

YUCAIPA VALLEY WATER DISTRICT

Dated: _____

By _____
President, Board of Directors

PLANTATION ON THE LAKE LLC

Dated: _____

By _____
President, Board of Directors

SHARONDALE MESA OWNERS ASSOCIATION

Dated: _____

By _____
President, Board of Directors

RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

8. Authority: Each person executing this Stipulation on behalf of any of the undersigned has been fully empowered to execute this Stipulation and that all necessary action for the execution of this Stipulation has been taken.

IT IS SO STIPULATED:

SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY

Dated: _____ By _____
President, Board of Directors

CITY OF BANNING

Dated: _____ By _____
Mayor

BEAUMONT-CHERRY VALLEY WATER DISTRICT

Dated: July 3, 2003 By _____
President, Board of Directors

YUCAIPA VALLEY WATER DISTRICT

Dated: _____ By _____
President, Board of Directors

PLANTATION ON THE LAKE LLC

Dated: _____ By _____
President, Board of Directors

SHARONDALE MESA OWNERS ASSOCIATION

Dated: _____ By _____
President, Board of Directors

RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

8. Authority: Each person executing this Stipulation on behalf of any of the undersigned has been fully empowered to execute this Stipulation and that all necessary action for the execution of this Stipulation has been taken.

IT IS SO STIPULATED:

SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY

Dated: _____ By _____
President, Board of Directors

CITY OF BANNING

Dated: _____ By _____
Mayor

BEAUMONT-CHERRY VALLEY WATER DISTRICT

Dated: _____ By _____
President, Board of Directors

YUCAIPA VALLEY WATER DISTRICT

Dated: 10/1/03 By _____
President, Board of Directors

PLANTATION ON THE LAKE LLC

Dated: _____ By _____
President, Board of Directors

SHARONDALE MESA OWNERS ASSOCIATION

Dated: _____ By _____
President, Board of Directors

LUF WY: 1
3403 TENTH ST, SUITE 610
RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

8. Authority: Each person executing this Stipulation on behalf of any of the undersigned has been fully empowered to execute this Stipulation and that all necessary action for the execution of this Stipulation has been taken.

IT IS SO STIPULATED:

SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY

Dated: _____ By _____
President, Board of Directors

CITY OF BANNING

Dated: _____ By _____
Mayor

BEAUMONT-CHERRY VALLEY WATER DISTRICT

Dated: _____ By _____
President, Board of Directors

YUCAIPA VALLEY WATER DISTRICT

Dated: _____ By _____
President, Board of Directors

PLANTATION ON THE LAKE LLC

Dated: 7/30/03 By James H Krueger
~~President, Board of Directors~~
Manager of Meadows Management Company LLC, Manager

SHARONDALE MESA OWNERS ASSOCIATION

Dated: _____ By _____
President, Board of Directors

RIVERSIDE, C. ORNIA 92501
(909) 682-5480

8. Authority: Each person executing this Stipulation on behalf of any of the undersigned has been fully empowered to execute this Stipulation and that all necessary action for the execution of this Stipulation has been taken.

IT IS SO STIPULATED:

SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY

Dated: _____ By _____
President, Board of Directors

CITY OF BANNING

Dated: _____ By _____
Mayor

BEAUMONT-CHERRY VALLEY WATER DISTRICT

Dated: _____ By _____
President, Board of Directors

YUCAIPA VALLEY WATER DISTRICT

Dated: _____ By _____
President, Board of Directors

PLANTATION ON THE LAKE LLC

Dated: _____ By _____
President, Board of Directors

SHARONDALE MESA OWNERS ASSOCIATION

Dated: June 27, 2003 By Lena Jo Alexander
President, Board of Directors

LUP... WY...
T..., SUITE 610
RIVERSIDE, C... ORNIA 92501
(909) 682-5480

SOUTH MESA MUTUAL WATER COMPANY

Dated: 6-27-03

By _____
President, Board of Directors

CALIFORNIA OAK VALLEY GOLF AND RESORT LLC

Dated: _____

By _____
President, Board of Directors

OAK VALLEY PARTNERS LP,
A Texas Limited Partnership

By: Oak Valley-Hunt, Inc.
a Texas Corporation
Managing General Partner

Dated: _____

By _____
D. CRAIG MARTIN

Its: President

SOUTHERN CALIFORNIA SECTION OF THE PROFESSIONAL GOLFERS ASSOCIATION OF AMERICA

Dated: _____

By _____
President, Board of Directors

SUNNY-CAL EGG AND POULTRY COMPANY

Dated: _____

By _____
President, Board of Directors

MANHEIM, MANHEIM & BERMAN

Dated: _____

By _____

RIVERSIDE, C ORNIA 92501
(909) 682-5480

SOUTH MESA MUTUAL WATER COMPANY

Dated: _____

By _____
President, Board of Directors

CALIFORNIA OAK VALLEY GOLF AND RESORT LLC

Dated: 7-31-2003

By _____
President, Board of Directors

OAK VALLEY PARTNERS LP,
A Texas Limited Partnership

By: Oak Valley-Hunt, Inc.
a Texas Corporation
Managing General Partner

Dated: _____

By _____
D. CRAIG MARTIN

Its: President

SOUTHERN CALIFORNIA SECTION OF THE PROFESSIONAL GOLFERS ASSOCIATION OF AMERICA

Dated: _____

By _____
President, Board of Directors

SUNNY-CAL EGG AND POULTRY COMPANY

Dated: _____

By _____
President, Board of Directors

MANHEIM, MANHEIM & BERMAN

Dated: _____

By _____

RIVERSIDE, C ORNIA 92501
(909) 682-5480

SOUTH MESA MUTUAL WATER COMPANY

Dated: _____ By _____
President, Board of Directors

CALIFORNIA OAK VALLEY GOLF AND RESORT LLC

Dated: _____ By _____
President, Board of Directors

OAK VALLEY PARTNERS LP,
A Texas Limited Partnership

By: Oak Valley-Hunt, Inc.
a Texas Corporation
Managing General Partner

Dated: _____ By _____
D. CRAIG MARTIN

Its: President

SOUTHERN CALIFORNIA SECTION OF THE PROFESSIONAL GOLFERS ASSOCIATION OF AMERICA

Dated: _____ By _____
President, Board of Directors

SUNNY-CAL EGG AND POULTRY COMPANY

Dated: _____ By _____
President, Board of Directors

MANHEIM, MANHEIM & BERMAN

Dated: _____ By _____

SOUTH MESA MUTUAL WATER COMPANY

Dated: _____

By _____
President, Board of Directors

CALIFORNIA OAK VALLEY GOLF AND RESORT LLC

Dated: _____

By _____
President, Board of Directors

OAK VALLEY PARTNERS LP,
A Texas Limited Partnership

By: Oak Valley-Hunt, Inc.
a Texas Corporation
Managing General Partner

Dated: _____

By _____
D. CRAIG MARTIN

Its: President

SOUTHERN CALIFORNIA SECTION OF THE PROFESSIONAL GOLFERS ASSOCIATION OF AMERICA

Dated: July 8, 2003

By Thomas C. Gustafson
~~President~~, ~~Board of Directors~~
CHIEF Executive Officer

SUNNY-CAL EGG AND POULTRY COMPANY

Dated: _____

By _____
President, Board of Directors

MANHEIM, MANHEIM & BERMAN

Dated: _____

By _____

SOUTH MESA MUTUAL WATER COMPANY

Dated: _____ By _____
President, Board of Directors

CALIFORNIA OAK VALLEY GOLF AND RESORT LLC

Dated: _____ By _____
President, Board of Directors

OAK VALLEY PARTNERS LP,
A Texas Limited Partnership

By: Oak Valley-Hunt, Inc.
a Texas Corporation
Managing General Partner

Dated: _____ By _____
D. CRAIG MARTIN

Its: President

SOUTHERN CALIFORNIA SECTION OF THE PROFESSIONAL GOLFERS ASSOCIATION OF AMERICA

Dated: _____ By _____
President, Board of Directors

SUNNY-CAL EGG AND POULTRY COMPANY

Dated: _____ By Michael Marderosian
President, Board of Directors

MANHEIM, MANHEIM & BERMAN

Dated: _____ By Scott Berman

Dated: 7-23-03

Walter M. Beckman

WALTER M. BECKMAN

Dated: 7-23-03

Walter M. Beckman

WALTER M. BECKMAN, Trustee of the BECKMAN FAMILY TRUST dated December 11, 1990

Dated: _____

_____

CECIL MERLE MURRAY

MERLIN PROPERTIES, LLC

Dated: _____

By _____

Dated: _____

_____

LEONARD M. STEARNS, individually and as Trustee of the LEONARD M. STEARNS FAMILY TRUST OF 1991

Dated: _____

_____

DOROTHY D. STEARNS, individually and as Trustee of the LEONARD M. STEARNS FAMILY TRUST OF 1991

APPROVAL AND ORDER

The foregoing Stipulation is hereby approved and is so ordered.

Dated: _____

_____

JUDGE OF THE SUPERIOR COURT

Dated: _____

WALTER M. BECKMAN

Dated: _____

WALTER M. BECKMAN, Trustee of the BECKMAN FAMILY TRUST dated December 11, 1990

THE ROMAN CATHOLIC BISHOP of San Bernardino, a California corporation

Dated: 9/18/03

By Msgr. Gerald M. Fogg

MERLIN PROPERTIES, LLC

Dated: _____

By _____

Dated: _____

LEONARD M. STEARNS, individually and as Trustee of the LEONARD M. STEARNS FAMILY TRUST OF 1991

Dated: _____

DOROTHY D. STEARNS, individually and as Trustee of the LEONARD M. STEARNS FAMILY TRUST OF 1991

APPROVAL AND ORDER

The foregoing Stipulation is hereby approved and is so ordered.

Dated: _____

JUDGE OF THE SUPERIOR COURT

Dated: _____

WALTER M. BECKMAN

Dated: _____

WALTER M. BECKMAN, Trustee of the BECKMAN FAMILY TRUST dated December 11, 1990

THE ROMAN CATHOLIC BISHOP of San Bernardino, a California corporation

Dated: _____

By _____

MERLIN PROPERTIES, LLC

Dated: July 31, 2003

By Paul L Rubner

Dated: _____

LEONARD M. STEARNS, individually and as Trustee of the LEONARD M. STEARNS FAMILY TRUST OF 1991

Dated: _____

DOROTHY D. STEARNS, individually and as Trustee of the LEONARD M. STEARNS FAMILY TRUST OF 1991

APPROVAL AND ORDER

The foregoing Stipulation is hereby approved and is so ordered.

Dated: _____

JUDGE OF THE SUPERIOR COURT

Dated: _____

WALTER M. BECKMAN

Dated: _____

WALTER M. BECKMAN, Trustee of the BECKMAN FAMILY TRUST dated December 11, 1990

Dated: _____

CECIL MERLE MURRAY

MERLIN PROPERTIES, LLC

Dated: _____ By _____

Dated: 7-23-03

LEONARD M. STEARNS, individually and as Trustee of the LEONARD M. STEARNS FAMILY TRUST OF 1991

Dated: 7-23-03

DOROTHY D. STEARNS, individually and as Trustee of the LEONARD M. STEARNS FAMILY TRUST OF 1991

APPROVAL AND ORDER

The foregoing Stipulation is hereby approved and is so ordered.

Dated: FEB - 4 2004

GARY TRANBARGER

JUDGE OF THE SUPERIOR COURT

ORIGINAL COPY

JOSEPH S. AKLUFI (Bar No. 68619)
AKLUFI AND WYSOCKI
3403 Tenth Street, Suite 610
Riverside, California 92501
(909)682-5480 Office
(909)682-2619 Fax

Attorneys for Plaintiff, SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY

NO FILING FEE REQUIRED PER GOVERNMENT CODE, SEC. 6103

FILED
SUPERIOR COURT OF CALIFORNIA
COUNTY OF RIVERSIDE

FEB - 4 2004

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF RIVERSIDE, RIVERSIDE COURT

SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY, a public agency,

Plaintiff,

vs.

CITY OF BANNING, a municipal corporation; BEAUMONT-CHERRY VALLEY WATER DISTRICT, an irrigation district; YUCAIPA VALLEY WATER DISTRICT, a county water district; PLANTATION ON THE LAKE LLC, a California limited liability company; SHARONDALE MESA OWNERS ASSOCIATION, an unincorporated association; SOUTH MESA MUTUAL WATER COMPANY, a mutual water company; CALIFORNIA OAK VALLEY GOLF AND RESORT LLC, a California limited liability company; OAK VALLEY PARTNERS LP, a Texas limited partnership; SOUTHERN CALIFORNIA SECTION OF THE PROFESSIONAL GOLFERS ASSOCIATION OF AMERICA, a California corporation; SUNNY-CAL EGG AND POULTRY COMPANY, a California corporation; MANHEIM, MANHEIM & BERMAN, a California General Partnership; WALTER M. BECKMAN, individually and as Trustee of the BECKMAN FAMILY TRUST dated December 11, 1990; THE ROMAN CATHOLIC BISHOP of San Bernardino,

CASE NO. RIC 389197

JUDGMENT PURSUANT TO STIPULATION ADJUDICATING GROUNDWATER RIGHTS IN THE BEAUMONT BASIN

AKLUFI AND WYSOCKI
3403 TENTH STREET, SUITE 610
RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

a California corporation; MERLIN PROPERTIES, LLC; LEONARD M. STEARNS and DOROTHY D. STEARNS, individually and as Trustees of the LEONARD M. STEARNS FAMILY TRUST OF 1991; and DOES 1 through 500, inclusive,

Defendants.

I. INTRODUCTION

1. Pleadings, Parties and Jurisdiction

The complaint herein was filed on February 20, 2003, seeking an adjudication of water rights, injunctive relief and the imposition of a physical solution. The defaults of certain defendants have been entered, and certain other defendants dismissed. Other than defendants who have been dismissed or whose defaults have been entered, all defendants have appeared herein. This Court has jurisdiction of the subject matter of this action and of the parties herein.

2. Stipulation for Judgment

Stipulation for Entry of Judgment has been filed by and on behalf of all defendants who have appeared herein.

3. Definitions

As used in this Judgment, these terms shall have the following meanings:

A. Appropriator or Appropriator Parties: the pumpers identified in Exhibit "C" attached hereto.

B. Appropriator's Production Right: consists of an Appropriator's share of Operating Yield, plus (1) any water acquired by an Appropriator from an Overlying Producer or other Appropriator pursuant to this Judgment, (2) any water

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RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

withdrawn from the Appropriator's storage account, (3) and New Yield created by the Appropriator.

C. Appropriative Water: the amount of Safe Yield remaining after satisfaction of Overlying Water Rights.

D. Appropriative Water Right: each Appropriator's share of Appropriative Water, such share expressed as a percentage as shown on Exhibit "C".

E. Beaumont Basin or Beaumont Storage Unit: the area situated within the boundaries shown on Exhibit "A" attached hereto.

F. Conjunctive Use: the storage of water in a Groundwater Basin for use at a later time.

G. Groundwater: water beneath the surface of the ground within the zone below the water table in which soil is saturated with water.

H. Groundwater Basin: an area underlain by one or more permeable formations capable of furnishing a substantial water supply.

I. Groundwater Storage Agreement: a standard form of written agreement between the Watermaster and any Person requesting the storage of Supplemental Water.

J. Groundwater Storage Capacity: the space available in a Groundwater Basin that is not utilized for storage or regulation of Safe Yield and is reasonably available for Stored Water and Conjunctive Use.

K. Minimal Producer: any Producer who pumps 10 or fewer acre feet of Groundwater from the Beaumont Basin per year.

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RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

L. New Yield: increases in yield in quantities greater than historical amounts from sources of supply including, but not limited to, capture of available storm flow, by means of projects constructed after February 20, 2003, as determined by the Watermaster.

M. Operating Yield: the maximum quantity of water which can be produced annually by the Appropriators from the Beaumont Basin, which quantity consists of Appropriative Water plus Temporary Surplus.

N. Overdraft: a condition wherein the total annual production from a Groundwater Basin exceeds the Safe Yield thereof.

O. Overlying Parties: the Persons listed on Exhibit "B", who are owners of land which overlies the Beaumont Basin and have exercised Overlying Water Rights to pump therefrom. Overlying Parties include successors in interest and assignees.

P. Overlying Water Rights: the quantities decreed to Overlying Parties in Column 4 of Exhibit "B" to this Judgment.

Q. Overproduction: by an Appropriator, measured by an amount equal to the Appropriator's actual annual production minus the Appropriator's Production Right. By a new overlying producer, an amount equal to what the overlying producer pumped during the year.

R. Party (Parties): any Person(s) named in this action, or who has intervened, or has become subject to this Judgment either through stipulation, trial or otherwise

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RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

S. Person: any individual, partnership, association, corporation, governmental entity or agency, or other organization.

T. Physical Solution: the physical solution set forth in Part V of this Judgment.

U. Produce, Producing, Production, Pump or Pumping: the extraction of groundwater.

V. Producer or Pumper: any Person who extracts groundwater.

W. Recycled Water: has the meaning provided in Water Code Section 13050(n) and includes other nonpotable water for purposes of this Judgment.

X. Safe Yield: the maximum quantity of water which can be produced annually from a Groundwater Basin under a given set of conditions without causing a gradual lowering of the groundwater level leading eventually to depletion of the supply in storage. The Safe Yield of the Beaumont Basin is 8650 acre feet per year in each of the ten (10) years following entry of this Judgment.

Y. San Timoteo Watershed Management Authority: a joint powers public agency whose members are the Beaumont-Cherry Valley Water District, the City of Beaumont, the South Mesa Mutual Water Company and the Yucaipa Valley Water District.

Z. Stored Water: Supplemental Water stored in the Beaumont Basin pursuant to a Groundwater Storage Agreement with the Watermaster.

AA. Supplemental Water: water imported into the

LUF[illegible] WYS[illegible]
3403 TENTH [illegible]ET, SUITE 610
RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

Beaumont Basin from outside the Beaumont Basin including, without limitation, water diverted from creeks upstream and tributary to Beaumont Basin and water which is recycled and useable within the Beaumont Basin.

BB. Temporary Surplus: the amount of groundwater that can be pumped annually in excess of Safe Yield from a Groundwater Basin necessary to create enough additional storage capacity to prevent the waste of water.

CC. Watermaster: the Person appointed by the Court to administer and enforce the Physical Solution.

4. List of Exhibits

The following exhibits are attached to this Judgment and made a part hereof:

Exhibit "A" -- "Location Map of Beaumont Basin"
Exhibit "B" -- "Overlying Owners and Their Water Rights"
Exhibit "C" -- "Appropriators and Their Water Rights"
Exhibit "D" -- "Legal Description of Lands of the Overlying Parties"
Exhibit "E" -- "Location of Overlying Producer Parcels and Boundary of the Beaumont Basin"

II. INJUNCTIONS

1. Injunction Against Unauthorized Production of Beaumont Basin Water

Each party herein is enjoined, as follows:

A. Overlying Parties: Each defendant who is an Overlying Party, and its officers, agents, employees, successors and assigns, is hereby enjoined and restrained from producing groundwater from the Beaumont Basin in any five-year period hereafter in excess of five times the share of the Safe Yield assigned to the Overlying Parties as set

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RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

forth in Column 4 of Exhibit "B", as more fully described in the Physical Solution.

B. Appropriator Parties: Each defendant who is an Appropriator Party, and its officers, agents, employees, successors and assigns, is hereby enjoined and restrained from producing groundwater from the Beaumont Basin in any year hereafter in excess of such party's Appropriator's Production Right, except as additional annual Production may be authorized by the provisions of the Physical Solution.

2. Injunction Against Unauthorized Storage or Withdrawal of Stored Water

Each and every Party, and its officers, agents, employees, successors and assigns, is hereby enjoined and restrained from storing Supplemental Water in the Beaumont Basin for withdrawal, or causing withdrawal of water stored by that Party, except pursuant to the terms of a written Groundwater Storage Agreement with the Watermaster and in accordance with Watermaster Rules and Regulations. Any Supplemental Water stored in the Beaumont Basin, except pursuant to a Groundwater Storage Agreement, shall be deemed abandoned and not classified as Stored Water.

III. DECLARATION AND ADJUSTMENT OF RIGHTS

1. Overlying Rights

The Overlying Parties are currently exercising Overlying Water Rights in the Beaumont Basin. As shown on Exhibit "B", the aggregate Projected Maximum Production of water from the Beaumont Basin pursuant to Overlying Water Rights is 8610 acre feet and the Overlying Water Rights are individually decreed, in Column 4 of Exhibit "B", for each Overlying Party. The Overlying Parties

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RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

shall continue to have the right to exercise their respective Overlying Water Right as set forth in Column 4 of Exhibit "B" except to the extent their respective properties receive water service from an Appropriator Party, as contemplated by Paragraph III.3 of this Judgment.

2. Appropriator's Share of Operating Yield

Each Appropriator Party's share of Operating Yield is shown on Exhibit "C". Notwithstanding any other provision of this Judgment, each Appropriator Party may use its Appropriator's Production Right anywhere within its service area.

3. Adjustment of Rights

A. The Overlying Parties shall have the right to exercise their respective Overlying Water Rights except as provided in this Paragraph 3.

B. To the extent any Overlying Party requests, and uses its Exhibit "B", Column 4 water to obtain water service from an Appropriator Party, an equivalent volume of potable groundwater shall be earmarked by the Appropriator Party which will serve the Overlying Party, up to the volume of the Overlying Water Right as reflected in Column 4 of Exhibit "B" attached hereto, for the purpose of serving the Overlying Party. The intent of this provision is to ensure that the Overlying Party is given credit towards satisfying the water availability assessment provisions of Government Code, Section 66473.7 et seq. and Water Code, Section 10910 et seq. or other similar provisions of law, equal to the amount of groundwater earmarked hereunder.

C. When an Overlying Party receives water service as

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(909) 682-5480

provided for in subparagraph III.3.B the Overlying Party shall forebear the use of that volume of the Overlying Water Right earmarked by the Appropriator Party. The Appropriator Party providing such service shall have the right to produce the volume of water foregone by the Overlying Party, in addition to other rights otherwise allocated to the Appropriator Party.

D. Should the volume of the Overlying Water Right equal or exceed the volume of potable groundwater earmarked as provided in subparagraph 3.B, the Appropriator Party which will serve the Overlying Party shall (i) impose potable water charges and assessments upon the Overlying Party and its successors in interest at the rates charged to the then-existing regular customers of the Appropriator Party, and (ii) not collect from such Overlying Party any development charge that may be related to the importation of water into the Beaumont Basin. The Appropriator Party which will serve the Overlying Party pursuant to Subparagraph III.3.B shall also consider, and negotiate in good faith regarding, the provision of a meaningful credit for any pipelines, pump stations, wells or other facilities that may exist on the property to be served.

E. In the event an Overlying Party receives Recycled Water from an Appropriator Party to serve an overlying use served with groundwater, the Overlying Water Right of the Overlying Party shall not be diminished by the receipt and use of such Recycled Water. Recycled Water provided by an Appropriator Party to an Overlying Party shall satisfy the

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...3403 TENTH ... ET, SUITE 610
RIVERSIDE, C...FORNIA 92501
(909) 682-5480

criteria set forth in the California Water Code including, without limitation, the criteria set forth in Water Code Sections 13550 and 13551. The Appropriator Party which will serve the Recycled Water shall have the right to use that portion of the Overlying Water Right of the Overlying Party offset by the provision of Recycled Water service pursuant to the terms of this subparagraph; provided, however, that such right of use by the Appropriator Party shall no longer be valid if the Recycled Water, provided by the Appropriator Party to the Overlying Party, does not satisfy the requirements of Sections 13550 and 13551 and the Overlying Party ceases taking delivery of such Recycled Water.

F. Nothing in this Judgment is intended to impair or adversely affect the ability of an Overlying Party to enter into annexation or development agreements with any Appropriator Party.

G. Oak Valley Partners LP ("Oak Valley") is developing its property pursuant to Specific Plans 216 and 216A adopted by the County of Riverside ("County") in May 1990, and Specific Plan 318 adopted by the County in August, 2001, (Specific Plans 216, 216A and 318 are collectively referred to as the "Specific Plans"). The future water supply needs at build-out of the Specific Plans will greatly exceed Oak Valley's Projected Maximum Production, as reflected in Exhibit "B" to the Judgment, and may be as much as 12,811 acre feet per year. Oak Valley has annexed the portion of its property now within the City of Beaumont into the Beaumont-Cherry Valley Water District ("BCVWD"), and is in

the process of annexing the remainder portion of its property into the Yucaipa Valley Water District ("YVWD"), in order to obtain retail water service for the development of the Oak Valley property pursuant to the Specific Plans (for purposes of this subparagraph BCVWD and YVWD are collectively referred to as the "Water Districts", and individually as a "Water District"). YVWD covenants to use its best efforts to finalize the annexation of the Oak Valley property within the Calimesa City limits. Oak Valley, for itself and its successors and assigns, hereby agrees, by this stipulation and upon final annexation of its property by YVWD, to forbear from claiming any future, unexercised, overlying rights in excess of the Projected Maximum Production of Exhibit "B" of 1806 acre feet per year. As consideration for the forbearance, the Water Districts agree to amend their respective Urban Water Management Plans ("UWMP") in 2005 as follows: BCVWD agrees that 2,400 acre feet per year of projected water demand shall be included for the portion of Oak Valley to be served by BCVWD in its UWMP, and YVWD agrees to include 8,000 acre feet per year of projected water demand as a projected demand for the portion of Oak Valley to be served by YVWD in its UWMP by 2025. The Water Districts agree to use their best judgment to accurately revise this estimate to reflect the projected water demands for the UWMP prepared in 2010. Furthermore, the Water Districts further agree that, in providing water availability assessments prior to 2010, as required by Water Code §10910 and water supply verifications as required by Government Code §§66455.3 and

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66473.7, or any similar statute, and in maintaining their respective UWMP, each shall consider the foregoing respective projected water demand figures for Oak Valley as proposed water demands. The intent of the foregoing requirements is to ensure that Oak Valley is credited for the forbearance of its overlying water rights and is fully accounted for in each Water District's UWMP and overall water planning. The Water Districts' actions in performance of the foregoing planning obligations shall not create any right or entitlement to, or priority or allocation in, any particular water supply source, capacity or facility, or any right to receive water service other than by satisfying the applicable Water District's reasonable requirements relating to application for service. Nothing in this subparagraph G is intended to affect or impair the provision of earmarked water to Overlying Parties who request and obtain water service from Appropriator Parties, as set forth in subparagraph III.3.B, above.

H. Persons who would otherwise qualify as Overlying Producers based on an interest in land lying within the City of Banning's service area shall not have the rights described in this Paragraph III.3.

4. Exemption for Minimal Producers

Unless otherwise ordered by the Court, Minimal Producers are exempt from the provisions of this Judgment.

IV. CONTINUING JURISDICTION

Full jurisdiction, power and authority is retained and reserved to the Court for purposes of enabling the Court, upon

application of any Party, by a motion noticed for at least a 30-day period (or consistent with the review procedures of Paragraph VII.6 herein, if applicable), to make such further or supplemental order or directions as may be necessary or appropriate for interim operation of the Beaumont Basin before the Physical Solution is fully operative, or for interpretation, or enforcement or carrying out of this Judgment, and to modify, amend or amplify any of the provisions of this Judgment or to add to the provisions hereof consistent with the rights herein decreed; except that the Court's jurisdiction does not extend to the redetermination of (a) Safe Yield during the first ten years of operation of the Physical Solution, and (b) the fraction of the share of Appropriative Water of each Appropriator.

V. THE PHYSICAL SOLUTION

1. Purpose and Objective

In accordance with the mandate of Section 2 of Article X of the California Constitution, the Court hereby adopts, and orders the parties to comply with, a Physical Solution. The purpose of the Physical Solution is to establish a legal and practical means for making the maximum reasonable beneficial use of the waters of Beaumont Basin, to facilitate conjunctive utilization of surface, ground and Supplemental Waters, and to satisfy the requirements of water users having rights in, or who are dependent upon, the Beaumont Basin. Such Physical Solution requires the definition of the individual rights of all Parties within the Beaumont Basin in a manner which will fairly allocate the native water supplies and which will provide for equitable sharing of costs of Supplemental Water.

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2. Need for Flexibility

The Physical Solution must provide maximum flexibility and adaptability in order that the Watermaster and the Court may be free to use existing and future technological, social, institutional and economic options. To that end, the Court's retained jurisdiction shall be utilized, where appropriate, to supplement the discretion granted herein to the Watermaster.

3. Production and Storage in Accordance With Judgment

This Judgment, and the Physical Solution decreed herein, address all Production and Storage within the Beaumont Basin. Because the Beaumont Basin is at or near a condition of Overdraft, any Production outside the framework of this Judgment and Physical Solution will potentially damage the Beaumont Basin, injure the rights of all Parties, result in the waste of water and interfere with the Physical Solution. The Watermaster shall bring an action or a motion to enjoin any Production that is not in accordance with the terms of this Judgment.

4. General Pattern of Operation

One fundamental premise of the adjudication is that all Producers shall be allowed to pump sufficient water from the Beaumont Basin to meet their respective requirements. Another fundamental premise of the adjudication is that Overlying Parties who pump no more than the amount of their Overlying Water Right as shown on Column 4 of Exhibit "B" hereto, shall not be charged for the replenishment of the Beaumont Basin. To the extent that pumping exceeds five (5) times the share of the Safe Yield assigned to an Overlying Party (Column 4 of Exhibit "B") in any five (5) consecutive years, or the share of Operating Yield

Right of each Appropriator Party, each such Party shall provide funds to enable the Watermaster to replace such Overproduction.

5. Use of Available Groundwater Storage Capacity

A. There exists in the Beaumont Basin a substantial amount of available Groundwater Storage Capacity. Such Capacity can be reasonably used for Stored Water and Conjunctive Use and may be used subject to Watermaster regulation to prevent injury to existing Overlying and Appropriative water rights, to prevent the waste of water, and to protect the right to the use of Supplemental Water in storage and Safe Yield of the Beaumont Basin.

B. There shall be reserved for Conjunctive Use a minimum of 200,000 acre feet of Groundwater Storage Capacity in the Beaumont Basin provided that such amount may be reduced as necessary to prevent injury to existing water rights or existing uses of water within the Basin, and to prevent the waste of water. Any Person may make reasonable beneficial use of the Groundwater Storage Capacity for storage of Supplemental Water; provided, however, that no such use shall be made except pursuant to a written Groundwater Storage Agreement with the Watermaster. The allocation and use of Groundwater Storage Capacity shall have priority and preference for Producers within the Beaumont Basin over storage for export. The Watermaster may, from time-to-time, redetermine the available Groundwater Storage Capacity.

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VI. ADMINISTRATION

1. Administration and Enforcement by Watermaster

The Watermaster shall administer and enforce the provisions of this Judgment and any subsequent order or instructions of the Court.

2. Watermaster Control

The Watermaster is hereby granted discretionary powers to develop and implement a groundwater management plan and program for the Beaumont Basin, which plan shall be filed with and shall be subject to review and approval by, the Court, and which may include water quantity and quality considerations and shall reflect the provisions of this Judgment. Except for the exercise by Overlying Parties of their respective Rights described in Column 4 of Exhibit "B" hereto in accordance with the provisions of the Physical Solution, groundwater extractions and the replenishment thereof, and the storage of Supplemental Water, shall be subject to procedures established and administered by the Watermaster. Such procedures shall be subject to review by the Court upon motion by any Party.

3. Watermaster Standard of Performance

The Watermaster shall, in carrying out its duties and responsibilities herein, act in an impartial manner without favor or prejudice to any Party or purpose of use.

4. Watermaster Appointment

The Watermaster shall consist of a committee composed of persons nominated by the City of Banning, the City of Beaumont, the Beaumont-Cherry Valley Water District, the South Mesa Mutual Water Company and the Yucaipa Valley Water District, each of

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which shall have the right to nominate one representative to the Watermaster committee who shall be an employee of or consultant to the nominating agency. Each such nomination shall be made in writing, served upon the other parties to this Judgment and filed with the Court, which shall approve or reject such nomination. Each Watermaster representative shall serve until a replacement nominee is approved by the Court. The nominating agency shall have the right to nominate that representative's successor.

5. Powers and Duties of the Watermaster

Subject to the continuing supervision and control of the Court, the Watermaster shall have and may exercise the following express powers, and shall perform the following duties, together with any specific powers, authority, and duties granted or imposed elsewhere in this Judgment or hereafter ordered or authorized by the Court in the exercise of its continuing jurisdiction:

A. Rules and Regulations: The adoption of appropriate rules and regulations for the conduct of Watermaster affairs, copies of which shall be provided to all interested parties.

B. Wellhead Protection and Recharge: The identification and management of wellhead protection areas and recharge areas.

C. Well Abandonment: The administration of a well abandonment and well destruction program.

D. Well Construction: The development of minimum well construction specifications and the permitting of new wells.

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E. Mitigation of Overdraft: The mitigation of conditions of uncontrolled overdraft.

F. Replenishment: The acquisition and recharge of Supplemental Water.

G. Monitoring: The monitoring of groundwater levels, ground levels, storage, and water quality.

H. Conjunctive Use: The development and management of conjunctive-use programs.

I. Local Projects: The coordination of construction and operation, by local agencies, of recharge, storage, conservation, water recycling, extraction projects and any water resource management activity within or impacting the Beaumont Basin.

J. Land Use Plans: The review of land use plans and coordination with land use planning agencies to mitigate or eliminate activities that create a reasonable risk of groundwater contamination.

K. Acquisition of Facilities: The purchase, lease and acquisition of all necessary real and personal property, including facilities and equipment.

L. Employment of Experts and Agents: The employment or retention of such technical, clerical, administrative, engineering, accounting, legal or other specialized personnel and consultants as may be deemed appropriate. The Watermaster shall maintain records allocating the cost of such services as well as all other expenses of Watermaster administration.

M. Measuring Devices: Except as otherwise provided

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by agreement the Watermaster shall install and maintain in good operating condition, at the cost of the Watermaster, such necessary measuring devices or meters as Watermaster may deem appropriate. Such devices shall be inspected and tested as deemed necessary by the Watermaster and the cost thereof borne by the Watermaster. Meter repair and retesting will be a Producer expense.

N. Assessments: The Watermaster is empowered to levy and collect the following assessments:

(1) Annual Replenishment Assessments

The Watermaster shall levy and collect assessments in each year, in amounts sufficient to purchase replenishment water to replace Overproduction by any Party.

(2) Annual Administrative Assessments

a. Watermaster Expenses: The expenses of administration of the Physical Solution shall be categorized as either "General Watermaster Administration Expenses", or "Special Project Expenses".

i. General Watermaster Administration Expenses: shall include office rent, labor, supplies, office equipment, incidental expenses and general overhead. General Watermaster Administration Expenses shall be assessed by the Watermaster equally against the Appropriators who have appointed representatives to the Watermaster.

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ii. Special Project Expenses: shall include special engineering, economic or other studies, litigation expenses, meter testing or other major operating expenses. Each such project shall be assigned a task order number and shall be separately budgeted and accounted for. Special Project Expenses shall be allocated to the Appropriators, or portion thereof, on the basis of benefit.

O. Investment of Funds; Borrowing: The Watermaster may hold and invest Watermaster funds as authorized by law, and may borrow, from time-to-time, amounts not exceeding annual receipts.

P. Contracts: The Watermaster may enter into contracts for the performance of any of its powers.

Q. Cooperation With Other Agencies: The Watermaster may act jointly or cooperate with other local, state and federal agencies.

R. Studies: The Watermaster may undertake relevant studies of hydrologic conditions and operating aspects of the management program for the Beaumont Basin.

S. Groundwater Storage Agreements: The Watermaster shall adopt uniform rules and a standard form of agreement for the storage of Supplemental Water, provided that the activities undertaken pursuant to such agreements do not injure any Party.

T. Administration of Groundwater Storage Capacity: Except for the exercise by the Overlying Parties of their

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respective Overlying Water Rights described in Part III, above, in accordance with the provisions of the Physical Solution, all Groundwater Storage Capacity in the Beaumont Basin shall be subject to the Watermaster's rules and regulations, which regulations shall ensure that sufficient storage capacity shall be reserved for local projects. Any Person or entity may apply to the Watermaster to store water in the Beaumont Basin.

U. Accounting for Stored Water: The Watermaster shall calculate additions, extractions and losses and maintain an annual account of all stored water in the Beaumont Basin, and any losses of water supplies or Safe Yield resulting from such stored water.

V. Accounting for New Yield: Recharge of the Beaumont Basin with New Yield water shall be credited to the Party that creates the New Yield. The Watermaster shall make an independent scientific assessment of the estimated New Yield created by each proposed project. New Yield will be allocated on an annual basis, based upon monitoring data and review by the Watermaster.

W. Accounting for Acquisitions of Water Rights: The Watermaster shall maintain an accounting of acquisitions by Appropriators of water otherwise subject to Overlying Water Rights as the result of the provision of water service thereto by an Appropriator.

X. Annual Administrative Budget: The Watermaster shall prepare an annual administrative budget for public review, and shall hold a public hearing on each such budget

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prior to adoption. The budget shall be prepared in sufficient detail so as to make a proper allocation of the expenses and receipts. Expenditures within budgeted items may thereafter be made by the Watermaster as a matter of course.

Y. Redetermining the Safe Yield: The Safe Yield of the Beaumont Basin shall be redetermined at least every 10 years beginning 10 years after the date of entry of this Judgment.

6. Reports and Accounting

(a) Production Reports: Each Pumper shall periodically file, pursuant to Watermaster rules and regulations, a report showing the total production of such Pumper from each well during the preceding report period, and such additional information as the Watermaster may reasonably require.

(b) Watermaster Report and Accounting: The Watermaster shall prepare an annual report of the preceding year's operations, which shall include an audit of all assessments and Watermaster expenditures.

7. Replenishment

Supplemental Water may be obtained by the Watermaster from any source. The Watermaster shall seek the best available quality of Supplemental Water at the most reasonable cost for recharge in the Basin. Sources may include, but are not limited to:

(a) Recycled Water;

(b) State Water Project Water;

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(c) Other imported water.

Replenishment may be accomplished by any reasonable method including:

(a) Spreading and percolation, or injection of water in existing or new facilities; and/or

(b) In-lieu deliveries for direct surface use, in lieu of groundwater extraction.

VII. MISCELLANEOUS PROVISIONS

1. Designation of Address for Notice and Service

Each Party shall designate, in writing to the plaintiff, the name and address to be used for purposes of all subsequent notices and service herein, such designation to be delivered to the plaintiff within 30 days after the Judgment has been entered. The plaintiff shall, within 45 days after judgment has been entered, file the list of designees with the Court and serve the same on the Watermaster and all Parties. Such designation may be changed from time-to-time by filing a written notice of such change with the Watermaster. Any Party desiring to be relieved of receiving notices of Watermaster activity may file a waiver of notice on a form to be provided by the Watermaster. The Watermaster shall maintain, at all times, a current list of Parties to whom notices are to be sent and their addresses for purposes of service. The Watermaster shall also maintain a full current list of names and addresses of all Parties or their successors, as filed herein. Copies of such lists shall be available to any Person. If no designation is made, a Party's designee shall be deemed to be, in order of priority: (i) the Party's attorney of record; or (ii) if the Party does not have an

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attorney of record, the Party itself at the address on the Watermaster list.

2. Intervention After Judgment

Any Person who is neither a Party to this Judgment nor a successor or assignee of a Party to this Judgment may seek to become a party to this Judgment by filing a petition in intervention.

3. Interference with Pumping

Nothing in this judgment shall be deemed to prevent any party from seeking judicial relief against any other party whose pumping activities constitute an unreasonable interference with the complaining party's ability to extract groundwater.

4. Successors and Assigns

This Judgment and all provisions herein shall be binding on and shall inure to the benefit of the heirs, executors, administrators, successors and assigns of the parties hereto.

5. Severability

The provisions of this Judgment are severable. If any provision of this Judgment is held by the Court to be illegal, invalid or unenforceable, that provision shall be excised from the Judgment. The remainder of the terms of the Judgment shall remain in full force and effect and shall in no way be affected, impaired or invalidated by such excision. This Judgment shall be reformed to add, in lieu of the excised provision, a provision as similar in terms to the excised provision as may be possible and be legal, valid and enforceable.

6. Review Procedures

Any action, decision, rule or procedure of the Watermaster

pursuant to this Judgment shall be subject to review by the Court on its own motion or on timely motion by any Party, as follows:

A. Effective Date of Watermaster Action: Any order, decision or action of the Watermaster pursuant to this Judgment on noticed specific agenda items shall be deemed to have occurred on the date of the order, decision or action.

B. Notice of Motion: Any Party may, by a regularly-noticed motion, petition the Court for review of the Watermaster's action or decision pursuant to this Judgment. The motion shall be deemed to be filed when a copy, conformed as filed with the Court, has been delivered to the Watermaster, together with the service fee established by the Watermaster sufficient to cover the cost to photocopy and mail the motion to each Party. The Watermaster shall prepare copies and mail a copy of the motion to each Party or its designee according to the official service list which shall be maintained by the Watermaster according to Part VII, paragraph 1, above. A Party's obligation to serve the notice of a motion upon the Parties is deemed to be satisfied by filing the motion as provided herein. Unless ordered by the Court, any petition shall not operate to stay the effect of any Watermaster action or decision which is challenged.

C. Time for Motion: A motion to review any Watermaster action or decision shall be filed within 90 days after such Watermaster action or decision, except that motions to review Watermaster assessments hereunder shall be filed within 30 days of mailing of notice of the assessment.

D. De Novo Nature of Proceeding: Upon filing of a petition to review a Watermaster action, the Watermaster shall notify the Parties of a date when the Court will take evidence and hear argument. The Court's review shall be de novo and the Watermaster decision or action shall have no evidentiary weight in such proceeding.

E. Decision: The decision of the Court in such proceedings shall be an appealable Supplemental Order in this case. When the same is final, it shall be binding upon the Watermaster and the Parties.

Dated: FEB - 4 2004

GARY TRANBARGER

JUDGE OF THE SUPERIOR COURT

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RIVERSIDE, CALIFORNIA 92501
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Appendix C
50-Year Lifecycle Cost

Inflation 3.75%
Discount rate (Nominal) 5%

Alternative 3 Phase I

Item	1 2027	2 2028	3 2029	4 2030	5 2031	6 2032	7 2033	8 2034	9 2035	10 2036	11 2037	12 2038	13 2039	14 2040	15 2041	16 2042	17 2043	18 2044	19 2045	20 2046	21 2047	22 2048	23 2049	24 2050	25 2051	26 2052	27 2053	28 2054	29 2055	30 2056	31 2057	32 2058	33 2059	34 2060	35 2061	36 2062	37 2063	38 2064	39 2065	40 2066	41 2067	42 2068	43 2069	44 2070	45 2071	46 2072	47 2073	48 2074	49 2075	50 2076	51 2077
Capital	$ 93,487,328	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Annual Costs (Labor, Electrical, Chemical, Repairs)	$ 3,890,000	$ 4,035,875	$ 4,187,220	$ 4,344,241	$ 4,507,150	$ 4,676,168	$ 4,851,525	$ 5,033,457	$ 5,222,211	$ 5,418,044	$ 5,621,221	$ 5,832,017	$ 6,050,717	$ 6,277,619	$ 6,513,030	$ 6,757,269	$ 7,010,666	$ 7,273,566	$ 7,546,325	$ 7,829,312	$ 8,122,911	$ 8,427,520	$ 8,743,552	$ 9,071,436	$ 9,411,615	$ 9,764,550	$ 10,130,721	$ 10,510,623	$ 10,904,771	$ 11,313,700	$ 11,737,964	$ 12,178,137	$ 12,634,818	$ 13,108,623	$ 13,600,197	$ 14,110,204	$ 14,639,337	$ 15,188,312	$ 15,757,873	$ 16,348,794	$ 16,961,873	$ 17,597,944	$ 18,257,867	$ 18,942,537	$ 19,652,882	$ 20,389,865	$ 21,154,485	$ 21,947,778	$ 22,770,819	$ 23,624,725	$ 24,510,652
Civil/Structural, Mechanical, Electrical/Controls Replacements	$ -	$ 868,659	$ 901,234	$ 935,030	$ 970,093	$ 1,006,472	$ 1,044,215	$ 1,083,373	$ 1,123,999	$ 1,166,149	$ 1,209,880	$ 1,255,250	$ 1,302,322	$ 1,351,159	$ 1,401,828	$ 1,454,396	$ 1,508,936	$ 1,565,521	$ 1,624,228	$ 1,685,137	$ 1,748,329	$ 1,813,892	$ 1,881,913	$ 1,952,484	$ 2,025,702	$ 2,101,666	$ 2,180,479	$ 2,262,247	$ 2,347,081	$ 2,435,097	$ 2,526,413	$ 2,621,153	$ 2,719,446	$ 2,821,426	$ 2,927,229	$ 3,037,000	$ 3,150,888	$ 3,269,046	$ 3,391,635	$ 3,518,822	$ 3,650,777	$ 3,787,681	$ 3,929,720	$ 4,077,084	$ 4,229,975	$ 4,388,599	$ 4,553,171	$ 4,723,915	$ 4,901,062	$ 5,084,852	$ 5,275,534
RO Membrane Replacement and MBR Membrane Replacements	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,807,819	$ -	$ -	$ -	$ 3,583,568	$ -	$ -	$ -	$ -	$ 4,573,642	$ -	$ -	$ -	$ -	$ 5,837,255	$ -	$ -	$ -	$ -	$ 7,449,981	$ -	$ -	$ -	$ -	$ 9,508,273	$ -	$ -	$ -	$ -	$ 12,135,234	$ -	$ -	$ -	$ -	$ 15,487,975	$ -	$ -	$ -	$ -	$ 19,767,017	$ -	$ -	$ -	$ -	$ 25,228,280
Total	$ 97,377,328	$ 4,904,534	$ 5,088,454	$ 5,279,271	$ 5,477,244	$ 8,490,460	$ 5,895,739	$ 6,116,829	$ 6,346,210	$ 6,584,193	$ 10,414,669	$ 7,087,267	$ 7,353,039	$ 7,628,778	$ 7,914,858	$ 12,785,307	$ 8,519,602	$ 8,839,087	$ 9,170,553	$ 9,514,449	$ 15,708,496	$ 10,241,412	$ 10,625,465	$ 11,023,920	$ 11,437,317	$ 19,316,197	$ 12,311,199	$ 12,772,869	$ 13,251,852	$ 13,748,797	$ 23,772,650	$ 14,799,290	$ 15,354,264	$ 15,930,049	$ 16,527,426	$ 29,282,438	$ 17,790,224	$ 18,457,358	$ 19,149,509	$ 19,867,615	$ 36,100,626	$ 21,385,625	$ 22,187,586	$ 23,019,621	$ 23,882,856	$ 44,545,481	$ 25,707,656	$ 26,671,693	$ 27,671,881	$ 28,709,577	$ 55,014,466
50-Year Future Cost	**$ 486,892,000**																																																		
50-Year Present Cost	**$ 224,149,159**																																																		

Appendix D
Preliminary Detailed Site Plan and Process Flow Diagram



CIVIL SITE LAYOUT
SCALE: 1" = 50'-0"

N2W ENGINEERING, INC.
3240 El Camino Real. Suite 150
Irvine, CA 92602
WWW.N2WENG.COM

REV.	DATE	DESCRIPTION	DESIGNED BY:	DRAWN BY:	CHECKED BY:	APPROVED BY:

PLOT DATE: 11/6/2023 5:26 PM

STATUS: PRELIMINARY

CLIENT: CITY OF BANNING
789 N. SAN GORGONIO AVENUE
BANNING, CA 92220

PROJECT: BANNING WWTP
2242 CHARLES STREET
BANNING, CA 92220

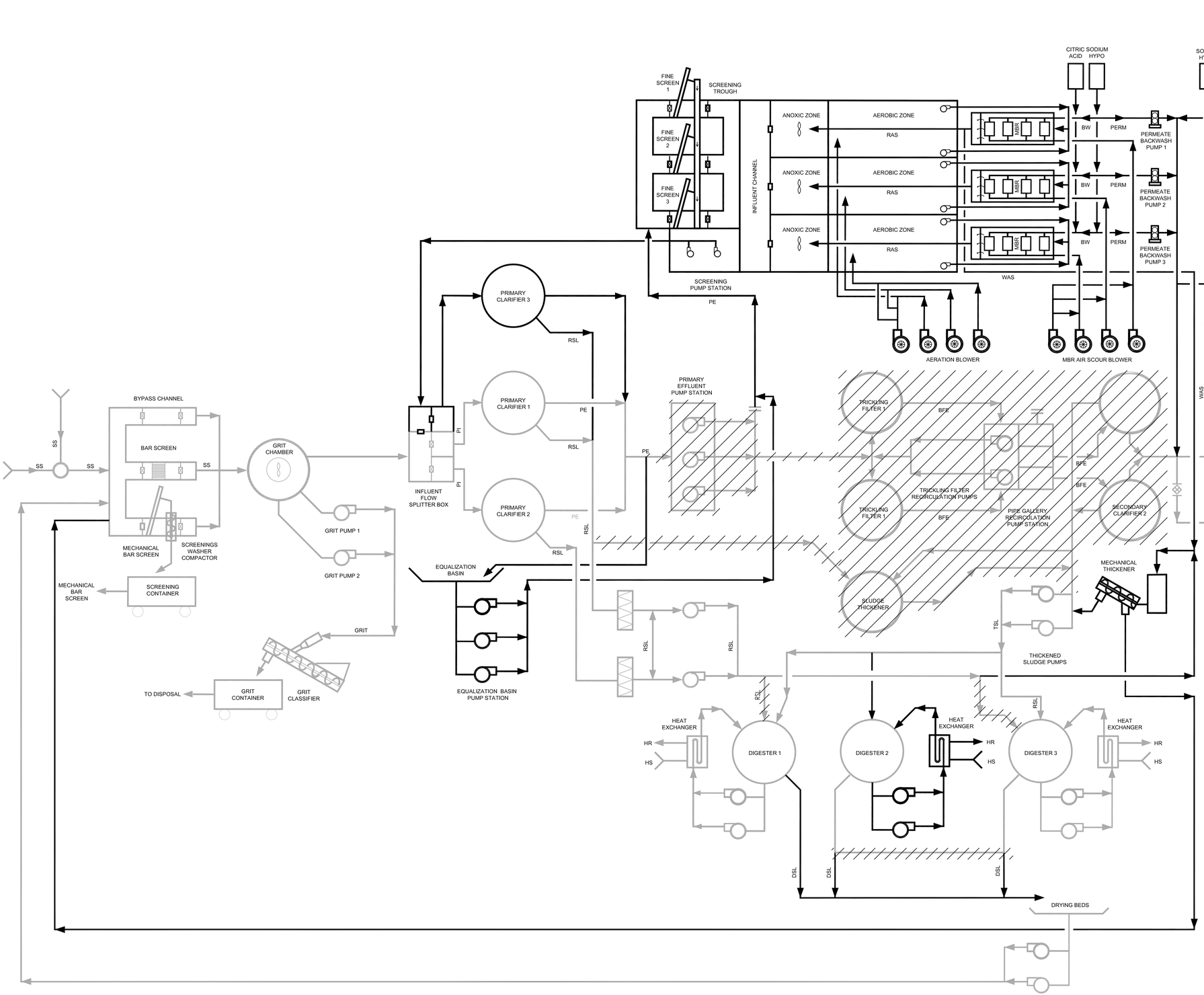
TITLE: CIVIL SITE PLAN

PROJECT NO. 105-0002

ORIGINAL SHEET SIZE ANSI-D

SHEET: C-101

FILE: C:\USERS\JAMES WANG\N2W ENGINEERING\N2W - SERVER\PROJECTS\105-CITY OF BANNING\105-0002 OWNER ADVISOR W&WWTP\6. PROJECT ENGINEERING AND DESIGN\06.01_PRELIMINARY DESIGN\DESIGN DRAWING\MBR SITE PLAN JAMES WANG 11 06 2023.DWG



N2W ENGINEERING, INC.
3240 El Camino Real. Suite 150
Irvine, CA 92602
WWW.N2WENG.COM

REV.	DATE	DESCRIPTION
	DESIGNED BY:	DRAWN BY: CHECKED BY: APPROVED BY:

PLOT DATE: 11/6/2023 5:16 PM

STATUS: PRELIMINARY

CLIENT:
CITY OF BANNING
789 N. SAN GORGONIO AVENUE
BANNING, CA 92220

PROJECT:
BANNING WWTP
2242 CHARLES STREET
BANNING, CA 92220

TITLE:
PROCESS FLOW DIAGRAM

PROJECT NO.
105-0002

ORIGINAL SHEET SIZE
ANSI-D

SHEET:
G-101

FILE: C:\USERS\JAMES WANG\N2W ENGINEERING\N2W - SERVER\PROJECTS\105-CITY OF BANNING\105-0002 OWNER ADVISOR W&WWTP\6. PROJECT ENGINEERING AND DESIGN\06.01_PRELIMINARY DESIGN\DESIGN DRAWING\MBR PFD 11 04 2023.DWG

Appendix E
Preliminary Capital Cost Estimate

PRELIMINARY CONSTRUCTION COST OPINION - RO System (Phase I)

Project: City of Banning MBR
Client: City of Banning MBR
Location: City of Banning

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	UNIT LABOR	UNIT LABOR COST	MATERIAL SUBTOTAL	MATERIAL TOTAL	LABOR SUBTOTAL	MATERIAL & INSTALLATION SUBTOTAL	MATERIAL & INSTALLATION TOTAL
	Division 01 - General Requirements										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 02 - Site Work										
	Site Clearing and General Demolition (Inlcuded in MBR cost)	1	LS	$ -			$0			$0	
	Excavation for 8" PVC RO Pipelines	556	CY	$ 20			$11,111			$11,111	
	Backfill/Compaction for 8" PVC RO Pipelines	536	CY	$ 20			$10,723			$10,723	
	Material Disposal for 8" PVC RO Pipelines	19	CY	$ 10			$194			$194	
	Total							**$22,100**			**$22,028**
	Division 03 - Concrete										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 04 - CMU										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 05 - Metals										
	Pipe Support	1	LS	$ 15,000			$15,000			$15,000	
	Total							**$15,000**			**$15,000**
	Division 07 - Thermal and Moisture Protection										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 08 - Doors and Windows										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 09 - Finishes										
	Painting and Coating	1	LS	$ 15,000			$15,000			$15,000	
	Total							**$15,000**			**$15,000**
	Division 10 - Specialties										
	Identification Device	1	LS	$ 5,000			$5,000			$5,000	
	Signage	1	LS	$ 5,000			$5,000			$5,000	
	Total							**$10,000**			**$10,000**
	Division 11 - Equipment										
	RO System (0.8 MGD, Includes Chemical Dosing System)	1	LS	$ 1,035,000			$1,035,000		$ 207,000	$1,242,000	
	RO Effluent Pumps (700 gpm @ 30 ft 10 HP)	2	EA	$ 30,000			$60,000		$ 12,000	$72,000	
	CIP Skid for 8" Membrane	1	EA	$ 38,611			$38,611		$ 7,722	$46,333	
	Total							**$1,133,700**			**$1,360,333**
	Division 13 - Speciality										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 15 - Mechanical										
	NP-1 Effluent to RO (8" PVC)	750	LF	$ 100			$75,000		$ 15,000	$90,000	
	RO Effluent to NPR Pipeline (8" PVC)	750	LF	$ 100			$75,000		$ 15,000	$90,000	
	Suction/Discharge Plug Valve (8")	4	EA	$ 700			$2,800		$ 560	$3,360	
	Discharge Swing Check Valve (8")	2	EA	$ 1,600			$3,200		$ 640	$3,840	
	8" 45/ 90 Degree Elbows	8	EA	$ 400			$3,200		$ 640	$4,000	
	Misc Piping	1	LS	$ 10,000			$10,000		$ 2,000	$12,000	
	Total							**$169,200**			**$203,200**
	Division 16 - Electrical										
	Electrical (Control Panel, Service Metering, Conduit,Wiring, Lighting, Grounding, VFD, Soft Starter, etc)	1	LS	$ 340,110			$340,110		$ -	$340,110	
	Total							**$340,200**			**$340,110**
	Division 17 - Instrumentation										
	Plant SCADA and Instrumentation (PLC, Master Control Panel, SCADA, Programming, etc)	1	LS	$ 136,044			$136,044		$ -	$136,044	
	Total							**$136,100**			**$136,044**
	Construction Total										**$2,101,716**
	Contingency and Construction Level of Difficulties		25%								$525,429
										Subtotal 1	**$2,627,144**
	Mobilization and Insurance (Percentage of Subtotal 1)		5%								$131,357
										Subtotal 2	**$2,758,502**
	General Conditions (Percentage of Subtotal 2)		5%								$137,925
										Subtotal 3	**$2,896,427**
	Contractor Profit (Percentage of Subtotal 3)		15%								$434,464
										Subtotal 4	**$3,330,891**
	Escalation to Mid-Point of Construction Assume 2022 (Percentage of Subtotal 4)		5%								$166,545
										Subtotal 5	**$3,497,500**

PRELIMINARY CONSTRUCTION COST OPINION - Brine Drying Beds and Evaporators (Phase I)

Project: City of Banning MBR
Client: City of Banning MBR
Location: City of Banning

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	UNIT LABOR	UNIT LABOR COST	MATERIAL SUBTOTAL	MATERIAL TOTAL	LABOR SUBTOTAL	MATERIAL & INSTALLATION SUBTOTAL	MATERIAL & INSTALLATION TOTAL
	Division 01 - General Requirements										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 02 - Site Work										
	Demolition	1	LS	$ 15,000			$15,000			$15,000	
	Site excavation	121000.00	CY	$ 10			$ 1,210,000			$1,210,000	
	Total							**$1,225,000**			**$1,225,000**
	Division 03 - Concrete										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 04 - CMU										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 05 - Metals										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 07 - Thermal and Moisture Protection										
	60 mil HDPE - Double Lined Pond	653400	SQ FT	$ 3			$1,633,500			$1,633,500	
	Total							**$1,633,500**			**$1,633,500**
	Division 08 - Doors and Windows										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 09 - Finishes										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 10 - Specialties										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 11 - Equipment										
	Evaporator	10	EA	$ 30,000			$300,000			$300,000	
	Total							**$300,000**			**$300,000**
	Division 13 - Speciality										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 15 - Mechanical										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 16 - Electrical										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 17 - Instrumentation										
	Not Used									$0	
	Total							**$0**			**$0**
	Construction Total										**$3,158,500**
	Contingency and Construction Level of Difficulties		25%								$789,625
										Subtotal 1	**$3,948,125**
	Mobilization and Insurance (Percentage of Subtotal 1)		5%								$197,406
										Subtotal 2	**$4,145,531**
	General Conditions (Percentage of Subtotal 2)		5%								$207,277
										Subtotal 3	**$4,352,808**
	Contractor Profit (Percentage of Subtotal 3)		15%								$652,921
										Subtotal 4	**$5,005,729**
	Escalation to Mid-Point of Construction Assume 2022 (Percentage of Subtotal 4)		5%								$250,286
										Subtotal 5	**$5,256,100**

PRELIMINARY CONSTRUCTION COST OPINION - MBR Facility (Phase I)

Project: City of Banning MBR
Client: City of Banning MBR
Location: City of Banning

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	UNIT LABOR	UNIT LABOR COST	MATERIAL SUBTOTAL	MATERIAL TOTAL	LABOR SUBTOTAL	MATERIAL & INSTALLATION SUBTOTAL	MATERIAL & INSTALLATION TOTAL
	Division 01 - General Requirements										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 02 - Site Work										
	Site Cleaning	1	LS	$ 50,000			$50,000			$50,000	
	Yard Piping	1	LS	$ 500,000			$500,000			$500,000	
	Excavation	33,217	CY	$ 20			$664,344			$664,344	
	Backfill	18,906	CY	$ 20			$378,121			$378,121	
	Soil Disposal Onsite	19791.111	CY	$ 10			$197,911			$197,911	
	Paving	1	LS	$ 200,000			$200,000			$200,000	
	Grading	1.00	LS	$ 400,000			$400,000			$400,000	
	Total							**$2,390,400**			**$2,391,000**
	Division 03 - Concrete										
	Concrete	3,389	CY	$ 1,250			$4,236,852			$4,236,852	
								$4,236,900			**$4,237,000**
	Division 04 - CMU										
	Building (Blower, MCC, Lab, Storage, Chemical, Pump, RO)	7200	SF	$ 500			$3,600,000			$3,600,000	
	Canopy for MBR	2800	SF	$ 120			$336,000			$336,000	
								$3,936,000			**$3,936,000**
	Division 05 - Metals										
	Pipe Support	1	LS	$ 250,000			$250,000			$250,000	
								$250,000			**$250,000**
	Division 07 - Thermal and Moisture Protection										
	Not Used									$0	
								$0			**$0**
	Division 08 - Doors and Windows										
	Not Used									$0	
								$0			**$0**
	Division 09 - Finishes										
	Painting and Coating (Concrete, Equipment, Piping)	1	LS	$ 250,000			$250,000			$250,000	
	Total							**$250,000**			**$250,000**
	Division 10 - Specialties										
	Identification Device and Signage Not Used	1	LS	$ 50,000			$50,000			$50,000	
	Total							**$50,000**			**$50,000**
	Division 11 - Equipment										
	Influent Fine Screen	3	EA	$ 345,000			$1,035,000		$ 207,000	$1,242,000	
	MBR	1	EA	$9,660,000			$9,660,000		$2,415,000	$12,075,000	
	Aeration Blower	4	EA	$ 276,000			$1,104,000		$ 220,800	$1,324,800	
	Aeration Diffuser	2000	EA	$ 276			$552,000		$ 110,400	$662,400	
	Sludge Thickener	2	EA	$ 150,000			$300,000		$ 60,000	$360,000	
	Total							**$12,651,000**			**$15,665,000**
	Division 14 - Conveying Systems										
	Bridge Crane	1	LS	$ 100,000			$100,000			$100,000	
	Total							**$100,000**			**$100,000**
	Division 15 - Mechanical										
	Piping, Fitting, Valving	1	LS	$2,000,000			$2,000,000		$1,000,000	$3,000,000	
	Total							**$2,000,000**			**$3,000,000**
	Division 16 - Electrical										
	Control Panel for Pump and Blower, Conduit, Wiring and Misc Electrical	1	LS	$4,500,000			$4,500,000		$1,125,000	$5,625,000	
	Total							**$4,500,000**			**$5,625,000**
	Division 17 - Instrumentation										
	System Control / SCADA	1	LS	$1,250,000			$1,250,000		$ 312,500	$1,562,500	
	Total							**$1,250,000**			**$1,563,000**
	Construction Total										**$24,416,000**
	Contingency and Construction Level of Difficulties		25%								$6,104,000
										Subtotal 1	**$30,520,000**
	Mobilization and Insurance (Percentage of Subtotal 1)		5%								$1,526,000
										Subtotal 2	**$32,046,000**
	General Conditions (Percentage of Subtotal 2)		6%								$1,922,760
										Subtotal 3	**$33,968,760**
	Contractor Profit (Percentage of Subtotal 3)		15%								$5,095,314
										Subtotal 4	**$39,064,074**
	Escalation to Mid-Point of Construction Assume 2022 (Percentage of Subtotal 4)		3%								$1,171,922
										Subtotal 5	**$40,236,000**
	Total									**TOTAL COST (with Packaged MBR)**	**$52,887,000**

PRELIMINARY CONSTRUCTION COST OPINION - Primary Clarifier (Phase I)

Project: City of Banning MBR
Client: City of Banning MBR
Location: City of Banning

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	UNIT LABOR	UNIT LABOR COST	MATERIAL SUBTOTAL	MATERIAL TOTAL	LABOR SUBTOTAL	MATERIAL & INSTALLATION SUBTOTAL	MATERIAL & INSTALLATION TOTAL
	Division 01 - General Requirements										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 02 - Site Work										
	Site Clearing	1	LS	$ 10,000			$ 10,000			$10,000	
	Site General Demolition (Building and Pavement)	1	LS	$ 10,000			$ 10,000			$10,000	
	Site Material Disposal	891.44	CY	$ 10			$ 8,914			$8,914	
	Site Excavation	1565.68	CY	$ 20			$ 31,314			$31,314	
	Site Backfill	674.24	CY	$ 20			$ 13,485			$13,485	
	Shoring	2915.40	SF	$ 50			$ 145,770			$145,770	
	PI Primary Influent Site Material Disposal	0.05	CY	$ 10			$1			$1	
	PI Primary Influent Site Excavation	62.52	CY	$ 20			$1,250			$1,250	
	PI Primary Influent Backfill	62.47	CY	$ 20			$1,249			$1,249	
	PE Primary Effluent Site Material Disposal	0.05	CY	$ 10			$1			$1	
	PE Primary Effluent Site Excavation	57.19	CY	$ 20			$1,144			$1,144	
	PE Primary Effluent Backfill	57.13	CY	$ 20			$1,143			$1,143	
	Total							**$224,300**			**$224,300**
	Division 03 - Concrete										
	Concrete Pad	169.65	CY	$ 1,250			$ 212,058			$212,058	
	Primary Clarifier	81.60	CY	$ 1,250			$ 102,006			$102,006	
	Total							**$314,100**			**$314,100**
	Division 04 - CMU										
	Platform									$0	
	Total							**$0**			**$0**
	Division 05 - Metals										
	Pipe Supports, Handrail	1	LS	$ 40,000			$ 40,000			$40,000	
	Total							**$40,000**			**$40,000**
	Division 07 - Thermal and Moisture Protection										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 08 - Doors and Windows										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 09 - Finishes										
	Painting and Coating	1	LS	$ 20,000			$ 20,000			$20,000	
	Total							**$20,000**			**$20,000**
	Division 10 - Specialties										
	Signage	1	LS	$ 10,000			$ 10,000			$10,000	
	Total							**$10,000**			**$10,000**
	Division 11 - Equipment										
	Center Drive, Scraper, Platform	1	LS	$ 250,000			$ 250,000		$ 50,000	$375,000	
	Total							**$250,000**			**$375,000**
	Division 13 - Speciality										
	Not Used	0	LS							$0	
	Total							**$0**			**$0**
	Division 15 - Mechanical										
	PI Primary Influent (12" steel)	70.33	LF	$ 200			$14,067		$ 2,813	$16,880	
	PE Primary Effluent (12" steel)	64.33	LF	$ 200			$12,867		$ 2,573	$15,440	
	Misc Piping	1	LS	$ 30,000			$ 30,000		$ 6,000	$37,500	
	Total							**$56,940**			**$69,820**
	Division 16 - Electrical										
	Electrical (Control Panel, Service Metering, Conduit,Wiring, Lighting, Grounding, VFD, Soft Starter, etc)	1	LS	$ 75,000			$ 75,000		$ -	$75,000	
	Total							**$75,000**			**$75,000**
	Division 17 - Instrumentation										
	Plant SCADA and Instrumentation (PLC, Master Control Panel, SCADA, Programming, etc)	1	LS	$ 20,000			$ 20,000		$ -	$20,000	
	Total							**$20,000**			**$40,000**
	Construction Total										**$1,168,220**
	Contingency and Construction Level of Difficulties		25%								$292,055
										Subtotal 1	**$1,460,275**
	Mobilization and Insurance (Percentage of Subtotal 1)		5%								$73,014
										Subtotal 2	**$1,533,289**
	General Conditions (Percentage of Subtotal 2)		5%								$76,664
										Subtotal 3	**$1,609,953**
	Contractor Profit (Percentage of Subtotal 3)		15%								$241,493
										Subtotal 4	**$1,851,446**
	Escalation to Mid-Point of Construction Assume 2022 (Percentage of Subtotal 4)		5%								$92,572
										Subtotal 5	**$1,944,100**

PRELIMINARY CONSTRUCTION COST OPINION - Chlorine Tank (Phase I)

Project: City of Banning MBR
Client: City of Banning MBR
Location: City of Banning

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	UNIT LABOR	UNIT LABOR COST	MATERIAL SUBTOTAL	MATERIAL TOTAL	LABOR SUBTOTAL	MATERIAL & INSTALLATION SUBTOTAL	MATERIAL & INSTALLATION TOTAL
	Division 01 - General Requirements										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 02 - Site Work										
	Site Clearing	1	LS	$ 10,000			$ 10,000			$10,000	
	Site Material Disposal	2816.00	CY	$ 10			$ 28,160			$28,160	
	Site Excavation	6332.50	CY	$ 20			$ 126,650			$126,650	
	Site Backfill	3516.50	CY	$ 20			$ 70,330			$70,330	
	FE Chlorination Pipe Site Material Disposal	0.05	CY	$ 10			$1			$1	
	FE Chlorination Pipe Site Excavation	66.67	CY	$ 20			$1,333			$1,333	
	FE Chlorination Pipe Backfill	66.61	CY	$ 20			$1,332			$1,332	
	Total							**$237,900**			**$237,900**
	Division 03 - Concrete										
	Concrete Tank	690.24	CY	$ 1,300			$ 897,313			$897,313	
	Total							**$897,400**			**$897,400**
	Division 04 - CMU										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 05 - Metals										
	Pipe Support	1	LS	$ 20,000			$ 20,000			$20,000	
	Total							**$20,000**			**$20,000**
	Division 07 - Thermal and Moisture Protection										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 08 - Doors and Windows										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 09 - Finishes										
	Painting and Coating	1	LS	$ 10,000			$ 10,000			$10,000	
	Total							**$10,000**			**$10,000**
	Division 10 - Specialties										
	Signage	1	LS	$ 10,000			$ 10,000			$10,000	
	Total							**$10,000**			**$10,000**
	Division 11 - Equipment										
	Tank - Schneider - 1500 gallon (Ilnstallation - 25%)	2	EA	$ 20,000			$ 40,000		$ 10,000	$62,500	
	Chemical Injection Package	2	EA	$ 15,000			$ 30,000		$ 6,000	$45,000	
	Total							**$70,000**			**$107,500**
	Division 13 - Speciality										
	Not Used	0	LS							$0	
	Total							**$0**			**$0**
	Division 15 - Mechanical										
	MBR Effluent to Chlorination (16" steel)	75	LF	$ 400			$ 30,000.00		$ 6,000	$36,000	
	Misc Piping	1	LS	$ 20,000			$ 20,000		$ 4,000	$25,000	
	Total							**$50,000**			**$61,000**
	Division 16 - Electrical										
	Electrical (Control Panel, Service Metering, Conduit,Wiring, Lighting, Grounding, VFD, Soft Starter, etc)	1	LS	$ 25,000			$ 25,000		$ -	$25,000	
	Total							**$25,000**			**$25,000**
	Division 17 - Instrumentation										
	Plant SCADA and Instrumentation (PLC, Master Control Panel, SCADA, Programming, etc)	1	LS	$ 30,000			$ 30,000		$ -	$30,000	
	Total							**$30,000**			**$60,000**
	Construction Total										**$1,428,800**
	Contingency and Construction Level of Difficulties		25%								$357,200
										Subtotal 1	**$1,786,000**
	Mobilization and Insurance (Percentage of Subtotal 1)		5%								$89,300
										Subtotal 2	**$1,875,300**
	General Conditions (Percentage of Subtotal 2)		5%								$93,765
										Subtotal 3	**$1,969,065**
	Contractor Profit (Percentage of Subtotal 3)		15%								$295,360
										Subtotal 4	**$2,264,425**
	Escalation to Mid-Point of Construction Assume 2022 (Percentage of Subtotal 4)		5%								$113,221
										Subtotal 5	**$2,377,700**

PRELIMINARY CONSTRUCTION COST OPINION - Upgrade Ferric Sulfate Feed/Storage System (Phase I)

Project: City of Banning MBR
Client: City of Banning MBR
Location: City of Banning

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	UNIT LABOR	UNIT LABOR COST	MATERIAL SUBTOTAL	MATERIAL TOTAL	LABOR SUBTOTAL	MATERIAL & INSTALLATION SUBTOTAL	MATERIAL & INSTALLATION TOTAL
	Division 01 - General Requirements										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 02 - Site Work										
	Site Material Disposal	22.52	CY	$ 80			$ 1,801			$1,801	
	Site Excavation	33.78	CY	$ 30			$ 1,013			$1,013	
	Site Backfill	11.26	CY	$ 50			$ 563			$563	
	Total							**$3,400**			**$3,378**
	Division 03 - Concrete										
	Concrete Pad and Walls	19.64	CY	$ 1,500			$ 29,460			$29,460	
	Total							**$29,500**			**$29,500**
	Division 04 - CMU										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 05 - Metals										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 07 - Thermal and Moisture Protection										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 08 - Doors and Windows										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 09 - Finishes										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 10 - Specialties										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 11 - Equipment										
	Ferric Sulfate Tank	1	EA	$ 6,250			$ 6,250		$ 1,250	$9,375	
	Chemical Injection Package	1	EA	$ 31,250			$ 31,250		$ 6,250	$46,875	
	Total							**$37,500**			**$56,250**
	Division 13 - Speciality										
	Not Used	0	LS							$0	
	Total							**$0**			**$0**
	Division 15 - Mechanical										
	Misc Piping	1	LS	$ 12,000			$ 12,000		$ 2,400	$15,000	
	Total							**$12,000**			**$15,000**
	Division 16 - Electrical										
	Electrical/Controls	1	LS	$ 75,000			$ 75,000		$ -	$75,000	
	Total							**$75,000**			**$75,000**
	Division 17 - Instrumentation										
	Not Used	0	LS							$0	
	Total							**$0**			**$0**
	Construction Total										**$179,128**
	Contingency and Construction Level of Difficulties		25%								$44,782
										Subtotal 1	**$223,910**
	Mobilization and Insurance (Percentage of Subtotal 1)		5%								$11,195
										Subtotal 2	**$235,105**
	General Conditions (Percentage of Subtotal 2)		5%								$11,755
										Subtotal 3	**$246,860**
	Contractor Profit (Percentage of Subtotal 3)		15%								$37,029
										Subtotal 4	**$283,890**
	Escalation to Mid-Point of Construction Assume 2022 (Percentage of Subtotal 4)		5%								$14,194
										Subtotal 5	**$298,100**

PRELIMINARY CONSTRUCTION COST OPINION - Digester Coating (Phase I)

Project: City of Banning MBR
Client: City of Banning MBR
Location: City of Banning

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	UNIT LABOR	UNIT LABOR COST	MATERIAL SUBTOTAL	MATERIAL TOTAL	LABOR SUBTOTAL	MATERIAL & INSTALLATION SUBTOTAL	MATERIAL & INSTALLATION TOTAL
	Division 01 - General Requirements										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 02 - Site Work										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 03 - Concrete										
	Concrete Rehabilitation	1	LS	$ 100,000			$ 100,000			$100,000	
	Total							**$100,000**			**$100,000**
	Division 04 - CMU										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 05 - Metals										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 07 - Thermal and Moisture Protection										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 08 - Doors and Windows										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 09 - Finishes										
	Internal Coating	2,308	LS	$ 60			$ 138,474			$138,474	
	Total							**$138,500**			**$138,474**
	Division 10 - Specialties										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 11 - Equipment										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 13 - Speciality										
	Confined Space Entry	1	LS	$ 40,000			$ 40,000			$40,000	
	Total							**$40,000**			**$40,000**
	Division 15 - Mechanical										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 16 - Electrical										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 17 - Instrumentation										
	Not Used									$0	
	Total							**$0**			**$0**
	Construction Total										**$278,474**
	Contingency and Construction Level of Difficulties		25%								$69,619
										Subtotal 1	**$348,093**
	Mobilization and Insurance (Percentage of Subtotal 1)		5%								$17,405
										Subtotal 2	**$365,497**
	General Conditions (Percentage of Subtotal 2)		5%								$18,275
										Subtotal 3	**$383,772**
	Contractor Profit (Percentage of Subtotal 3)		15%								$57,566
										Subtotal 4	**$441,338**
	Escalation to Mid-Point of Construction Assume 2022 (Percentage of Subtotal 4)		5%								$22,067
										Subtotal 5	**$463,500**

PRELIMINARY CONSTRUCTION COST OPINION - Replace Piping in Grit Chamber (Phase I)

Project: City of Banning MBR
Client: City of Banning MBR
Location: City of Banning

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	UNIT LABOR	UNIT LABOR COST	MATERIAL SUBTOTAL	MATERIAL TOTAL	LABOR SUBTOTAL	MATERIAL & INSTALLATION SUBTOTAL	MATERIAL & INSTALLATION TOTAL
	Division 01 - General Requirements										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 02 - Site Work										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 03 - Concrete										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 04 - CMU										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 05 - Metals										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 07 - Thermal and Moisture Protection										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 08 - Doors and Windows										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 09 - Finishes										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 10 - Specialties										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 11 - Equipment										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 13 - Speciality										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 15 - Mechanical										
	4" Piping	100	LF	$ 350			$ 35,000			$35,000	
	Total							**$35,000**			**$35,000**
	Division 16 - Electrical										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 17 - Instrumentation										
	Not Used									$0	
	Total							**$0**			**$0**
	Construction Total										**$35,000**
	Contingency and Construction Level of Difficulties		25%								$8,750
										Subtotal 1	**$43,750**
	Mobilization and Insurance (Percentage of Subtotal 1)		5%								$2,188
										Subtotal 2	**$45,938**
	General Conditions (Percentage of Subtotal 2)		5%								$2,297
										Subtotal 3	**$48,234**
	Contractor Profit (Percentage of Subtotal 3)		15%								$7,235
										Subtotal 4	**$55,470**
	Escalation to Mid-Point of Construction Assume 2022 (Percentage of Subtotal 4)		5%								$2,773
										Subtotal 5	**$58,300**

PRELIMINARY CONSTRUCTION COST OPINION - Replace TF Center Drives (Phase I)

Project: City of Banning MBR
Client: City of Banning MBR
Location: City of Banning

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	UNIT LABOR	UNIT LABOR COST	MATERIAL SUBTOTAL	MATERIAL TOTAL	LABOR SUBTOTAL	MATERIAL & INSTALLATION SUBTOTAL	MATERIAL & INSTALLATION TOTAL
	Division 01 - General Requirements										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 02 - Site Work										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 03 - Concrete										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 04 - CMU										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 05 - Metals										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 07 - Thermal and Moisture Protection										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 08 - Doors and Windows										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 09 - Finishes										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 10 - Specialties										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 11 - Equipment										
	Center Drive (2 Total, 1 Per Trickling Filter)	1	LS	$ 250,000			$250,000		$ 50,000	$300,000	
	Total							**$250,000**			**$300,000**
	Division 13 - Speciality										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 15 - Mechanical										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 16 - Electrical										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 17 - Instrumentation										
	Not Used									$0	
	Total							**$0**			**$0**
	Construction Total										**$300,000**
	Contingency and Construction Level of Difficulties		25%								$75,000
										Subtotal 1	**$375,000**
	Mobilization and Insurance (Percentage of Subtotal 1)		5%								$18,750
										Subtotal 2	**$393,750**
	General Conditions (Percentage of Subtotal 2)		5%								$19,688
										Subtotal 3	**$413,438**
	Contractor Profit (Percentage of Subtotal 3)		15%								$62,016
										Subtotal 4	**$475,453**
	Escalation to Mid-Point of Construction Assume 2022 (Percentage of Subtotal 4)		5%								$23,773
										Subtotal 5	**$499,300**

PRELIMINARY CONSTRUCTION COST OPINION - Replace East Primary Clarifier Center Drive (Phase I)

Project: City of Banning MBR
Client: City of Banning MBR
Location: City of Banning

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	UNIT LABOR	UNIT LABOR COST	MATERIAL SUBTOTAL	MATERIAL TOTAL	LABOR SUBTOTAL	MATERIAL & INSTALLATION SUBTOTAL	MATERIAL & INSTALLATION TOTAL
	Division 01 - General Requirements										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 02 - Site Work										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 03 - Concrete										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 04 - CMU										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 05 - Metals										
	Pipe Support	1	LS	$ -			$0			$0	
	Total							**$0**			**$0**
	Division 07 - Thermal and Moisture Protection										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 08 - Doors and Windows										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 09 - Finishes										
	Painting and Coating	1	LS	$ -			$0			$0	
	Total							**$0**			**$0**
	Division 10 - Specialties										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 11 - Equipment										
	Center Drive (for East Primary Clarifier)	1	LS	$ 50,000			$50,000		$ 10,000	$60,000	
	Total							**$50,000**			**$60,000**
	Division 13 - Speciality										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 15 - Mechanical										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 16 - Electrical										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 17 - Instrumentation										
	Not Used									$0	
	Total							**$0**			**$0**
	Construction Total										**$60,000**
	Contingency and Construction Level of Difficulties		25%								$15,000
										Subtotal 1	**$75,000**
	Mobilization and Insurance (Percentage of Subtotal 1)		5%								$3,750
										Subtotal 2	**$78,750**
	General Conditions (Percentage of Subtotal 2)		5%								$3,938
										Subtotal 3	**$82,688**
	Contractor Profit (Percentage of Subtotal 3)		15%								$12,403
										Subtotal 4	**$95,091**
	Escalation to Mid-Point of Construction Assume 2022 (Percentage of Subtotal 4)		5%								$4,755
										Subtotal 5	**$99,900**

PRELIMINARY CONSTRUCTION COST OPINION - Replace Existing PVC Digester Gas Piping (Phase I)

Project: City of Banning MBR
Client: City of Banning MBR
Location: City of Banning

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	UNIT LABOR	UNIT LABOR COST	MATERIAL SUBTOTAL	MATERIAL TOTAL	LABOR SUBTOTAL	MATERIAL & INSTALLATION SUBTOTAL	MATERIAL & INSTALLATION TOTAL
	Division 01 - General Requirements										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 02 - Site Work										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 03 - Concrete										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 04 - CMU										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 05 - Metals										
	Pipe Support	1	LS	$ -			$0			$0	
	Total							**$0**			**$0**
	Division 07 - Thermal and Moisture Protection										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 08 - Doors and Windows										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 09 - Finishes										
	Painting and Coating	1	LS	$ -			$0			$0	
	Total							**$0**			**$0**
	Division 10 - Specialties										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 11 - Equipment										
	Valves	1	LS	$ -			$0		$ -	$0	
	Total							**$0**			**$0**
	Division 13 - Speciality										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 15 - Mechanical										
	2"/3" PVC Piping	50	LF	$ 100			$5,000		$ 5,000	$10,000	
	Total							**$5,000**			**$10,000**
	Division 16 - Electrical										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 17 - Instrumentation										
	Not Used									$0	
	Total							**$0**			**$0**
	Construction Total										**$10,000**
	Contingency and Construction Level of Difficulties		25%								$2,500
										Subtotal 1	**$12,500**
	Mobilization and Insurance (Percentage of Subtotal 1)		5%								$625
										Subtotal 2	**$13,125**
	General Conditions (Percentage of Subtotal 2)		5%								$656
										Subtotal 3	**$13,781**
	Contractor Profit (Percentage of Subtotal 3)		15%								$2,067
										Subtotal 4	**$15,848**
	Escalation to Mid-Point of Construction Assume 2022 (Percentage of Subtotal 4)		5%								$792
										Subtotal 5	**$16,700**

PRELIMINARY CONSTRUCTION COST OPINION - Replace Digester Hot Water Boiler (Phase I)

Project: City of Banning MBR
Client: City of Banning MBR
Location: City of Banning

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	UNIT LABOR	UNIT LABOR COST	MATERIAL SUBTOTAL	MATERIAL TOTAL	LABOR SUBTOTAL	MATERIAL & INSTALLATION SUBTOTAL	MATERIAL & INSTALLATION TOTAL
	Division 01 - General Requirements										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 02 - Site Work										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 03 - Concrete										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 04 - CMU										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 05 - Metals										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 07 - Thermal and Moisture Protection										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 08 - Doors and Windows										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 09 - Finishes										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 10 - Specialties										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 11 - Equipment										
	Hot Water Boiler	1	LS	$ 81,000			$81,000		$ 25,000	$106,000	
	Total							**$81,000**			**$106,000**
	Division 13 - Speciality										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 15 - Mechanical										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 16 - Electrical										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 17 - Instrumentation										
	Not Used									$0	
	Total							**$0**			**$0**
	Construction Total										**$106,000**
	Contingency and Construction Level of Difficulties		25%								$26,500
										Subtotal 1	**$132,500**
	Mobilization and Insurance (Percentage of Subtotal 1)		5%								$6,625
										Subtotal 2	**$139,125**
	General Conditions (Percentage of Subtotal 2)		5%								$6,956
										Subtotal 3	**$146,081**
	Contractor Profit (Percentage of Subtotal 3)		15%								$21,912
										Subtotal 4	**$167,993**
	Escalation to Mid-Point of Construction Assume 2022 (Percentage of Subtotal 4)		5%								$8,400
										Subtotal 5	**$176,400**

PRELIMINARY CONSTRUCTION COST OPINION - Replace TF Effluent Distribution Valves (4) (Phase I)

Project: City of Banning MBR
Client: City of Banning MBR
Location: City of Banning

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	UNIT LABOR	UNIT LABOR COST	MATERIAL SUBTOTAL	MATERIAL TOTAL	LABOR SUBTOTAL	MATERIAL & INSTALLATION SUBTOTAL	MATERIAL & INSTALLATION TOTAL
	Division 01 - General Requirements										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 02 - Site Work										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 03 - Concrete										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 04 - CMU										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 05 - Metals										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 07 - Thermal and Moisture Protection										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 08 - Doors and Windows										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 09 - Finishes										
	Painting and Coating	1	LS	$ -				$0		$0	
	Total							**$0**			**$0**
	Division 10 - Specialties										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 11 - Equipment										
	Trickling Filter Distribution Gate Valve (18")	4	EA	$ 20,000			$80,000		$ 25,000	$105,000	
	Total							**$80,000**			**$105,000**
	Division 13 - Speciality										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 15 - Mechanical										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 16 - Electrical										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 17 - Instrumentation										
	Not Used									$0	
	Total							**$0**			**$0**
	Construction Total										**$105,000**
	Contingency and Construction Level of Difficulties		25%								$26,250
										Subtotal 1	**$131,250**
	Mobilization and Insurance (Percentage of Subtotal 1)		5%								$6,563
										Subtotal 2	**$137,813**
	General Conditions (Percentage of Subtotal 2)		5%								$6,891
										Subtotal 3	**$144,703**
	Contractor Profit (Percentage of Subtotal 3)		15%								$21,705
										Subtotal 4	**$166,409**
	Escalation to Mid-Point of Construction Assume 2022 (Percentage of Subtotal 4)		5%								$8,320
										Subtotal 5	**$174,800**

PRELIMINARY CONSTRUCTION COST OPINION - Replace TF Recirculation Pumps (2) (Phase I)

Project: City of Banning MBR
Client: City of Banning MBR
Location: City of Banning

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	UNIT LABOR	UNIT LABOR COST	MATERIAL SUBTOTAL	MATERIAL TOTAL	LABOR SUBTOTAL	MATERIAL & INSTALLATION SUBTOTAL	MATERIAL & INSTALLATION TOTAL
	Division 01 - General Requirements										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 02 - Site Work										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 03 - Concrete										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 04 - CMU										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 05 - Metals										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 07 - Thermal and Moisture Protection										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 08 - Doors and Windows										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 09 - Finishes										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 10 - Specialties										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 11 - Equipment										
	Trickling Filter Recirculation Pump (1800 GPM @ 20 ft 15 HP)	2	EA	$ 25,000			$50,000		$ 25,000	$75,000	
	Total							**$50,000**			**$75,000**
	Division 13 - Speciality										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 15 - Mechanical										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 16 - Electrical										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 17 - Instrumentation										
	Not Used									$0	
	Total							**$0**			**$0**
	Construction Total										**$75,000**
	Contingency and Construction Level of Difficulties		25%								$18,750
										Subtotal 1	**$93,750**
	Mobilization and Insurance (Percentage of Subtotal 1)		5%								$4,688
										Subtotal 2	**$98,438**
	General Conditions (Percentage of Subtotal 2)		5%								$4,922
										Subtotal 3	**$103,359**
	Contractor Profit (Percentage of Subtotal 3)		15%								$15,504
										Subtotal 4	**$118,863**
	Escalation to Mid-Point of Construction Assume 2022 (Percentage of Subtotal 4)		5%								$5,943
										Subtotal 5	**$124,900**

PRELIMINARY CONSTRUCTION COST OPINION - Replace Grit/Cyclone Unit (Phase I)

Project: City of Banning MBR
Client: City of Banning MBR
Location: City of Banning

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	UNIT LABOR	UNIT LABOR COST	MATERIAL SUBTOTAL	MATERIAL TOTAL	LABOR SUBTOTAL	MATERIAL & INSTALLATION SUBTOTAL	MATERIAL & INSTALLATION TOTAL
	Division 01 - General Requirements										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 02 - Site Work										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 03 - Concrete										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 04 - CMU										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 05 - Metals										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 07 - Thermal and Moisture Protection										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 08 - Doors and Windows										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 09 - Finishes										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 10 - Specialties										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 11 - Equipment										
	Grit/Cyclone Unit (3.6 MGD Capacity)	1	LS	$ 150,000			$150,000		$ 30,000	$180,000	
	Total							**$150,000**			**$180,000**
	Division 13 - Speciality										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 15 - Mechanical										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 16 - Electrical										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 17 - Instrumentation										
	Not Used									$0	
	Total							**$0**			**$0**
	Construction Total										**$180,000**
	Contingency and Construction Level of Difficulties		25%								$45,000
										Subtotal 1	**$225,000**
	Mobilization and Insurance (Percentage of Subtotal 1)		5%								$11,250
										Subtotal 2	**$236,250**
	General Conditions (Percentage of Subtotal 2)		5%								$11,813
										Subtotal 3	**$248,063**
	Contractor Profit (Percentage of Subtotal 3)		15%								$37,209
										Subtotal 4	**$285,272**
	Escalation to Mid-Point of Construction Assume 2022 (Percentage of Subtotal 4)		5%								$14,264
										Subtotal 5	**$299,600**

PRELIMINARY CONSTRUCTION COST OPINION - Replace Two Old Grit Pumps (Phase I)

Project: City of Banning MBR
Client: City of Banning MBR
Location: City of Banning

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	UNIT LABOR	UNIT LABOR COST	MATERIAL SUBTOTAL	MATERIAL TOTAL	LABOR SUBTOTAL	MATERIAL & INSTALLATION SUBTOTAL	MATERIAL & INSTALLATION TOTAL
	Division 01 - General Requirements										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 02 - Site Work										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 03 - Concrete										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 04 - CMU										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 05 - Metals										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 07 - Thermal and Moisture Protection										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 08 - Doors and Windows										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 09 - Finishes										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 10 - Specialties										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 11 - Equipment										
	Grit Pump (220 GPM @ 50 ft 25 HP)	2	EA	$ 40,000			$80,000		$ 25,000	$105,000	
	Total							**$80,000**			**$105,000**
	Division 13 - Speciality										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 15 - Mechanical										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 16 - Electrical										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 17 - Instrumentation										
	Not Used									$0	
	Total							**$0**			**$0**
	Construction Total										**$105,000**
	Contingency and Construction Level of Difficulties		25%								$26,250
										Subtotal 1	**$131,250**
	Mobilization and Insurance (Percentage of Subtotal 1)		5%								$6,563
										Subtotal 2	**$137,813**
	General Conditions (Percentage of Subtotal 2)		5%								$6,891
										Subtotal 3	**$144,703**
	Contractor Profit (Percentage of Subtotal 3)		15%								$21,705
										Subtotal 4	**$166,409**
	Escalation to Mid-Point of Construction Assume 2022 (Percentage of Subtotal 4)		5%								$8,320
										Subtotal 5	**$174,800**

PRELIMINARY CONSTRUCTION COST OPINION - Recycled Water Laterals (Phase I)

Project: City of Banning MBR
Client: City of Banning MBR
Location: City of Banning

NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	UNIT LABOR	UNIT LABOR COST	MATERIAL SUBTOTAL	MATERIAL TOTAL	LABOR SUBTOTAL	MATERIAL & INSTALLATION SUBTOTAL	MATERIAL & INSTALLATION TOTAL
	Division 01 - General Requirements										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 02 - Site Work										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 03 - Concrete										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 04 - CMU										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 05 - Metals										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 07 - Thermal and Moisture Protection										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 08 - Doors and Windows										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 09 - Finishes										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 10 - Specialties										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 11 - Equipment										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 13 - Speciality										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 15 - Mechanical										
	Banning High School (6" Pipe)	1500	LF	$ 165			$ 247,500		$ 49,500	$297,000	
	Dysart Park (6" Pipe)	3500	LF	$ 165			$ 577,500		$ 115,500	$693,000	
	Lions Park (6" Pipe)	1500	LF	$ 165			$ 247,500		$ 49,500	$297,000	
	Total							**$1,072,500**			**$1,287,000**
	Division 16 - Electrical										
	Not Used									$0	
	Total							**$0**			**$0**
	Division 17 - Instrumentation										
	Not Used									$0	
	Total							**$0**			**$0**
	Construction Total										**$1,287,000**
	Contingency and Construction Level of Difficulties		25%								$321,750
										Subtotal 1	**$1,608,750**
	Mobilization and Insurance (Percentage of Subtotal 1)		5%								$80,438
										Subtotal 2	**$1,689,188**
	General Conditions (Percentage of Subtotal 2)		5%								$84,459
										Subtotal 3	**$1,773,647**
	Contractor Profit (Percentage of Subtotal 3)		15%								$266,047
										Subtotal 4	**$2,039,694**
	Escalation to Mid-Point of Construction Assume 2022 (Percentage of Subtotal 4)		5%								$101,985
										Subtotal 5	**$2,141,700**

BUDGET ITEM DESCRIPTION	COMPUTATION			Recipient	Reclamation	TOTAL COST
	Price/Rate	Unit	Quantity			
SALARIES AND WAGES						
Not applicable				$ -	$ -	$ -
					Subtotal	**$ -**
FRINGE BENEFITS - See proposal in official file for detailed calculations						
Not applicable		percent		$ -	$ -	$ -
					Subtotal	**$ -**
EQUIPMENT - Leased Equipment use rate + hourly wage/salary x est. hours for assisted activity—Describe equipment to be purchased, unit price, # of units for all equipment to be purchased or leased for assisted activity: Do not list contractor supplied equipment here.						
Not applicable				$ -	$ -	$ -
			Subtotal	$ -	$ -	**$ -**
SUPPLIES/MATERIALS - Describe all major types of supplies/materials, unit price, # of units, etc., to be used on this assisted activity.						
Not applicable				$ -	$ -	$ -
					Subtotal	**$ -**
CONTRACTUAL/ CONSTRUCTION - Explain any contracts or sub-Agreements that will be awarded, why needed. Explain contractor qualifications and how the contractor will be selected.						
Phase 1 Costs: City of Banning WWTP Upgrades						
Task 1: CEQA						
CEQA (bio, cultural, air quality & IS/MND)	$180,000	LS	1.0	$ 135,000	$ 45,000	$ 180,000
Permitting	$120,000	LS	1.0	$ 90,000	$ 30,000	$ 120,000
					Subtotal	**$ 300,000**
Task 2: Design						
Preliminary Design	$1,409,808	% of cost	2.0%	$ 1,057,356	$ 352,452	$1,409,808
Final Design	$5,639,232	% of cost	8.0%	$ 4,229,424	$ 1,409,808	$5,639,232
					Subtotal	**$ 7,049,040**
Task 3: Construction						
RO system	$ 3,497,500	LS	1.0	$ 2,623,125	$ 874,375	$ 3,497,500
Brine Drying Beds and Evaporators	$ 5,256,100	LS	1.0	$ 3,942,075	$ 1,314,025	$ 5,256,100
MBR Facility (3.6 MGD)	$ 52,887,000	LS	1.0	$ 39,665,250	$ 13,221,750	$ 52,887,000
Primary Clarifier	$ 1,944,100	LS	1.0	$ 1,458,075	$ 486,025	$ 1,944,100
Chlorine Tank	$ 2,377,700	LS	1.0	$ 1,783,275	$ 594,425	$ 2,377,700
Upgrade Ferric Sulfate Feed/Storage System	$ 298,100	LS	1.0	$ 223,575	$ 74,525	$ 298,100
Digester Coating	$ 463,500	LS	1.0	$ 347,625	$ 115,875	$ 463,500
Replace Piping in Grit Chamber	$ 58,300	LS	1.0	$ 43,725	$ 14,575	$ 58,300
Replace TF Center Drives	$ 499,300	LS	1.0	$ 374,475	$ 124,825	$ 499,300
Replace East Primary Clarifier Center Drive	$ 99,900	LS	1.0	$ 74,925	$ 24,975	$ 99,900
Replace Existing PVC Digester Gas Piping	$ 16,700	LS	1.0	$ 12,525	$ 4,175	$ 16,700
Replace Digester Hot Water Boiler	$ 176,400	LS	1.0	$ 132,300	$ 44,100	$ 176,400
Replace TF Effluent Distribution Valves (4)	$ 174,800	LS	1.0	$ 131,100	$ 43,700	$ 174,800
Replace TF Recirculation Pumps (2)	$ 124,900	LS	1.0	$ 93,675	$ 31,225	$ 124,900
Replace Grit/Cyclone Unit	$ 299,600	LS	1.0	$ 224,700	$ 74,900	$ 299,600
Replace Two Old Grit Pumps	$ 174,800	LS	1.0	$ 131,100	$ 43,700	$ 174,800
Recycled Water Laterals	$ 2,141,700	LS	1.0	$ 1,606,275	$ 535,425	$ 2,141,700
					Subtotal	**$ 70,490,400**
Task 4: Construction Admin						
Construction Management and Inspection	$7,049,040	% of cost	10.0%	$ 5,286,780	$ 1,762,260	$ 7,049,040
Environmental Monitoring and Support during Construction	$100,000	LS	1.0%	$ 75,000	$ 25,000	$ 100,000
					Subtotal	**$ 7,149,040**
OTHER - List any other cost elements necessary for your project; such as extra reporting, or contingencies in a construction contract.						
Contingency (10% of project cost)	$8,498,848	% of cost	10.0%	$ 6,374,136	$ 2,124,712	$ 8,498,848
					Subtotal	**$ 8,498,848**
TOTAL DIRECT COSTS:				**70,115,496.00**	**23,371,832.00**	**$ 93,487,328**
INDIRECT COSTS -						
Not applicable						$ -
TOTAL ESTIMATED PROJECT/ACTIVITY COSTS:						**$ 93,487,328**

Appendix F
Nitrogen Removal and Plant Reliability Technical Memo

City of Banning

WWTP Upgrade OA Service

Draft Nitrogen Removal and Plant Reliability Technical Memo

November 27, 2023









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Reviewed by: James Wang



EXECUTIVE SUMMARY

The purpose of this memo is to evaluate biological treatment alternatives for nitrogen removal and the production of recycled water for the City of Banning Wastewater Treatment Plant. Wastewater treatment stages considered for this evaluation included biological, tertiary, and solids treatments. Several process options were assessed within each treatment stage to develop a list of wastewater treatment alternatives for further evaluation. The treatment alternatives are evaluated based on estimated construction and operating costs, operational issues, site constraints, and the ability to comply with current and future regulatory requirements. Additionally, this evaluation considered existing treatment process operations, and the ability to upgrade or reuse facilities for future use. The viable wastewater treatment alternatives developed from the evaluation are listed below:

Alternative 1 - Return Flow from Trickling Filter Effluent to Primary Clarifier
Alternative 2 - Conventional Activated Sludge
Alternative 3 - Moving Bed Biofilm Reactor
Alternative 4 - Membrane Bioreactor

The recommended alternative is the Membrane Bioreactor based on its expandability, operational reliability, effluent quality, and flexibility to meet future permit and reuse requirements.

1 BACKGROUND

The City of Banning (City) owns and operates a wastewater treatment plant (WWTP) located at 2242 East Charles Street, Banning, California 92220. The WWTP has a design treatment capacity of 3.6 million gallons per day (MGD) and currently discharges an average of 2.07 MGD into 10 unlined evaporation/percolation ponds. Future (Year 2035) average flow is expected to increase to 3.6 MGD. The treated effluent then percolates into the groundwater of the San Gorgonio Hydraulic Unit. Groundwater from this basin is used for municipal, industrial, and agricultural applications.

1.1 Regional Water Quality Control Board Order

On June 30, 2016, the California Regional Water Quality Control Board adopted Board Order R7-2016-0015, which describes the Waste Discharge Requirements (WDRs) and other terms and conditions of operation for the WWTP. The Board Order requires the WWTP to remove constituents that present the greatest risk to groundwater quality such as nitrogen, coliforms, and total dissolved solid (TDS). According to the United States Environmental Protection Agency (US EPA), the maximum contaminant level (MCL) for Nitrate as Nitrogen is 10 mg/L. Per the Board Order, it is assumed all nitrogen available converts to nitrate/nitrite so Total Nitrogen (TN) is used as the measurement of concern. The wastewater effluent limitations per the Board Order are outlined in Table 1.

Table 1. WWTP effluent limitations per Board Order R7-2016-0015

Parameter	30-Day Average	7-Day Average
20°C BOD_5	30 mg/L	45 mg/L
TSS	30 mg/L	45 mg/L
pH	6.0 - 9.0	
30-Day Daily Dry Weather Discharge	< 3.6 MGD	
DO	Upper Zone of the Ponds > 1.0 mg/L	
TDS	Not to Exceed 300 mg/L above the Water Supply	
TN*	10 mg-N/L	

*City does not need to comply with this limit at this time

Currently, the average TN concentration in the WWTP's effluent is 27 mg-N/L, well above the future TN limit of 10 mg-N/L specified in Board Order R7-2016-0015. As a result, the City will need to upgrade the biological treatment process at the WWTP to lower the TN below 10 mg-N/L.

1.2 Title 22 Requirements

The City is interested in utilizing WWTP effluent for beneficial non-potable reuse applications such as landscape, public parks, and golf course irrigation. However, the WWTP effluent, based

on the Annual Operations Monitoring Report for 2022, does not comply with California's water recycling criteria outlined in Title 22, Code of Regulations. To comply with Title 22 requirements, the effluent must meet the following requirements:

- Average daily turbidity less than 2 nephelometric turbidity unit (NTU); approximately 3 – 5 mg/L TSS.
- Effluent cannot exceed 5 NTU more than 5% of the time.
- Effluent cannot exceed 10 NTU at any time.
- Coagulant must be added if the influent to the filter exceeds 5 NTU for more than 15 minutes, or 10 NTU at any time.
- The disinfection process must provide a chlorine residual that provides 450 milligram-minutes per liter (mg-min/L) under minimal modal contact time (CT) of 90 minutes.
    - This corresponds to a residual of 5 mg/L or less, or any process that achieves 5-log virus removal.
- Total coliform cannot exceed the average most probable number (MPN) of 2.2 per 100 milliliters (mL).
- No more than one sample per month can exceed an MPN of 23 per 100 mL.

The WWTP currently discharges 27 mg/L TN and 20 mg/L TSS. In order to meet tertiary requirements, the City will be required to improve the removal efficiency of the existing WWTP to comply with the TN, turbidity, and disinfection requirements.

1.3 Beaumont Basin Plan Requirements

The largest potential recycled water user for the City of Banning is Sun Lakes Country Club, a golf course located above the Beaumont Basin Management Zone. In order to serve recycled water to Sun Lakes, the WWTP effluent must meet the Beaumont Basin maximum benefit objectives for TDS and TN of 330 mg/L and 5 mg/L, respectively. With a current average TDS of 390 mg/L and TN of 27 mg/L, the WWTP effluent does not meet either of these limits. Due to these restrictions, and potential stricter limits for the San Gorgonio region in the future, the City will need to implement a reverse osmosis train post-secondary treatment to further reduce the WWTP's TDS and TN levels.

The purpose of this technical memo is to evaluate potential treatment alternatives for the WWTP that comply with the Regional Water Quality Board Order as well as Title 22 and Beaumont Basin Management Zone requirements for tertiary water, and recommend the most suitable system for the City.

2 BIOLOGICAL TREATMENT ALTERNATIVES

Four viable biological treatment options were selected for evaluation to treat the anticipated average daily flow of 3.6 MGD. The treatment alternatives include:

1. Return Flow from Trickling Filter Effluent to Primary Clarifier
2. Conventional Activated Sludge
3. Moving Bed Biofilm Reactor
4. Membrane Bioreactor

For Alternatives 2-4, BioWin modeling results from the 2020 Banning Nitrogen Removal Feasibility Study (2020 Study) were used to compare effluent water quality. For Alternative 1, a new BioWin simulation was conducted to determine a different strategy that would allow the existing trickling filters to comply with the Board Order TN requirements. The previous design from the 2020 Study of increasing the recirculation of the trickling filters to 350% was ruled out, as this only lowered the final TN to 9.92 mg/L, just below the Board Order requirement of 10 mg/L. Alternative 1, as currently being considered, would send recirculation flow from the trickling filters back to primary influent.

2.1 Alternative No. 1: Return Flow from Trickling Filter Effluent to Primary Clarifier

2.1.1 Overview

Trickling Filters (TF) are currently utilized by the City at the WWTP. TF, shown in Figure 1, is an aerobic attached growth process used for secondary treatment. It consists of a tank filled with different types of media such as crushed stone, rocks, or plastic materials ranging in size from 2 – 4 inches. Wastewater is distributed by a rotary distributor arm over the top area of a vessel containing non-submerged packing material. As the wastewater trickles through the bed, microbial growth on the media forms a biofilm. The organic material in the wastewater is degraded by microorganisms attached to the biofilm. Some of the ammonia nitrogen in the wastewater is oxidized by nitrifying bacteria to nitrate or nitrite to nitrogen. An essential element of the trickling filter design and operation is the recirculation of effluent to the filter media for process optimization and increased treatment performance.

There are four basic trickling filter types: low-rate, intermediate-rate, high-rate, and roughing filters. Low-rate filters are loaded at less than 40 kg BOD_5 per day. The residual solids are usually well digested, producing a higher quality secondary effluent. Intermediate-rate filters are loaded up to 64 kg BOD_5 per day. This system requires wastewater recirculation to ensure sufficient effluent quality. High-rate filters have a maximum organic load, ranging from 64 – 160 kg BOD_5 per day. In this system, a secondary filtration stage is required to achieve effluent standards. Roughing filters are typically loaded from 160 – 480 kg BOD_5 per day. Overall, low-rate and high-rate trickling filters achieve the highest organic removal rates.



Figure 1. Trickling filters at the City WWTP

Advantages	Disadvantages
• Simplicity in biological operation • Low energy requirements • Low maintenance requirements • Low sludge production • Appropriate for small and medium sized communities • No problems of sludge bulking in secondary clarifiers • Improved sludge thickening abilities • Durable process elements	• Low loading rate requirements depending on media • Diffusion limitations and possibility of mass transfer • Higher BOD_5 and solid concentrations in the effluent • Issues with biofilm maintenance due to excess sloughing • Odor problems • Low efficiency at cold temperatures

2.1.2 Implementation at the WWTP

The existing operation of the trickling filters does not allow for sufficient N/DN to occur. One way to reduce trickling filter nitrate is to recycle trickling filter effluent to the headworks. Any denitrification achieved in the headworks and primary clarifiers would not only reduce the BOD in the primary effluent but also reduce the nitrate in the secondary effluent.

A recirculation pump, with a capacity of 1,400 gpm, will be installed at the Trickling Filter Recirculation Station. The pump will take trickling filter effluent and deliver it to the headworks at the Grit Chamber Splitter Box. Based on BioWin modeling results, the expected secondary effluent for the constituents of concern is provided in Table 2. As seen in Table 2, the operation of the trickling filters will comply with BOD_5 and TN effluent goals. However, to confirm that this approach will effectively lower TN levels, a 2-month pilot test will be conducted at the Plant.

Table 2. Secondary effluent water quality for Alternative 1

Parameter	Secondary Effluent Water Quality
BOD_5	24.74 mg/L
TSS	6.31 mg/L
TN	7.50 mg-N/L

A summary of the capital, annual O&M, and 20-year life cycle costs for Alternative 1 to comply with Board Order and Title 22 requirements is shown in Table 3. Annual O&M costs include pump power consumption, chemicals (NaOCl and polymers), and labor and maintenance of equipment. Due to the age and condition of the existing TFs, the remaining service life of both TFs is expected to be 10 years maximum. Therefore, although the capital cost only involves the addition of the recirculation flow, the 20-year life cycle cost includes the replacement of both TFs in 2035.

A tertiary filter is required to comply with Title 22 turbidity requirements, and ultrafiltration is needed to meet the Beaumont Basin maximum benefit objectives. If the pilot test is unsuccessful, a denitrification filter will need to be implemented rather than the proposed recirculation flow to the primary clarifier.

Table 3. Capital, O&M, and life cycle cost summary for Alternative 1

Cost Component	Cost
Capital	
Recirculation to Primary Clarifier	$705,500
Tertiary Filter	$2,721,000
Ultrafiltration	$5,900,000
Anaerobic Digester	$2,100,000
Total Capital Cost	**$11,426,500**
Annual O&M	
Power	$196,574
Chemical	$18,750
Labor and Maintenance	$1,080,000
Total O&M Cost	**$1,098,750**
20-Year Life Cycle Cost	
$44,768,000	

2.2 Alternative No. 2: Conventional Activated Sludge

2.2.1 Overview

The conventional activated sludge (CAS) process, shown in Figure 2, is a biological wastewater treatment system where various microorganisms growing as suspended flocs, called mixed liquor, degrade organic matter in the wastewater. The mixed liquor settles in the secondary clarifiers, effluent is discharged for further treatment, and the microorganisms are recirculated back to the bioreactor as return activated sludge (RAS). Oxygen is provided by blowers and diffusers to facilitate the growth of microorganisms. Excess sludge is wasted so that the system can be operated at a target solids retention time.

The conventional activated sludge process can be modified for biological nitrogen removal. This is accomplished by dividing the bioreactor into the aerobic zone and anoxic zone (where no oxygen is provided). Ammonia in the wastewater is oxidized to nitrite and nitrate in the aerobic zone, whereas nitrate and nitrite are denitrified to nitrogen gas in the anoxic zone. In the modified Ludzack-Ettinger (MLE) configuration, the anoxic zone is placed upstream of the aerobic zone. Nitrate and nitrite are recirculated back to from the end of the aerobic zone to the anoxic zone for denitrification. Other configurations, such as the step-feed activated sludge process, have also been used successfully for nitrogen removal.

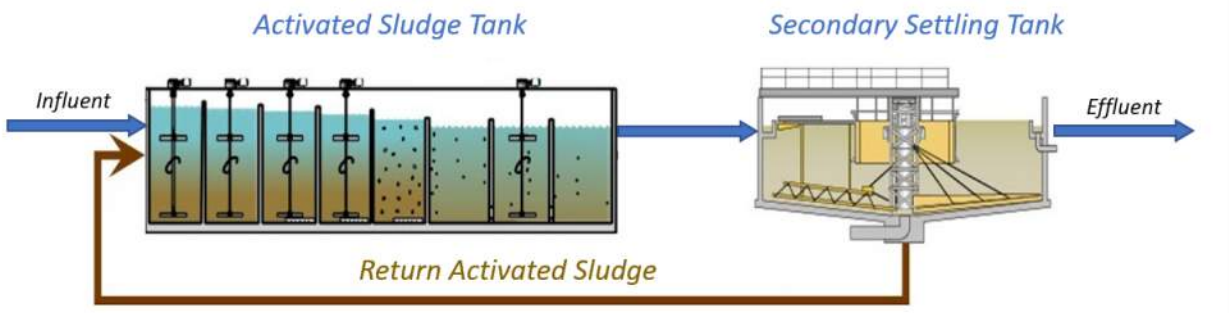


Figure 2. Conventional activated sludge flow diagram

Advantages

- Plenty of operating experience
- Uniform mixing in aeration tanks
- High oxygen transfer efficiency
- Solid and liquid stream separation
- High quality effluent

Disadvantages

- High operational cost
- Sludge disposal requirement
- Diffusers require regular cleaning

2.2.2 Implementation at the WWTP

Conventional activated sludge is one of the most common biological nutrient removal systems in the United States. New bioreactors with anoxic and aerobic zones will need to be constructed for

this system. The City owns the property immediately to the west of the WWTP where the proposed CAS system could be located. The existing trickling filters will be decommissioned, while the existing primary clarifiers and primary effluent pump station will remain in operation. The existing secondary clarifiers will not be suitable for the increased flow as the underflow drain is only 6" in diameter. The new RAS line needs to be at least 12" in diameter to handle the increased RAS flows. New rectangular clarifiers will need to be constructed north of the bioreactors to handle half (1.8 MGD) of the average daily flow. An external carbon source is not necessary for this option. Modeled secondary effluent water quality from the 2020 Study is provided in Table 4.

Table 4. Secondary effluent water quality for Alternative 2

Parameter	Secondary Effluent Water Quality
BOD_5	4.78 mg/L
TSS	10.96 mg/L
TN	7.49 mg-N/L

A summary of the capital, annual O&M, and 20-year life cycle costs for Alternative 2 is shown in Table 5. A tertiary filter is required to comply with Title 22 turbidity requirements, and ultrafiltration is needed to meet the Beaumont Basin maximum benefit objectives. Annual O&M costs are based on power, chemical (NaOCl and polymer), and labor and maintenance.

Table 5. Capital, O&M, and life cycle cost summary for Alternative 2

Cost Component	Cost
Capital	
Activated Sludge System	$48,910,800
Tertiary Filter	$2,721,000
Ultrafiltration	$5,900,000
Anaerobic Digester	-
Total Capital Cost	**$57,531,800**
Annual O&M	
Power	$1,310,496
Chemical	$18,750
Labor and Maintenance	$1,080,000
Total O&M Cost	**$2,409,246**
20-Year Life Cycle Cost	
$119,328,000	

2.3 Alternative No. 3: Moving Bed Biofilm Reactor

2.3.1 Overview

The moving bed biofilm reactor (MBBR) process, shown in Figure 3, is a biological treatment process that was developed by combining the conventional activated sludge system and suspended biofilm carrier media. This process incorporates polyethylene or other material media that provides surface area for the growth of heterotrophic and autotrophic bacteria biofilm in uniformly mixed tanks. The MBBR contains media with a surface area ranging from 400 – 600 m^2/m^3. A final clarifier is used to remove suspended solids and to produce a clarified effluent. Settled sludge can be returned to the bioreactor if necessary.

MBBRs may be used for aerobic, anoxic, or anaerobic processes. The system can handle high organic loads and high substrate concentrations. Nitrification rates are influenced by the organic load, dissolved oxygen (DO) concentration, ammonium nitrogen concentration, temperature, pH, and alkalinity in the reactor.

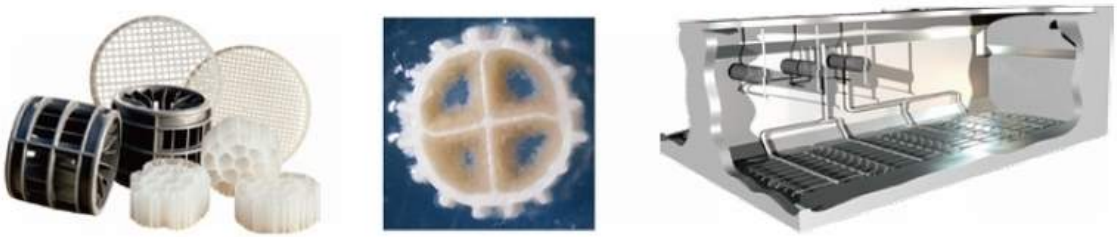


Figure 3. MBBR system components (courtesy of Veolia)

Advantages	Disadvantages
• Backwash is not necessary • A high specific biofilm surface area • Continuous operation of the reactor without clogging • Ability to increase the plant capacity without expansion of existing reactor volume • Easy to operate • Stable operation at low temperature • Long life expectancy of biofilm media carriers	• Media can wash out over time; regular cleaning of effluent screens • Longer start up time requirement • Bacterial activity has to be monitored periodically • Cost of the media

2.3.2 Implementation at the WWTP

For the MBBR system, plastic biocarriers are suspended in the aerobic and anoxic tanks to allow for microorganism growth. The primary effluent enters a common influent channel where flow is evenly distributed into the four tanks. The first tank is aerobic where heterotrophs are predominant and organic removal primarily occurs. The next tank is also aerobic, but the conditions are enhanced for the growth of nitrifiers for ammonia removal. From here, wastewater enters the anoxic tank where denitrification occurs. With this process configuration,

an external carbon source such as methanol or glycerol is added to promote denitrification. Alternatively, the City can reverse this process by having an anoxic tank upstream of the aeration tanks and utilize an internal recycle to maintain the carbon requirements for denitrification. This would decrease chemical costs but increase power costs due to additional pumping requirements. A final, small polishing reaeration step is included to re-add oxygen back into the wastewater for the purpose of downstream processes that require oxygen in the system. The secondary effluent is conveyed to the existing secondary clarifiers where a small portion of the sludge is returned to the reaeration tanks. The reactors will be equipped with media retention screens to keep the media elements from leaving the MBBR basins. Modeled secondary effluent water quality from the 2020 Study is provided in Table 6.

Table 6. Secondary effluent water quality for Alternative 3

Parameter	Secondary Effluent Water Quality
BOD_5	4.34 mg/L
TSS	6.64 mg/L
TN	8.00 mg-N/L

A summary of the capital, annual O&M, and 20-year life cycle costs for Alternative 3 is shown in Table 7. A tertiary filter is required to comply with Title 22 turbidity requirements, and ultrafiltration is needed to meet the Beaumont Basin maximum benefit objectives. Annual O&M costs are based on power, chemical (NaOCl, methanol, and polymer), and labor and maintenance.

Table 7. Capital, O&M, and life cycle cost summary for Alternative 3

Cost Component	Cost
Capital	
MBBR	$39,346,500
Denitrification Filter	-
Tertiary Filter	$2,721,000
Ultrafiltration	$5,900,000
Anaerobic Digester	$2,100,000
Total Capital Cost	**$50,067,500**
Annual O&M	
Power	$1,474,308
Chemical	$18,750
Labor and Maintenance	$1,080,000
Total O&M Cost	**$2,573,058**
20-Year Life Cycle Cost	
$116,048,000	

2.4 Alternative No. 4: Membrane Bioreactor

2.4.1 Overview

Membrane Bioreactors (MBRs), shown in Figure 4, consist of a biological reactor with suspended biomass and solids separation by microfiltration or ultrafiltration membranes with the nominal pore size ranging from 0.07 – 2.0 µm and 0.008 – 0.2 µm, respectively. MBRs can be operated at higher MLSS concentrations (8,000 – 12,000 mg/L), as a result, the reactor size is reduced. Solids liquid separation is accomplished with membranes instead of clarifiers. There are two fundamental arrangements of MBRs: (1) integrated systems that have membranes immersed in an activated sludge reactor and (2) separate systems that have a membrane module placed outside the reactor. Immersed MBRs typically use hollow fiber membranes that operate at lower pressures, accommodate various types of biosolids, concentrate biosolids without settling concerns, and have lower life-cycle costs. Separate systems are typically pressure driven and the membranes are in a stand-alone tank. Properly configured, the MBR process removes nitrogen similar to the activated sludge process.

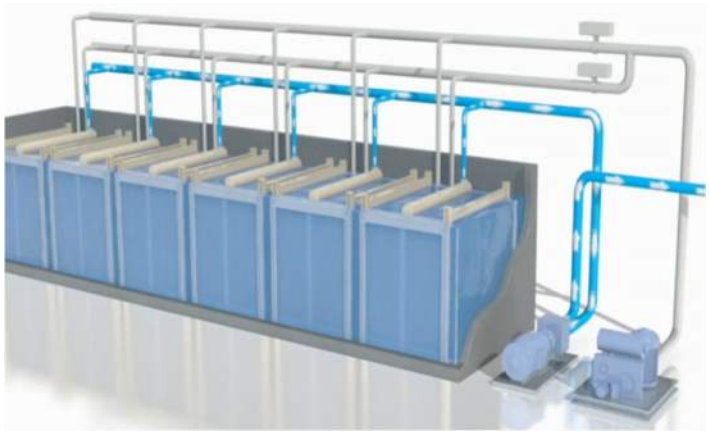


Figure 4. MBR Facility (courtesy of KY OCP)

Advantages

- Higher MLSS concentrations therefore a small footprint
- Less sludge production due to longer SRT design
- High effluent quality
- No secondary clarifier is needed
- Better site planning for City WWTP
- No UF pretreatment for future RO

Disadvantages

- High capital costs (membranes)
- High energy costs compared to the conventional process due to membrane scouring
- Limited time on membrane life
- High cost membrane replacement

2.4.1.1 Packaged vs Non-Packaged System

There are two options to consider for an MBR system: a packaged or non-packaged system. The main differences between the two options are cost, schedule, and aesthetics. Unlike packaged MBR systems which comprise of pre-engineered, prefabricated structures, non-packaged MBR systems require the contractor to source all related equipment, resulting in higher costs and longer construction schedules. Typically, packaged MBR systems involve stainless-steel tanks while non-packaged systems involve concrete tanks; the significant site work and material cost required for the construction of concrete costs also contribute to the higher overall cost of non-packaged systems. As for aesthetics, concrete structures are more common at existing municipal treatment plants. However, a prefabricated building can be built around a packaged MBR system for appearance purposes.

2.4.2 Implementation at the WWTP

The MBR system combines conventional biological nutrient removal with the use of membranes for the separation of solids and treated effluent. The MBR process train is similar to Alternative 2 except that membranes replace the secondary clarifiers and tertiary filters. The design MLSS of the MBR system is also much higher than Alternatives 2, which allows for greater treatment capacity per unit volume of the aeration basin. One design note is that the high recycle from the membrane aeration zone impacts the denitrification ability and the carbon demand. Consequently, a tank will be provided to allow the DO to decrease by endogenous respiration before the recycle stream is returned to the anoxic zone.

Membrane fouling is controlled by several methods of cleaning which includes the chemical clean in place (CIP) system, relaxation, and air scouring. Chemical CIP cleaning is also referred to as maintenance cleaning used to address irreversible fouling. This type of cleaning usually occurs at least 10 times a year and is completely automated; however, it can also be manually operated as needed. The membrane units are cleaned in place quickly by injecting a dilute solution of bleach into the permeate line which remains in the membranes for 1 to 3 hours and then the normal operation is resumed. During the cleaning of one basin, the other basins are left online and operated at a slightly higher flux rate as required to meet plant demand. Although this type of cleaning is efficient, the addition of chemicals will degrade any membrane material over time. Therefore, replacement of the membranes will be required.

There are two types of membranes available for wastewater applications: hollow fiber and flat sheet. Hollow fiber membranes are constructed of a microporous structure and are densely packed into tubes to create the membrane module. These tightly packed modules allow for high membrane surface areas and high outside pressure tolerance. Typically, flow is applied to the outside of the membranes and permeate is removed via the inner tube of the module. However, some manufacturers offer the opposite (in-out) flow pattern. The typical vacuum pressure applied to the hollow fiber membranes is around 10 pounds per square inch (psi). Flat sheet membranes are constructed of paper-like backing material with a membrane cast on the surface of the paper. These plates are submerged into the membrane tank, and permeate pass through

the membrane from the outside in. The membranes allow the biofilm to attach and are continuously aerated to prevent solids buildup.

Modeled secondary effluent water quality from the 2020 Study is provided in Table 8.

Table 8. Secondary effluent water quality for Alternative 4

Parameter	Secondary Effluent Water Quality
BOD_5	0.86 mg/L
TSS	0.00 mg/L
TN	7.74 mg-N/L

A summary of the capital, annual O&M, and 20-year life cycle costs for Alternative 4 is shown in Table 9. Annual O&M costs are based on power, chemical, and labor and maintenance. Chemical costs include NaOCl, polymer, citric acid, sodium bisulfite, and sodium hydroxide. Costs are based on the hollow fiber membrane type and include a range of costs from a non-packaged to a packaged system.

Table 9. Capital, O&M, and life cycle cost summary for Alternative 4

Cost Component	Cost
Capital	
MBR	$52,887,000 - $68,996,868
Tertiary Filter	-
Ultrafiltration	-
Anaerobic Digester	-
Total Capital Cost	**$52,887,000 - $68,996,868**
Annual O&M	
Power	$1,638,120
Chemical	$37,500
Labor and Maintenance	$1,200,000
Total O&M Cost	**$2,875,620**
20-Year Life Cycle Cost	
$126,344,000 - $142,454,000	

3 COMPARISON OF TREATMENT ALTERNATIVES

A comprehensive summary of the capital, annual O&M, and 20-year life cycle costs for the wastewater treatment alternatives developed for the City of Banning is shown in Table 10. The 20-year life cycle cost shows that Alternative 1 is the least expensive alternative. This alternative is essentially the baseline scenario to comply with Board Order and Title 22 requirements at 3.6 MGD and utilizes the existing treatment process as much as possible. However, this alternative provides the least flexibility regarding expected effluent water quality, particularly for BOD_5 and TN. If future discharge permit limits become more stringent, or other constituents, such as phosphorus, become regulated, upgrades to Alternative 1 would be challenging and costly.

Table 10. Cost comparison summary for the treatment alternatives

Treatment Alternative	Capital	Annual O&M	20-Year Life Cycle
Alternative 1 Trickling Filter	$11,426,500	$1,098,750	$44,768,000
Alternative 2 Activated Sludge	$57,531,800	$2,409,246	$119,328,000
Alternative 3 MBBR	$50,067,500	$2,573,058	$116,048,000
Alternative 4 MBR	$52,887,000 - $68,996,868	$2,875,620	$126,344,000 - $142,454,000

The cost comparison summary identifies three groupings of the treatment alternatives. Alternative 1 is the cheapest all-around option. Life cycle costs for Alternatives 2 and 3 are within $3,000,000 of one another and utilize the same treatment process with slightly varied components that alter the overall process operation. Between Alternatives 2 and 3, Alternative 3 provides the lower capital cost option due to the reduction in required tank size as compared to conventional activated sludge. Alternative 4 has an expensive capital cost, since the MBR system produces the highest effluent water quality. The capital cost for Alternatives 2 and 4 are relatively close to one another. However, the annual O&M costs show that Alternative 4 becomes more costly over a 20-year life cycle.

A breakdown of the required WWTP upgrades to meet Board Order requirements and Title 22 regulations for each alternative is provided in Table 11. The tertiary filter and ultrafiltration costs are the same for Alternatives 1 – 3, and not required for Alternative 4. Alternatives 2 and 4 do not require any additional anaerobic digesters, while Alternatives 1 and 3 will require a new anaerobic digester.

Table 11. Unit operation cost comparison for the treatment alternatives

Unit	Alternative 1 Trickling Filter	Alternative 2 Activated Sludge	Alternative 3 MBBR	Alternative 4 MBR
Recirculation to Primary Clarifier	$705,500	-	-	-
Activated Sludge	-	$48,910,800	-	-
MBBR	-	-	$39,346,500	-
MBR	-	-	-	$52,887,000 - $68,996,868
Tertiary Filter	$2,721,000	$2,721,000	$2,721,000	-
Ultrafiltration	$5,900,000	$5,900,000	$5,900,000	-
Anaerobic Digester	$2,100,000	-	$2,100,000	-
Total	**$11,426,500**	**$57,531,800**	**$50,067,500**	**$52,887,000 - $68,996,868**

A comparison of the expected secondary effluent water quality for all alternatives is provided in Table 12. The concentrations presented do not reflect tertiary filter effluent to show the comparison between biological treatment systems. All the alternatives comply with the Board Order requirements with respect to nitrogen. Compared to Alternative 1, Alternatives 2 – 4 produce better water quality, can meet possible more stringent discharge limits, and have better flexibility to stay in compliance if treatment efficiency degrades. Alternative 4 produces the best all-around effluent water quality, and an additional tertiary filter is not required to comply with Title 22 requirements unlike Alternatives 1 – 3.

Table 12. Secondary effluent water quality comparison for the treatment alternatives

Parameter	Secondary Treatment Effluent Concentration (mg/L)			
	Alternative 1 Trickling Filter	Alternative 2 Activated Sludge	Alternative 3 MBBR	Alternative 4 MBR
BOD_5	24.74	4.78	4.34	0.86
TSS	6.31	10.96	6.64	0
TN	7.50	7.49	8.00	7.74

Non-monetary criteria for the alternatives are compared in Table 13. The criteria for each alternative were given a ranking from 1 to 5; 5 being the best (and in terms of footprint, smallest), and 1 being the worst (and in terms of footprint, largest). Alternative 1 is the least scalable, operationally reliable, and flexible to meet permit requirements when compared to Alternatives 2-4. Alternatives 2 and 3 are similar in terms of operational reliability, ease of operation, flexibility

to meet permit requirements, footprint, and Title 22 reuse capability, but Alternative 3 is the more scalable of the two. Alternative 4 is the most scalable and operationally reliable of all alternatives, and because an MBR system does not require a secondary clarifier, it has the smallest overall footprint. Alternative 4 is also the only alternative that does not require additional filtration for Title 22 reuse. For overall rankings, Alternative 4 has the best score, followed by Alternative 3, Alternative 2, then Alternative 1.

Table 13. Non-monetary comparison summary for the treatment alternatives

Treatment Alternative	Scalability	Operational Reliability	Ease of Operation	Flexibility to Meet Permit Requirements	Footprint	Title 22 Reuse	Total Score
Alternative 1 Trickling Filter	1	2	5	1	1	1	**11**
Alternative 2 Activated Sludge	3	4	3	3	3	4	**20**
Alternative 3 MBBR	4	4	3	3	3	4	**21**
Alternative 4 MBR	5	5	2	5	5	5	**27**

4 SUMMARY OF ANALYSIS AND RECOMMENDATIONS

The cost evaluation suggests that Alternative 1 is the cheapest option available to comply with Board Order and Title 22 requirements. However, based on the capacity of the existing infrastructure, this option has the least flexibility to maintain effluent TN treatment goals, and the existing trickling filter components are old and will require replacement within the next 10 years. Therefore, this alternative is not recommended for future implementation.

Alternatives 2 – 3 are similar in cost and operation. Among them,

1. Alternative 2 (CAS) are ubiquitous throughout the United States, are reliable to meet discharge limits, easy to operate, and have the ability to be upgraded with IFAS or MBBR in the future if required. However, these systems require a larger footprint as compared to Alternative 4 to meet effluent requirements.
2. Alternative 3 (MBBR) produces the best secondary effluent water quality out of these two alternatives and is the lowest capital and life cycle cost option. However, Alternative 3 is more complex to operate, requires an external carbon input, and the number of municipal installations in the United States is significantly less than Alternative 2.

Alternative 4 (MBR) can be the most expensive alternative, depending on whether a packaged or non-packaged system is selected, but it produces the best water quality. With advances in technology, the MBR system can also be operated fairly autonomously and does not require much operator input. Additionally, the City is familiar with the design of MBRs based on the 90% design of an MBR facility in 2007.

Alternative 4 also sets the City up for any changes to discharge or reuse requirements in the future. Unlike Alternatives 1 – 3, MBR systems have built-in filtration, and therefore they can produce recycled water without the use of tertiary filters as well as meet the Beaumont Basin Plan TDS and TN requirements without ultrafiltration.

Furthermore, since MBR is modular, it allows the system to be phased into the Plant. In the first phase of upgrades, one approach is to keep the two TFs in operation and install an additional 1.5 MGD MBR at the Plant. This option involves sending 1.5 MGD to the MBR for recycled water irrigation use. For the remaining 2.1 MGD, the Alternative 1 strategy of sending a return flow from the TF effluent to the headworks would be implemented to allow the 2.1 MGD to flow through the TFs then discharge into the percolation ponds. As recycled water demands increase and the TFs reach the end of their service lives, more MBR modules can be phased in for increased capacity until the total 3.6 MGD future average flow is treated by MBR.

Therefore, due to its high effluent water quality, operational ease, flexibility to meet more stringent permit regulations, and scalability, a Membrane Bioreactor is recommended to be considered for future implementation.

Appendix G
WDR Board Order R7-2016-0015

July 5, 2016

Art Vela
Acting Public Works Director
City of Banning
99 East Ramsey Street
Banning, CA 92220

Lorenzo Amis
Project Manager
Suez Environmental Services, Inc.
2242 E. Charles Street
Banning, CA 92220

Dear Mr. Vela and Mr. Amis,

SUBJECT: WASTE DISCHARGE REQUIREMENTS (WDRs) BOARD ORDER R7-2016-0015, FOR CITY OF BANNING, WASTEWATER TREATMENT PLANT, BANNING, RIVERSIDE COUNTY

Enclosed is a copy of Board Order R7-2016-0015 adopted by the California Regional Water Quality Control Board, Colorado River Basin Region on June 30, 2016, during its public meeting in the Palm Desert, California.

Should you have any questions concerning this Board Order, please contact Jose Cortez, P.E., Water Resources Control Engineer, at jose.cortez@waterboards.ca.gov or (760) 776-8963.

Sincerely,

Jose L. Angel

Jose L. Angel, P.E.
Executive Officer
Colorado River Basin
Regional Water Quality Control Board

JC/mc

Enclosures: Board Order R7-2016-0015

File: City of Banning WWTP, WDID 7A330100015, CW-208668, GT-WDR100027202, R7-2016-0015

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

BOARD ORDER R7-2016-0015

WASTE DISCHARGE REQUIREMENTS
FOR
CITY OF BANNING, OWNER
SUEZ WATER ENVIRONMENTAL SERVICES, OPERATOR
BANNING WASTEWATER TREATMENT PLANT
Banning – Riverside County

The California Regional Water Quality Control Board, Colorado River Basin Region (Colorado River Basin Water Board) finds that:

1. The City of Banning (Owner), 99 East Ramsey Street, Banning, California 92220, and Suez Water Environmental Services, Inc., a Delaware-based business entity (Operator), (collectively or individually referred to as Discharger) submitted an application to update the Waste Discharge Requirements (WDRs) for the Banning Wastewater Treatment Plant (WWTP or Facility). The WWTP is located at 2242 East Charles Street, Banning, California 92220, as shown in Attachment A (Vicinity Map), made part of this Board Order by this reference. Suez Water Environmental Services, Inc. maintains an office at the Facility.

2. The City of Banning owns a wastewater collection, treatment and disposal system which provides sewerage service to the city. The WWTP has a design treatment capacity of 3.6 million gallons-per-day (MGD) and currently discharges approximately 2.07 MGD into 10 unlined evaporation/percolation ponds (ponds). The Facility is located in Section 14, Township 3 South, Range 1 East, San Bernardino Baseline and Meridian. The Facility's Assessor's Parcel Numbers are 532 180 038/532 180 036; and its latitude and longitude coordinates are 33.915194/33.912134 and 116.852411/116.84164, respectively. The Facility is assigned California Integrated Water Quality System (CIWQS) number CW-208668; Waste Discharger Identification (WDID) number 7A330100015, and GeoTracker Global ID number WDR100027202.

3. The wastewater treatment plant currently receives industrial wastewater from several businesses within the City of Banning. The Discharger's Industrial Waste Program issues Industrial User Discharge Permits to verify that these businesses meet the City of Banning's local ordinance discharge limits, which were determined to ensure that the wastewater treatment plant is protected and can meet effluent standards.

4. The discharge is currently regulated by Board Order (WDRs) 01-022, adopted on May 9, 2001.

5. Board Order 01-022, required the Discharger to construct a groundwater monitoring system in the vicinity of the unlined ponds. The Board Order also required effluent monitoring for Sulfate, Chloride, Fluoride, Aluminum, and Iron until the groundwater monitoring system was installed and groundwater monitoring was initiated. Board Order 01-022, Monitoring and Reporting Program, states that "As soon as Ground Water monitoring commences, these constituents will not be required in Effluent monitoring."

The groundwater monitoring system was completed in August 2007, and effluent monitoring for Sulfate, Chloride, Fluoride, Aluminum, and Iron were discontinued at that time. These constituents have been removed from the monitoring and reporting program for this Board Order as well as the effluent limitations for Chloride, Aluminum, and Iron.

6. The WDRs are being updated to implement the most current laws and regulations applicable to the discharge.

Wastewater Treatment Facility and Discharge

7. The WWTP consists of preliminary treatment, primary treatment, secondary treatment, solids handling, and disinfection (currently not in use), and the disposal ponds. Untreated wastewater flows to the preliminary treatment system, which consists of a mechanical bar screen, compactor, grit removal system, classifier and cyclone separator. Wastewater from the preliminary treatment system flows to two primary clarifiers and is then pumped to two trickling filters. The effluent from the trickling filters flows to the two secondary clarifiers and then to the chlorine contact chamber, which is currently used as a holding tank for the final effluent water sampling and discharge to the percolation ponds. The disinfection units have not been in use since April 2000.

8. Primary sludge from the two primary clarifiers is pumped to the anaerobic digester for further treatment. Secondary sludge from the secondary clarifiers is pumped to the gravity thickener for thickening and then pumped to three anaerobic digesters for further treatment. Sludge wasting from the digester is pumped to the sludge drying beds. The Discharger produces Class B biosolids, and a private contractor hauls the biosolids offsite to a permitted facility for disposal.

9. The Discharger's Self-Monitoring Reports (SMRs) from January 2011 through December 2015 characterize the WWTP effluent as follows:

Constituent	Units	Average	Maximum	Minimum
Flow	MGD	2.071	2.238	1.897
20° C BOD_5[1]	mg/L[2]	23	27	19
TSS[3]	mg/L	21	28	16
pH	s.u.[4]	7.3	7.6	7.1
TDS[5]	mg/L	426	464	380
Nitrate as N	mg/L	22	32	12
Total Nitrogen	mg/L	29	49	14

[1] 5-day biochemical oxygen demand at 20 degrees Celsius.
[2] milligrams per Liter
[3] Total Suspended Solids
[4] Standard pH units
[5] Total Dissolved Solids

Hydrogeological Conditions

10. Precipitation in the Banning area averages about 12 inches per year. Annual evapotranspiration rate is approximately 56 inches.

11. A drainage course identified as Smith Creek Flood Control Channel is located along the south side of WWTP.

12. There are no domestic wells within 500 feet of the on-site evaporation/percolation ponds.

13. The evaporation/percolation ponds overlay an aquifer of high quality groundwater. The Discharger's SMRs show that the depth to groundwater in the vicinity of the WWTF ranges from about 330 feet (MW1) to 630 feet below ground surface (bgs) (MW3).

14. Water supply to the community is from groundwater production wells located in the San Gorgonio Hydrologic Unit, Banning Hydrologic Subunit. TDS in the water supply averages about 204 mg/L, based on data reported in the City of Banning's SMRs from January 2011 through December 2015.

15. Regional groundwater flow in the area is generally from the west to the east.

16. The Discharger uses a network of three groundwater monitoring wells, one upgradient and two downgradient, to monitor the impact of wastewater discharge to groundwater in the area of the ponds. The locations of the groundwater monitoring wells identified as R-1 (MW1), MP-1 (MW2) and C-6 (MW3) are shown in Attachment C (Monitoring Well Locations), made part of this Board Order by reference. The Discharger's monitoring reports from January 2011 through December 2015 show the following average water quality data for the groundwater monitoring wells:

	Units	MW1 (downgradient)	MW2 (downgradient)	MW3 (upgradient)
Depth to Groundwater	feet below ground surface	361	410	629
Total Dissolved Solids	mg/L	332	252	219
Total Nitrogen	mg/L	4	2	1.1
Nitrate as N	mg/L	2	2	1.5
Iron	mg/L	34	ND	ND
Sulfate	mg/L	32	18	15
Chloride	mg/L	42	35	13
Aluminum	mg/L	20	ND	ND
Fluoride	mg/L	0.4	0.4	0.6

17. The Discharger reports that the soil in the vicinity of the WWTP, from ground surface to 300 bgs, is sand and gravelly sand containing small rocks and boulders. From a depth of 300 to 600 feet bgs, the soil is mostly sand and gravel with spots of brown clay and layers of fine sand and clay.

Basin Plan, Beneficial Uses, and Regulatory Considerations

18. The Water Quality Control Plan for the Colorado River Basin Region of California (Basin Plan), which was adopted on November 17, 1993 and amended on November 13, 2012, designates the beneficial uses of ground and surface waters in this Region, and contains implementation programs and policies to achieve water quality objectives, including narrative objectives for ground water quality, in Chapter 3, section IV, Ground Water Objectives.

19. The discharge is within the San Gorgonio Hydrologic Unit, Banning Subunit. The beneficial uses of groundwater in the San Gorgonio Hydrologic Unit include:

    a. Municipal supply (MUN),

    b. Industrial supply (IND), and

    c. Agricultural supply (AGR).

20. This Order implements numeric and narrative water quality objectives for ground and surface waters established by the Basin Plan. The numeric objectives for groundwater designated for municipal and domestic supply are the maximum contaminant levels (MCLs) specified in sections 64431, 64444, and 64678 of Title 22 of the California Code of Regulations (CCR), and the bacteriological limits specified in section 64426.1 of Title 22, CCR.

21. It is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This order promotes that policy by requiring discharges to meet maximum contaminant levels designed to protect human health and ensure that water is safe for domestic use.

22. Section 13267 of the California Water Code (CWC) authorizes the Colorado River Basin Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and state requirements.

23. This Order establishes WDRs pursuant to Division 7, Chapter 4, Article 4, of the CWC for discharges that are not subject to regulation under Clean Water Act (CWA) section 402 (33 U.S.C. section 1342).

24. Pursuant to CWC section 13263(g), the discharge of waste is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

25. The discharge authorized by this Board Order, and treatment and storage facilities associated with discharges of treated municipal wastewater, except for discharges of residual sludge and solid waste, are exempt from the requirements of the Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste, as set forth in Title 27, CCR, Division 2, Subdivision 1. This exemption is based on section 20090(a)

of Title 27, which states in relevant part that discharges of domestic sewage or treated effluent are exempt provided that such discharges are regulated by WDRs, or for which WDRs have been waived, and which are consistent with applicable water quality objectives, and treatment or storage facilities associated with municipal WWTP's, provided that residual sludges or solid waste from WWTP's shall be discharged only in accordance with the applicable Title 27 provisions. All of these Title 27 exemption conditions have been met with these WDRs.

Groundwater Degradation

26. State Water Board Resolution 68-16, "Policy with Respect to Maintaining High Quality Waters of the State"(Resolution 68-16) states:

"Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies."

Resolution 68-16 further states:

"Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control [BPTC] of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained."

27. Some degradation of groundwater from the discharge to the ponds is consistent with Resolution 68-16, provided that the degradation:
    a. Is confined to a reasonable area;
    b. Is minimized by means of full implementation, regular maintenance, and optimal operation of BPTC measures;
    c. Is limited to waste constituents typically encountered in domestic wastewater; and
    d. Does not result in the loss of any beneficial use as prescribed in the applicable basin plan, or violation of any water quality objective.

28. The discharge of wastewater from the WWTP, as permitted herein, reflects BPTC. The controls assure the discharge does not create a condition of pollution or nuisance, and that the highest water quality consistent with maximum benefit to the people of the State will be maintained, which is consistent with the anti-degradation provisions of Resolution 68-16. The WWTP incorporates:
    a. Technology for secondary treated domestic wastewater;
    b. Solids handling facilities;
    c. An operation and maintenance manual;
    d. A City ordinance that is comprised of a comprehensive set of rules and regulations

governing the design, construction, maintenance and use of public and private sewer facilities within City jurisdictional limits;

e. Staffing to assure proper operation and maintenance;

f. A network of groundwater monitoring wells; and

g. A standby emergency power generator of sufficient size to operate the treatment plant and ancillary equipment during periods of loss of commercial power.

Accordingly, the discharge as authorized is consistent with the anti-degradation provisions of Resolution 68-16 and the applicable water quality objectives.

Constituents of Concern

29. Constituents of concern in domestic wastewater effluent that present the greatest risk to groundwater quality are nitrogen, coliforms (pathogen-indicator organisms), and TDS. The WWTP provides substantial removal of soluble organic matter, solids, and some nitrogen treatment.

30. Title 22, CCR section 64431, Maximum Contaminant Level (MCL) for Nitrate plus Nitrite as Nitrogen is 10 mg/L. To account for the fate of transport for the various components of Total Nitrogen, as a conservative value it is assumed that all nitrogen present converts to nitrate/nitrite. The City of Banning's SMRs report an average of 29 mg/L for Total Nitrogen between January 2011 and December 2015. Because the concentration of total nitrogen in the effluent is elevated, it is probable that nitrates may reach groundwater in concentrations that exceed the MCL prescribed in Title 22, CCR, section 64431. This Board Order will require that the Discharger conduct a nitrogen removal analysis and provide its findings in a technical report that provides a workplan and time schedule for the installation and implementation of nitrogen removal alternatives.

31. While secondary treatment reduces fecal coliform densities by 90 to 99%, the remaining organisms in effluent are still 10^5 to 10^6 MPN/100 ml (United States Environmental Protection Agency, Design Manual, Municipal Wastewater Disinfection; October 1986). Given the depth to groundwater, it is not likely that pathogen-indicator bacteria will reach groundwater at densities exceeding those prescribed in Title 22, CCR. Thus, it is not anticipated that groundwater will be degraded by pathogen-indicator bacteria. Furthermore, any degradation by pathogens that might occur will be limited to the area in the vicinity of the ponds and degradation by pathogens should not be significant.

32. The typical incremental addition of dissolved salts from domestic water usage is 150 to 380 mg/L. Domestic water supply to the City of Banning showed an average of about 200 mg/L during the period of January 2011 to December 2015. From January 2011 to December 2015 treated wastewater discharged by the City of Banning had an average TDS concentration of approximately 420 mg/L. Thus, the average TDS increase over the domestic water supply for this facility during the same time period was about 220 mg/L. Treated wastewater discharged by the WWTP has a TDS limit of a maximum of 400 mg/L above the domestic source water as regulated by Board Order 01-022. The Colorado River Water Board is responsible for implementing the State Water Resources Control Board's Salt and Nutrient Management Plan (SNMP). To that end, the TDS effluent limit in this Board Order will be reduced to 300 mg/L above the domestic water supply. A regulatory limit of 300 mg/L above the domestic source water reasonably protects present and anticipated beneficial uses of groundwater in the area; therefore, it is

not likely that groundwater will exhibit significant degradation by TDS.

Stormwater

33. Federal regulations for storm water discharges were promulgated by the U.S. Environmental Protection Agency on November 16, 1990, (40 CFR Parts 122, 123, and 124) to implement the Clean Water Act's storm water program set forth in Clean Water Act section 402(p) (33 U.S.C. section 1342(p).). In relevant part, the regulations require specific categories of facilities that discharge storm water associated with industrial activity to "waters of the United States" to obtain NPDES permits and to require control of such pollutant discharges using Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to prevent and reduce pollutants and any more stringent controls necessary to meet water quality standards. Facilities used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are within the confines of the facility with a design flow of one million gallons a day or more, or required to have an approved pretreatment program under 40 CFR Part 403, are considered to be engaging in "industrial activity" for purposes of the Clean Water Act's storm water program. The facility has a design treatment capacity of 3.6 MGD, and is thus subject to the federal regulations for discharges of stormwater associated with industrial activity.

CEQA and Public Participation

34. In accordance with section 15301, Chapter 3, Title 14, CCR, the issuance of these WDRs, which govern the operation of an existing facility involving negligible or no expansion of use beyond that previously existing, is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code, section 21000 et seq.).

35. The Colorado River Basin Water Board has notified the Discharger and all known interested agencies and persons of its intent to draft WDRs for this discharge, and has provided them with an opportunity for a public meeting and an opportunity to submit comments.

36. The Colorado River Basin Water Board, in a public meeting, heard and considered all comments pertaining to this discharge.

IT IS HEREBY ORDERED, that Board Order 01-022 is rescinded upon the effective date of this Order, except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code, and regulations adopted thereunder, the Discharger shall comply with the following:

A. Effluent Limitations

1. Effluent discharged into the ponds for disposal shall not exceed the following effluent limits:

Constituent	Units	30-Day Arithmetic Mean	7-Day Arithmetic Mean	Maximum
20° C BOD_5	mg/L	30	45	-----

Constituent	Units	30-Day Arithmetic Mean	7-Day Arithmetic Mean	Maximum
Total Suspended Solids	mg/L	30	45	-----

2. The 30-day average daily dry weather discharge from the WWTP shall not exceed 3.6 MGD.

3. Effluent from the WWTP into the ponds shall not have a pH below 6.0 or above 9.0.

4. The increase in concentration of TDS in the wastewater discharged to the ponds over that contained in the water supply to the community shall not exceed 300 mg/L.

5. The ponds shall be maintained so they will continuously operate in aerobic conditions. The dissolved oxygen content in the upper zone (one foot) of the ponds shall not be less than 1.0 mg/L at all times.

B. Discharge Prohibitions

1. Discharge of waste classified as "hazardous", as defined in Title 23, CCR, section 2521(a), or "designated", as defined in California Water Code section 13173, is prohibited.

2. Discharge of treated wastewater at a location other than the designated disposal areas is prohibited.

3. The discharge of any wastewater from the Facility to any surface waters or surface drainage courses is prohibited.

4. Discharge of waste to land not owned or authorized for such use by the Discharger is prohibited.

5. Surfacing or ponding of wastewater outside of the designated disposal locations is prohibited.

6. Bypass, overflow, discharge, or spill of untreated or partially treated waste is prohibited.

C. Discharge Specifications

1. The treatment or disposal of wastes from the WWTP shall not cause pollution or nuisance as defined in sections 13050(l) and 13050(m) of Division 7 of the California Water Code, respectively.

2. A minimum freeboard depth of two feet shall be maintained at all times in each pond.

3. All treatment, storage, and disposal areas shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

4. Ponds shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, ancillary inflow, and infiltration during the non-irrigation season. Design seasonal precipitation shall be based on total annual precipitation using a return

period of 100 years, distributed monthly in accordance with historical rainfall patterns.

5. The ponds shall be managed to prevent breeding of mosquitoes. In particular:
   a. An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.
   b. Weeds shall be minimized through control of water depth, harvesting, or herbicides.
   c. Dead algae, vegetation, and debris shall not accumulate on the water surface.
6. Public contact with wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.
7. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the wastewater treatment and disposal area.
8. The ponds shall be maintained and operated so as to maximize infiltration and minimize the increase of salinity in the groundwater.
9. The Discharger shall not accept wastewater in excess of the treatment capacity of the Facility.

D. Groundwater Limitations

1. Discharge from the WWTP shall not cause groundwater to:
   a. Contain constituents in excess of California MCLs, as set forth in the California Code of Regulations, Title 22, section 64426.1 for bacteriological constituents; section 64431 for inorganic chemicals; section 64444 for organic chemicals; and section 64678 for determination of exceedances of lead and copper action levels.
   b. Contain taste or odor-producing substances in concentrations that adversely affect beneficial uses as a result of human activity.

E. Pretreatment

1. In the event that the facility has an average dry weather flow or treatment capacity of 5 MGD or more and Industrial Users [40 CFR 403.3(h)] are discharging pollutants which could Pass Through [40 CFR 403.3(n)] or Interfere [40 CFR 403.3(i)] with the operation of the wastewater treatment facility or are otherwise subject to National Pretreatment Standards [40 CFR 403.3(j)], (ii) California Code of Regulations, Title 23, section 2233 requires the facility to have and enforce an adequate pretreatment program, or (iii) the Colorado River Basin Water Board or its Executive Officer determines that other circumstances warrant, then:
   a. The Discharger shall notify the Colorado River Basin Water Board within 30 days after there are discharges that trigger the pretreatment requirements.
   b. The Discharger shall submit a revised Report of Waste Discharge and the pretreatment program for the Board review and approval as soon as possible but not later than one year of the notice of pretreatment requirements.
   c. The Discharger shall enforce the federal categorical pretreatment standards on all Categorical Industrial Users (CIUs).

d. The Discharger shall notify the CIU of its discharge effluent limits. The limits must be as stringent as the pretreatment standards contained in the applicable federal category (40 CFR Part 400-699). The Discharger may develop more stringent, technically based local limit if it can show cause.

e. The Discharger shall notify the RWQCB if the CIU violates its discharge effluent limits.

2. The Colorado River Basin Water Board retains the right to take legal action against an industrial user and/or the Discharger where a user fails to meet the approved applicable pretreatment standards.

F. Special Provisions

1. Within **12 months** of the adoption of this Order, the Discharger shall submit to the Colorado River Basin Water Board office a technical report that includes a copy of the Maintenance and Operations Manual for the WWTP.

2. Within **18 months** of the adoption date of this Board Order, the Discharger shall submit for approval by the Colorado River Basin Water Board's Executive Officer, a technical report that is a work plan and time schedule to conduct a study that addresses the practicability of a 10 mg/L total nitrogen effluent limitation and the impact the discharge has on the beneficial uses of the receiving groundwater. The time schedule for the study shall not be longer than four (4) years. A California Professional Engineer (PE), Registered Geologist (RG), Certified Engineering Geologist (CEG), or a Certified Hydro Geologist (CHG) must sign and stamp the technical report. The report shall, at a minimum, include the following:

   a. Evaluation by the Discharger must include information on the following factors relating to the discharge:

      i. Description of the municipal entity and facilities.

      ii. Description of the quantity and nitrogen concentration of domestic water sources contributing to discharge.

      iii. Description of significant nitrogen sources of the municipal wastewater collection system, and identification of entities responsible for each source, if available.

      iv. Description of the wastewater discharge, receiving waters, quantity, and nitrogen load.

      v. Alternative plans for minimizing nitrogen contribution from the municipal sources. Alternative plans should include:

         1) Description of nitrogen sources and alternative means of control; and

         2) Cost of alternative plans in dollars per ton, of nitrogen removed from discharge.

      vi. Description and analyses of potential conventional nitrogen removal treatment technologies for implementation at the WWTP. Analyses shall include cost of implementation in dollars per ton, of nitrogen removed from discharge.

      vii. Such other information pertinent to the study as the permitting authority may deem necessary.

   b. In determining what permit conditions shall be required, the permit issuing authority shall consider the following criteria including, but not limited to:

i. The practicability of achieving a 10 mg/L total nitrogen effluent limit.

ii. Where a 10 mg/L effluent limit is not determined to be practicable, the Discharger shall provide the following:

1) The impact of the proposed nitrogen input of each alternative on the beneficial uses of the groundwater in terms of tons per year and concentration;

2) Costs per ton of nitrogen removed from discharge of each alternative plan;

3) Capability of minimizing nitrogen discharge;

4) A proposed value for the practical incremental increase; and

5) A justification for the proposed practical incremental increased value.

a. By **June 30, 2020**, the Discharger shall submit a final technical report that includes the Discharger's recommendations and conclusions, including a tentative work plan and time schedule for facility plant improvements required to accomplish nitrogen removal and comply with the effluent water quality limit. The report shall be certified with the signature and stamp of a California licensed professional PE, PG, CEG, or a CHG.

3. Within **24 months** of the adoption of this Order, the Discharger shall submit to the Colorado River Basin Water Board a technical report that includes a copy of the City of Banning ordinance that provides a comprehensive set of rules and regulations governing the design, construction, maintenance and use of public and private sewer facilities within the city's jurisdictional limits.

4. Within **24 months** of the adoption of this Order, the Discharger shall submit a technical report that contains:

a. Documents demonstrating the City of Banning's authority to issue permits for individual and community onsite septic systems;

b. The City of Banning's affirmative statement with regard to submitting a Local Agency Management Program plan in accordance with the State Water Board's *Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems*; and,

c. Identification of all areas within the jurisdiction of the City of Banning's sewer authority that are currently on existing onsite septic systems, and those undeveloped areas planned for septic systems.

G. Standard Provisions

1. The Discharger shall comply with all of the conditions of this Board Order. Noncompliance is a violation of the Porter-Cologne Water Quality Control Act (CWC, section 13000 et seq.), and is grounds for enforcement action.

2. The Discharger shall comply with the Electronic Submittal of Information (ESI) requirements by submitting all correspondence and reports required under Monitoring and Reporting Program (MRP) R7-2016-0015, and future revisions thereto, including

groundwater monitoring data and discharge location data (latitude and longitude), correspondence, and pdf monitoring reports to the State Water Resources Control Board GeoTracker https://geotracker.waterboards.ca.gov/ database. Documents that are 2.0 MB or larger should be broken down into smaller electronic files, labelled properly and uploaded into GeoTracker.

3. All technical reports required in conjunction with this Order are required pursuant to Section 13267 of the CWC, and shall include a statement by the Discharger, or an authorized representative of the Discharger, certifying under penalty of perjury under the laws of the State of California, that the report is true, complete, and accurate.

4. In accordance with California Business and Professions Code Sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of California registered professionals (i.e., civil engineer, engineering geologist, geologist, etc.) competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain work plans, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professionals, even if not explicitly stated. Each technical report submitted by the Discharger shall contain a statement of qualifications of the responsible licensed professionals as well as the professional's signature and/or stamp of the seal. Additionally, to the extent that preparation of a required technical report involves field activities, field activities shall be conducted under the direct supervision of one or more of these professionals.

5. The Discharger shall not cause degradation of any water supply in accordance with State Water Board Resolution 68-16.

6. Standby power generating facilities shall be available to operate the plant during a commercial power failure.

7. Adequate measures shall be taken to assure that flood or surface drainage waters do not erode or otherwise render portions of the discharge facilities inoperable.

8. The WWTP shall be supervised and operated by persons possessing certification of appropriate grade pursuant to section 3680, Chapter 26, Division 3, Title 23 of the California Code of Regulations.

9. The Discharger shall at all times properly operate and maintain all systems and components of collection, treatment and control, installed or used by the Discharger to achieve compliance with this Board Order. Proper operation and maintenance includes effective performance, adequate process controls, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities/systems when necessary to achieve compliance with this Board Order. All systems in service or reserved shall be inspected and maintained on a regular basis. Records of inspections and maintenance shall be retained, and made available to the Colorado River Basin Water Board's Executive Officer on request.

10. The Discharger shall ensure that all site-operating personnel are familiar with the content of this Board Order, and shall maintain a copy of this Board Order at the site.

11. The Discharger shall allow the Colorado River Basin Water Board, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:

    a. Enter the premises regulated by this Board Order, or the place where records are kept under the conditions of this Board Order;

    b. Have access to and copy, at reasonable times, records kept under the conditions of this Board Order;

    c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Board Order; and

    d. Sample or monitor at reasonable times, for the purpose of assuring compliance with this Board Order or as otherwise authorized by the California Water Code, any substances or parameters at this location.

12. Disposal of oil and grease, biosolids, screenings, and other solids collected from liquid wastes shall be pursuant to Title 27, and the review and approval of the Colorado River Basin Water Board Executive Officer.

13. Any proposed change in use or disposal of biosolids requires the approval of the Colorado River Basin Water Board Executive Officer, and U.S. Environmental Protection Agency Regional Administrator, who must be notified at least 90 days in advance of the change.

14. Sludge use and disposal shall comply with Federal and State laws and regulations, including permitting requirements, and technical standards in 40 CFR Part 503. If the State and Colorado River Basin Water Boards are delegated the authority to implement 40 CFR Part 503 regulations, this Order may be revised to incorporate appropriate time schedules and technical standards. The Discharger shall comply with the standards and time schedules in 40 CFR part 503, whether or not part of this Order.

15. The Discharger shall provide a plan as to the method, treatment, handling and disposal of sludge that is consistent with all State and Federal laws and regulations and obtain prior written approval from the Colorado River Basin Water Board specifying location and method of disposal, before disposing of treated or untreated sludge, or similar solid waste.

16. The Discharger shall maintain a permanent log of all solids hauled away from the treatment facility for use/disposal elsewhere and shall provide a summary of the volume, type (screenings, grit, raw sludge, digested sludge), use (agricultural, composting, etc.), and the destination in accordance with the MRP of this Board Order. Sludge that is stockpiled at the treatment facility shall be sampled and analyzed for those constituents listed in the sludge monitoring section of the MRP of this Board Order and as required by Title 40, Code of Federal Regulations, Part 503. The results of the analyses shall be submitted to the Colorado River Basin Water Board as part of the MRP.

17. The Discharger shall provide a report to the Colorado River Basin Water Board when it determines that the plant's average dry-weather flow rate for any month exceeds 80 percent of the design capacity. The report should indicate what steps, if any, the Discharger intends to take to provide for the expected wastewater treatment capacity necessary when the plant reaches design capacity.

18. Prior to implementing a modification that results in a material change in the quality or quantity of wastewater treated or discharged, or a material change in the location of discharge, the Discharger shall report all pertinent information in writing to the Colorado River Basin Water Board, and obtain revised requirements.

19. Prior to a change in ownership or management of WWTP, the Discharger shall transmit a copy of this Board Order to the succeeding owner/operator, and forward a copy of the transmittal letter to the Colorado River Basin Water Board.

20. The Discharger shall provide adequate notice to the Colorado River Basin Water Board Executive Officer of the following:

    a. The introduction of pollutants into any treatment facility described in the Findings of this Board Order from an indirect Discharger which would be subject to section 301 or 306 of the Clean Water Act, if the pollutants were discharged directly;

    b. Any substantial change in the volume or character of pollutants introduced into any treatment facility described in the Findings of this Board Order, by an existing or new source; and

    c. Any planned physical alteration or addition to the facilities described in this Board Order, or change planned in the Discharger's sludge use or disposal practice, where such alterations, additions, or changes may justify the application of Board Order conditions that are different from or absent in the existing Board Order, including notification of additional disposal sites not reported during the Board Order application process, or not reported pursuant to an approved land application plan.

21. The Discharger shall report orally, any noncompliance that may endanger human health or the environment. The noncompliance shall be reported immediately to the Colorado River Basin Water Board's Executive Officer at (760) 346-7491, and the California Office of Emergency Services at (800) 852-7550 as soon as:

    a. The Discharger has knowledge of the discharge,

    b. Notification is possible, and

    c. Notification will not substantially impede cleanup or other emergency measures.

    During non-business hours, the Discharger shall leave a message on the Colorado River Basin Water Board's office voice recorder at the above listed number. Incident information shall be provided orally as soon as possible and within 24 hours from the time the Discharger becomes aware of the incident. A written report shall also be provided within five (5) business days of the time the Discharger becomes aware of the incident. The written report shall contain a description of the noncompliance and its cause, the period of noncompliance, the anticipated time to achieve full compliance, and the steps taken or planned, to reduce, eliminate, and prevent recurrence of the noncompliance. The Discharger shall report all intentional or unintentional spills in excess of one thousand (1,000) gallons occurring within the WWTP or collection system to the Colorado River Basin Water Board office in accordance with the above time limits.

22. The Discharger shall report all instances of noncompliance. Reports of noncompliance shall be submitted with the Discharger's next scheduled SMRs or earlier if requested by the Colorado River Basin Water Board's Executive Officer, or if required by an applicable standard for sludge use and disposal.

23. By-pass (i.e., the intentional diversion of waste streams from any portion of the treatment facilities, except diversions designed to meet variable effluent limits) is prohibited. The Colorado River Basin Water Board may take enforcement action against the Discharger for by-pass unless:

    a. By-pass was unavoidable to prevent loss of life, personal injury, or severe property damage. Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to be inoperable, or substantial and permanent loss of natural resources reasonably expected to occur in the absence of a by-pass. Severe property damage does not mean economic loss caused by delays in production; and

       There were no feasible alternatives to by-pass, such as the use of auxiliary treatment facilities or retention of untreated waste. This condition is not satisfied if adequate back-up equipment was not installed to prevent by-pass occurring during equipment downtime, or preventive maintenance.

    b. By-pass is:

       i. Required for essential maintenance to assure efficient operation; and

       ii. Neither effluent nor receiving water limitations are exceeded; and

       iii. The Discharger notifies the Colorado River Basin Water Board ten (10) days in advance.

24. In the event of an unanticipated by-pass, the Discharger shall immediately report the incident to the Colorado River Basin Water Board. During non-business hours, the Discharger shall leave a message on the Colorado River Basin Water Board office voice recorder. A written report shall be provided within five business days the Discharger is aware of the incident. The written report shall include a description of the by-pass, any noncompliance, the cause, period of noncompliance, anticipated time to achieve full compliance, and steps taken or planned, to reduce, eliminate, and prevent recurrence of the noncompliance.

25. Federal regulations for storm water discharges require specific categories of facilities which discharge storm water associated with industrial activity (storm water) to obtain National Pollutant Discharge Elimination System (NPDES) permits and to implement Best Conventional Pollutant Technology (BCPT) and Best Available Technology Economically Achievable (BAT) to reduce or eliminate industrial storm water pollution.

26. All storm water discharges from this facility must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies, regarding discharges of storm water to storm water drain systems or other courses under their jurisdiction.

27. Storm water discharges from the facility shall not cause or threaten to cause pollution or contamination.

28. Storm water discharges from the facility shall not contain hazardous substances equal to or in excess of a reportable quantity listed in 40 CFR Part 117 and/or 40 CFR Part 302.

29. The Discharger is the responsible party for the waste discharge requirements and the monitoring and reporting program for the facility. The Discharger shall comply with all

conditions of these waste discharge requirements. Violations may result in enforcement actions, including Colorado River Basin Water Board Orders or court orders, requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Colorado River Basin Water Board.

30. This Board Order does not authorize violation of any federal, state, or local laws or regulations.

31. This Board Order does not convey property rights of any sort, or exclusive privileges, nor does it authorize injury to private property or invasion of personal rights, or infringement of federal, state, or local laws or regulations.

32. This Board Order may be modified, rescinded, or reissued, for cause. The filing of a request by the Discharger for a Board Order modification, rescission or reissuance, or notification of planned changes or anticipated noncompliance, does not stay any Board Order condition. Causes for modification include a change in land application plans, or sludge use or disposal practices, and adoption of new regulations by the State or Colorado River Basin Water Board (including revisions to the Basin Plan), or Federal government.

I, Jose L. Angel, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Colorado River Basin Region, on June 30, 2016.

Jose L. Angel

JOSE L. ANGEL, P.E.
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM R7-2016-0015
FOR
CITY OF BANNING, OWNER
SUEZ WATER ENVIRONMENTAL SERVICES, INC., OPERATOR
BANNING WASTEWATER TREATMENT PLANT
Banning - Riverside County

Location of Discharge:
Section 14, T3S, R1E, SBB&M

A. Monitoring

1. This Monitoring and Reporting Program (MRP) describes requirements for monitoring a wastewater system and groundwater quality (when needed). This MRP is issued pursuant to California Water Code (CWC) section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

2. Water Code section 13267 states, in part:

   "In conducting an investigation specified in subdivision (a), the Colorado River Basin Water Board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the Colorado River Basin Water Board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the Colorado River Basin Water Board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."

3. Water Code section 13268 states, in part:

   "(a) (1) Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of section 13267, or failing or refusing to furnish a statement of compliance as required by subdivision (b) of section 13399.2, or falsifying any information provided therein, is guilty of a misdemeanor, and may be liable civilly in accordance with subdivision (b). (b) (1) Civil liability may be administratively imposed by a Colorado River Basin Water Board in accordance with Article 2.5 (commencing with section 13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violation occurs."

4. The Discharger owns and operates the wastewater system that is subject to Board Order R7-2016-0015. The reports are necessary to ensure that the Discharger complies with the Order. Pursuant to Water Code section 13267, the Discharger shall implement the MRP and shall submit the monitoring reports described herein.

5. All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form. If composite samples are collected, the basis for sampling (time or flow weighted) shall be approved by Colorado River Basin Water Board staff.

6. Field test instruments (such as those used to test pH, dissolved oxygen, and electrical conductivity) may be used provided that:

   a. The user is trained in proper use and maintenance of the instruments;

   b. The instruments are field calibrated prior to monitoring events at the frequency recommended by the manufacturer;

   c. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and

   d. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

7. The collection, preservation and holding times of all samples shall be in accordance with U. S. Environmental Protection Agency (USEPA) approved procedures. Unless otherwise approved by the Colorado River Basin Water Board's Executive Officer, all analyses shall be conducted by a laboratory certified by the State Water Resources Control Board Division of Drinking Water. All analyses shall be conducted in accordance with the latest edition of the "Guidelines Establishing Test Procedures for Analysis of Pollutants" (40 CFR Part 136), promulgated by the USEPA.

8. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. In the event that continuous monitoring equipment is out of service for period greater than 24-hours, the Discharger shall obtain representative grab samples each day the equipment is out of service. The Discharger shall correct the cause(s) of failure of the continuous monitoring equipment as soon as practicable. The Discharger shall report the period(s) during which the equipment was out of service and if the problem has not been corrected, shall identify the steps which the Discharger is taking or proposes to take to bring the equipment back into service and the schedule for these actions.

9. The Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Board Order, and records of all data used to complete the application for this Board Order, for a period of at least five (5) years from the date of the sample, measurement, report or application. This period may be extended by request of the Colorado River Basin Water Board's Executive Officer at any time. Records of monitoring information shall include:

   a. The date, exact place, and time of sampling or measurement(s);

   b. The individual(s) who performed the sampling or measurement(s);

   c. The date(s) analyses were performed;

   d. The individual(s) who performed the analyses;

e. The analytical techniques or method used; and

f. The results of such analyses.

10. Samples shall be collected at the location specified in the WDRs. If no location is specified, sampling shall be conducted at the most representative sampling point available.

11. Given the monitoring frequency prescribed by MRP R7-2016-0015, if only one sample is available for a given reporting period, compliance with monthly average, or weekly average Discharge Specifications, will be determined from that sample.

12. If the facility is not in operation, or there is no discharge during a required reporting period, the Discharger shall forward a letter to the Colorado River Basin Water Board indicating that there has been no activity during the required reporting period.

Influent Monitoring

13. Influent to the WWTP shall be monitored according to the following schedule:

Constituent	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
20°C BOD_5[1]	mg/L[2]	24-Hr. Composite	2x/Month	Monthly
Total Suspended Solids	mg/L	24-Hr. Composite	2x/Month	Monthly
Nitrate as N	mg/L	24-Hr. Composite	Quarterly	Quarterly
Nitrite as N	mg/L	24-Hr. Composite	Quarterly	Quarterly
Total Nitrogen	mg/L	24-Hr. Composite	Quarterly	Quarterly

WWTP Effluent Monitoring

14. Effluent from the WWTP into the Evaporation/Percolation Ponds shall be monitored according to the following schedule:

Constituent	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
Flow; Total Plant Effluent into Ponds	MGD[3]	Flow Meter Reading	Daily	Monthly
20°C BOD_5	mg/L	24 Hr. Composite	Weekly	Monthly
Total Suspended Solids	mg/L	24 Hr. Composite	Weekly	Monthly
Nitrate as N	mg/L	24 Hr. Composite	2x/Month	Monthly

[1] 5-day Biochemical Oxygen Demand at 20 degrees Celsius.
[2] milligrams per Liter
[3] Million Gallons per Day

Constituent	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
Nitrite as N	mg/L	24 Hr. Composite	2x/Month	Monthly
Total Nitrogen	mg/L	24 Hr. Composite	2x/Month	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly	Monthly
VOCs[4]	µg/L[5]	24 Hr. Composite	Annually	Annually

Pond Monitoring

15. The ponds shall be monitored according to the following schedule:

Constituent	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
Dissolved Oxygen[6]	mg/L	Composite	Weekly	Monthly
pH	s.u.[7]	Grab	Weekly	Monthly
Freeboard	Ft	Measurement	Weekly	Monthly

The ponds shall be observed for vegetation growth, erosion and irregularities to prevent the breeding of mosquitoes. Observations shall be reported with the monthly SMR.

Domestic Water Supply

16. The domestic water supply shall be monitored according to the following schedule:

Constituent	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
Total Dissolved Solids	mg/L	Composite	Monthly	Monthly

Groundwater Monitoring

17. Groundwater shall be sampled in the uppermost 20 feet of the shallow aquifer from the monitoring wells according to the following schedule:

Constituent	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
Depth to Groundwater	ft (bgs)[8]	measurement	Quarterly	Quarterly

[4] Analysis of Volatile Organic Compounds is to be accomplished using the USEPA test methods 601 and 602 or 624
[5] micrograms per liter
[6] Dissolved Oxygen shall be monitored at the upper one foot layer of the evaporation/percolation ponds.
[7] standard pH units
[8] feet below ground surface.

Constituent	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
Total Dissolved Solids	mg/L	Grab	Quarterly	Quarterly
Total Nitrogen	mg/L	Grab	Quarterly	Quarterly
Nitrate as N	mg/L	Grab	Quarterly	Quarterly
Nitrite as N	mg/L	Grab	Quarterly	Quarterly
Sulfate	mg/L	Grab	Quarterly	Quarterly
Chloride	mg/L	Grab	Quarterly	Quarterly
Fecal Coliform	MPN/100mL	Grab	Quarterly	Quarterly
VOCs	µg/L	Grab	Annually	Annually

Sludge Monitoring

18. Prior to disposal, sludge that is generated at the WWTP shall be sampled and analyzed for the following:

Constituent	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
Arsenic	mg/kg[9]	Composite	Annually	Annually
Cadmium	mg/kg	Composite	Annually	Annually
Chromium	mg/kg	Composite	Annually	Annually
Copper	mg/kg	Composite	Annually	Annually
Lead	mg/kg	Composite	Annually	Annually
Mercury	mg/kg	Composite	Annually	Annually
Molybdenum	mg/kg	Composite	Annually	Annually
Nickel	mg/kg	Composite	Annually	Annually
Selenium	mg/kg	Composite	Annually	Annually
Zinc	mg/kg	Composite	Annually	Annually
Fecal Coliform	MPN/gram[10]	Composite	Prior to Disposal	Annually

B. Reporting

1. The Discharger shall inspect and document any operation/maintenance problems by inspecting each unit process. In addition, calibration of flow meters and equipment shall be performed in a timely manner and documented. Operation and Maintenance reports shall be submitted to the Colorado River Basin Water Board Office annually.

[9] milligrams per kilogram
[10] Most Probable Number per gram.

2. The annual Operation and Maintenance report shall include the following:

   a. Documentation showing the calibration of flow meters and equipment as performed in a timely manner annually;

   b. Modifications and updates to the Operation and Maintenance Manual;

   c. Operator certification status update including number of staff and grade certification.

   d. Modifications and updates to the City's waste water ordinance or rules and regulations.

3. The Discharger shall report annually on the quantity, location and method of disposal of all sludge and similar solid materials being produced at the WWTP. If no sludge is disposed of during the year being reported, the Discharger shall state "No Sludge Removed" in the annual monitoring report.

4. The Discharger shall provide the Colorado River Basin Water Board with an annual report describing the pretreatment program activities over the previous twelve-month period. The report shall be transmitted to the Colorado River Basin Water Board office no later than January 31 of each year and include:

   a. A summary of actions taken by the Discharger which ensures industrial-user compliance;

   b. An updated list of industrial users (by SIC categories) which were issued permits, and/or enforcement orders, and a status of compliance for each user; and

   c. The name and address of each user that received a revised discharge limit.

5. SMRs shall be certified under penalty of perjury to be true and correct, and shall contain the required information at the frequency designated in this MRP.

6. Each Report must contain an affirmation in writing that states:

   "All analyses were conducted at a laboratory certified for such analyses by and in accordance with current USEPA procedures or as specified in this Monitoring and Reporting Program."

7. Each Report shall contain the following completed declaration:

   "I certify under the penalty of law that this document, including all attachments and supplemental information, was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment.

   Executed on the _____day of _____ at _____

   _____(Signature)

   _____(Title)"

8. The SMRs, and other information requested by the Colorado River Basin Water Board, shall be signed by a principal executive officer or ranking elected official.

9. A duly authorized representative of the Discharger may sign the documents if:
   a. The authorization is made in writing by the person described above;
   b. The authorization specified an individual or person having responsibility for the overall operation of the regulated disposal system; and
   c. The written authorization is submitted to the Colorado River Basin Water Board's Executive Officer.

10. The Discharger shall attach a cover letter to the SMRs. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned and the proposed time schedule of corrective actions. Identified violations should include a description of the requirement that was violated and a description of the violation.

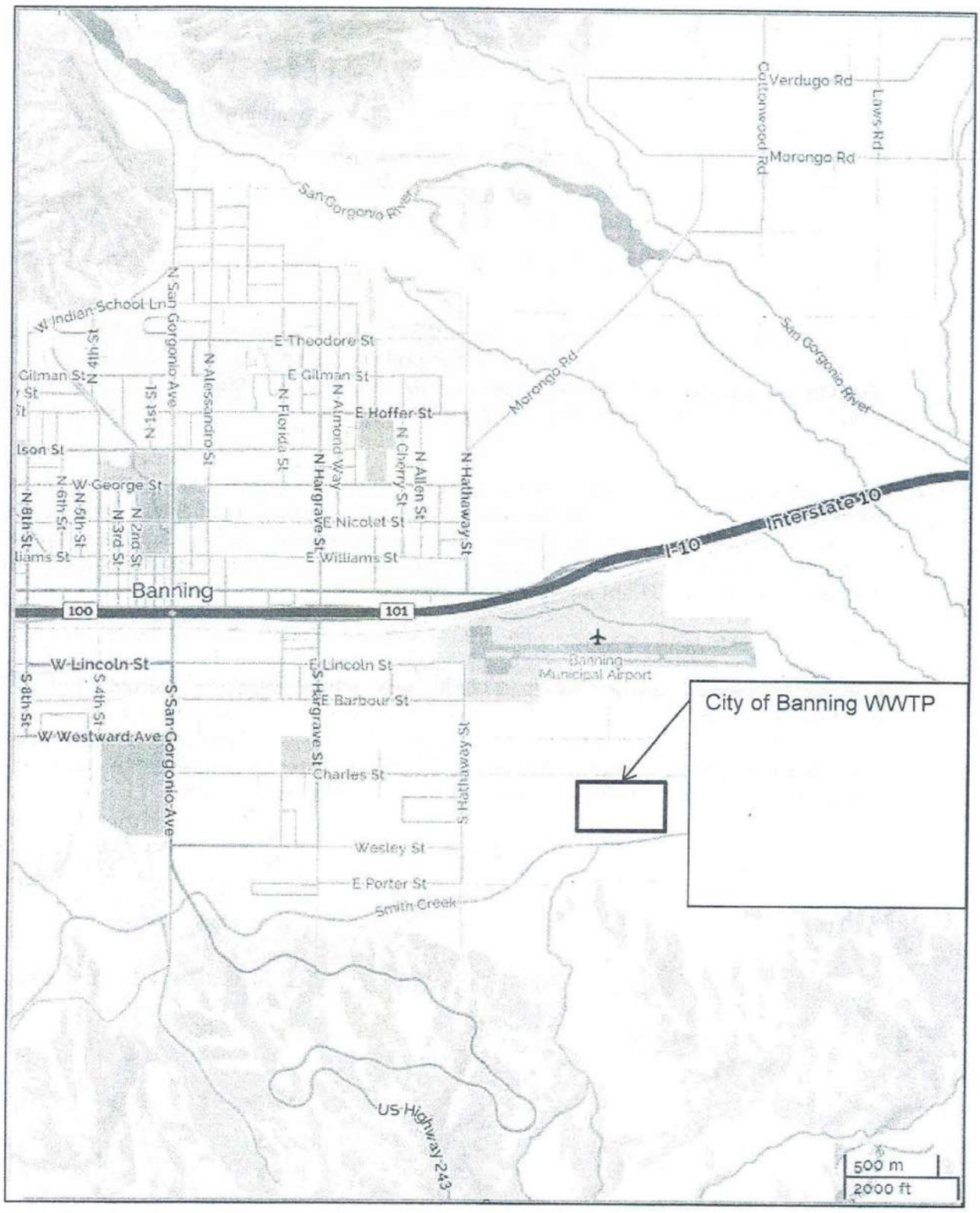
11. Daily, weekly, and monthly monitoring shall be included in the monthly monitoring report. Monthly monitoring reports shall be submitted to the Colorado River Basin Water Board by the 15th day of the following month. Quarterly monitoring reports shall be submitted by January 15th, April 15th, July 15th and October 15th. Annual monitoring reports shall be submitted by January 31st of the following year.

12. The Discharger shall comply with the Electronic Submittal of Information (ESI) requirements by submitting all correspondence and reports required under Monitoring and Reporting Program (MRP) R7-2016-0015, and future revisions thereto, including groundwater monitoring data and discharge location data (latitude and longitude), correspondence, and pdf monitoring reports to the State Water Resources Control Board GeoTracker database. Documents that are 2.0 MB or larger should be broken down into smaller electronic files, labelled properly and uploaded into GeoTracker.

Jose L. Angel

JOSE L. ANGEL, P.E.
Executive Officer

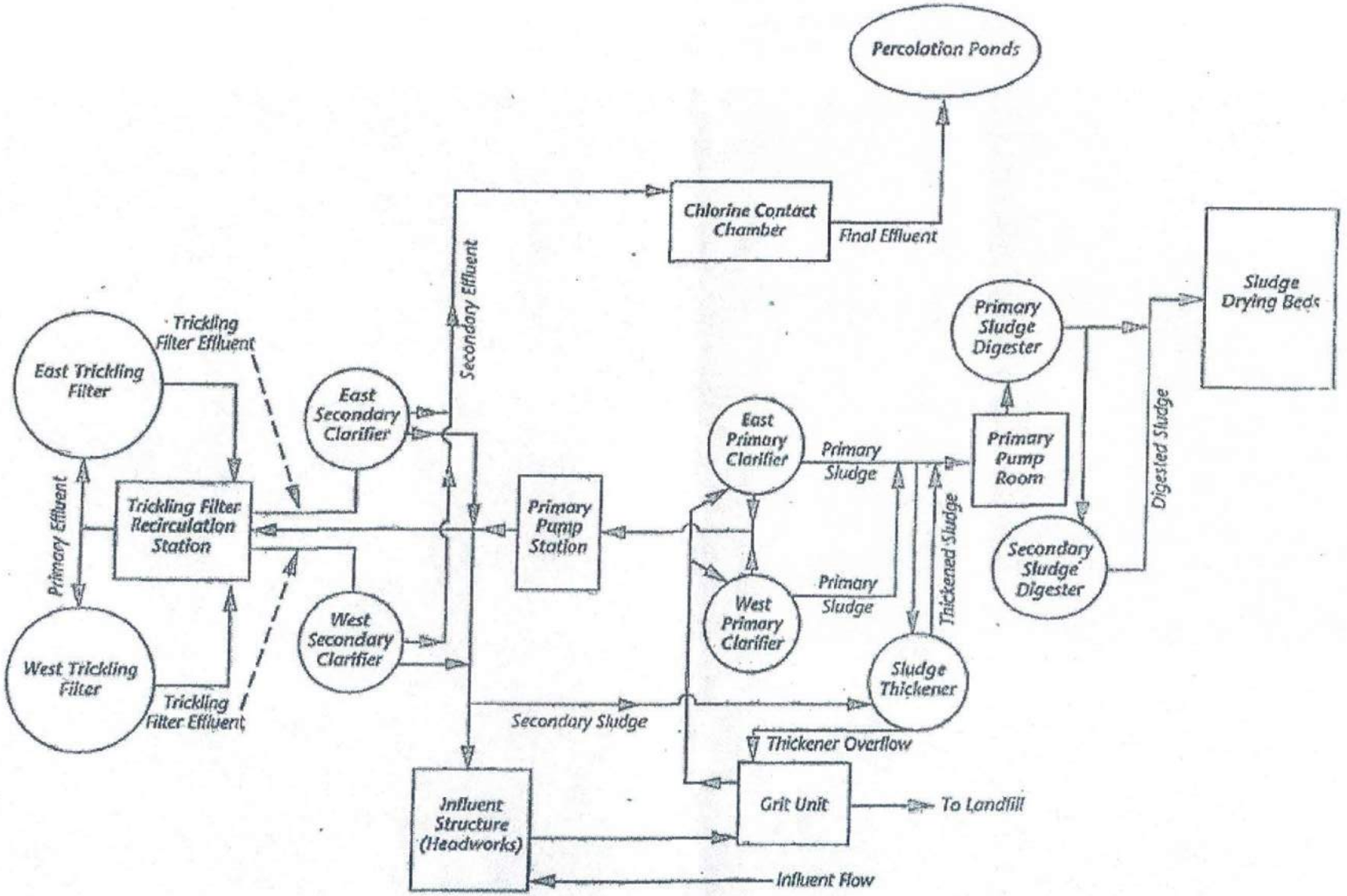
6/30/2016
Date



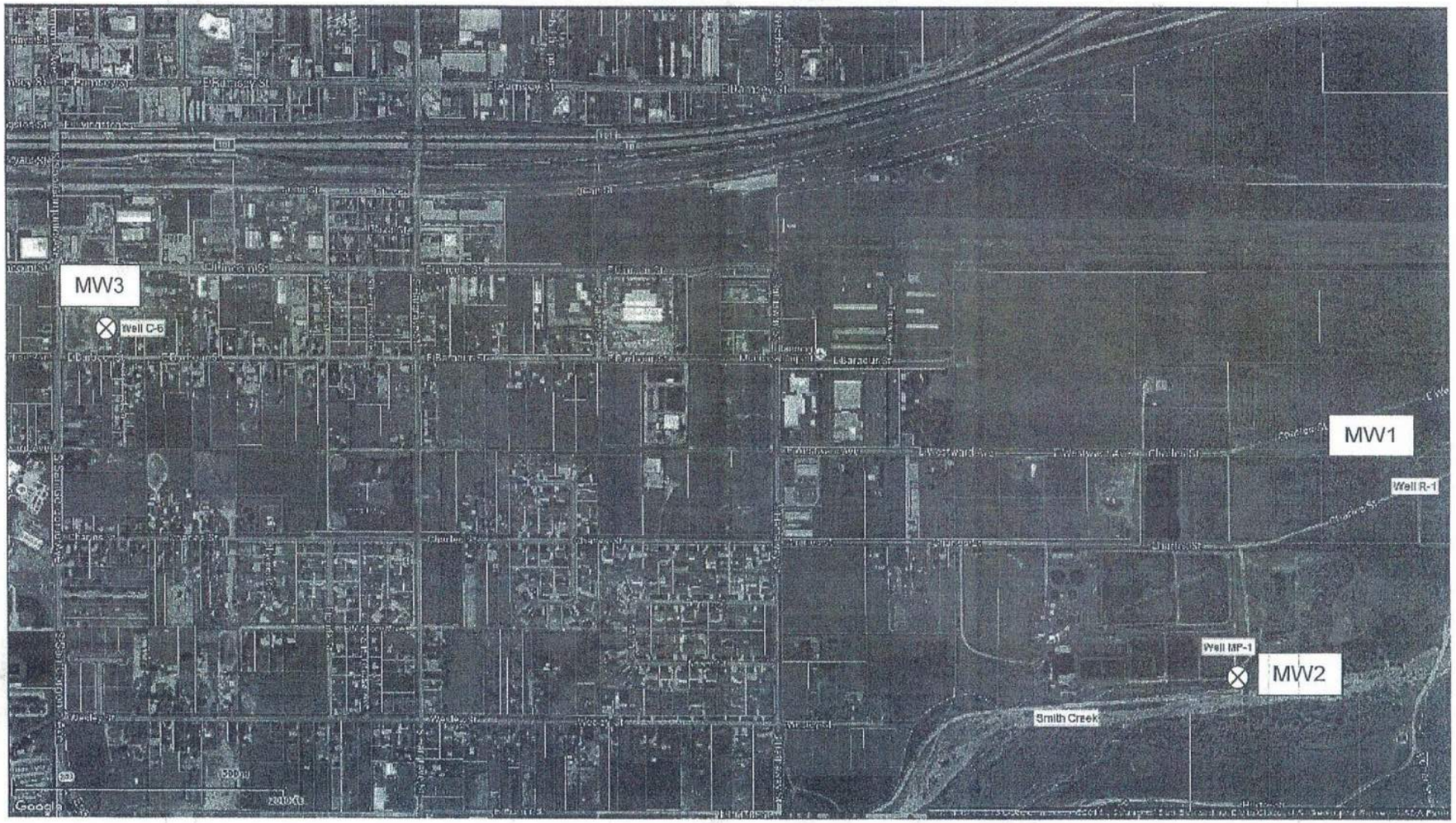
CITY OF BANNING, OWNER
SUEZ WATER ENVIRONMENTAL SERVICES, INC., OPERATOR
WASTEWATER TREATMENT PLANT
Banning – Riverside County
Section 14, T3S, R1E, SBB&M

ATTACHMENT A – VICINITY MAP

Board Order R7-2016-0015



CITY OF BANNING, OWNER
SUEZ WATER ENVIRONMENTAL SERVICES, INC., OPERATOR
WASTEWATER TREATMENT PLANT
Banning – Riverside County



CITY OF BANNING, OWNER
SUEZ WATER ENVIRONMENTAL SERVICES, INC., OPERATOR
WASTEWATER TREATMENT PLANT
Banning – Riverside County

ATTACHMENT C – MONITORING WELL LOCATIONS

City of Banning

Wastewater Treatment Plant Equalization Basin Project

May 2021



Preliminary Engineering Report

AQUA ENGINEERING
533 W 2600 S Suite 275, Bountiful, UT 84010
Phone: 801.299.1327 | Fax: 801.299.0153

ALBERT A. WEBB ASSOCIATES

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1. INTRODUCTION

The City of Banning desires to construct equalization basins at the existing Wastewater Treatment Plant (WWTP) to mitigate the daily and wet weather flow variations received at the plant. Specifically, the City would like to construct two distinct basins at the existing plant site. The first basin will be used to equalize the daily diurnal flows received by the plant. The second basin will primarily be utilized during large "wet weather flow" events to store the additional plant flow.

The key objective of this Preliminary Engineering Report (PER) is to discuss the approach and identify principal design criteria associated with the City of Banning WWTP Equalization Basin construction project. Specifically, this report addresses and describes the following:

- Conceptual project approach
- Relevant existing facilities
- Determination of required equalization volumes
- Description and preliminary layouts of proposed equalization basins, auxiliary facilities, and potential modifications to existing facility
- Preliminary opinion of cost.

1.1. PROJECT APPROACH

The project approach assumes the proposed basins will receive plant influent flows following the primary treatment processes (screening, grit removal and primary clarification). This means the primary treatment processes will continue to experience diurnal and wet weather flow variations. However, the maintenance and operation of the proposed equalization basins will be simplified. The main reason for this is that a significant quantity of rags, grit, and larger debris will be removed from the influent flow prior to entering the equalization and storage basins. Thus, the equalization and storage basins will accumulate less debris, requiring less cleaning and maintenance by operations staff.

Flow from the primary clarifiers will be gravity conveyed to the equalization basin, as illustrated in the preliminary hydraulic profile and process flow schematic drawings included in Appendix A. Specifically, the existing primary effluent piping will be intercepted with a new 20-inch pipe (PVC, C-900) which will convey the flow to the new diurnal equalization basin, as shown in attached drawings. Available record drawings indicate that a portion of an existing 18-inch bypass line could be used for this purpose. However, due to age and unknown condition of this pipe, this preliminary effort assumes that a new pipe will be constructed.

As noted previously, two basins are proposed to be constructed. The smaller diurnal equalization basin will attenuate variation of typical daily flows. During infrequent wet weather flows, or other conditions where the capacity of the diurnal equalization basin is exceeded, liquid will overflow into the larger wet weather flow storage basin. Typically, the plant average day flow (ADF) will be discharged from the equalization basin(s) to the downstream secondary treatment processes using an equalization basin pump station. The diurnal equalization basin will be sized to allow daily emptying at the plant design flows. Based on the operational preference, the wet weather storage basin may require several days to empty. Alternatively, increased discharge (higher than ADF) from the equalization pump station may also be used to control the time required to empty this basin.

The flow from the diurnal equalization basin will be pumped directly to the existing 20-inch piping feeding the existing humus recirculation pump station. As a result, the existing primary effluent pump station will be abandoned.

2. EXISTING FACILITIES

2.1. DESCRIPTION OF EXISTING FACILITIES

Information presented below has been extracted from record drawings made available by the City, limited site visits conducted to date, and specific survey and geotechnical studies completed for this effort. Due to the age of record drawings and potential for changed field conditions it is anticipated that additional site visits will be required to verify existing conditions and further develop the design.

The current wastewater treatment plant was designed to treat an average day flow of 3.6 million gallons per day (MGD) and a peak flow of 7.2 MGD (MWH Plan Set 1999). The existing WWTP is a trickling filter plant with the following principal process/treatment components:

- Headworks (screening and grit removal)
- Primary Clarification
- Primary Effluent Pump Station
- Trickling Filters
- Humus Recirculation Pump Station
- Secondary Clarifiers
- Chlorine Disinfection
- Solids Handling Facilities
- Auxiliary facilities such as MCC buildings, chemical storage areas, detention pond(s), sludge drying beds, and others

A brief description of pertinent existing facilities is provided in the following paragraphs. These facilities are also identified in the facility site and yard piping drawings included in Appendix A.

2.1.1. Detention Pond

This earthen pond, constructed in 1999-2000, is principally used to accept storm water collected on site. Multiple pipes deliver storm water to the basin currently. The area currently occupied by this pond has been identified as the site of the proposed equalization basins.



Figure A. Existing Detention Pond

2.1.2. Primary Clarifiers

Two concrete circular primary clarifiers are operated in the plant. Primary effluent from each clarifier is currently conveyed to the primary effluent pump station via 18-inch piping. In addition, original plans indicate that primary clarifier effluent boxes also allow for discharge of the primary effluent directly into an 18-inch bypass line. However, based on site visit observations, the current condition of the primary clarifier effluent boxes is such that will require modifications to ensure continued operability.

2.1.3. Primary Effluent Pump Station

The main function of this pump station is to deliver primary effluent to the recirculation pump station and ultimately trickling filters for additional treatment. This pump station currently receives primary effluent from the primary clarifiers and a 4-inch drain line from the trickling filter recirculation pump station. The pump station shows significant signs of age and its continued use would require substantial improvements.





Figure B. Existing Primary Effluent Pump Station

2.1.4. Humus Recirculation Pump Station

The existing Humus Recirculation Pump Station delivers a combined flow of primary effluent and humus return flows to trickling filters. Review of available record drawings show the current pump station consisting of a wet well with submersible pumps and a pump gallery with valves and piping combining the return and primary effluent flows. Figure C below shows a pump station schematic. In addition, capacity of existing pumps is shown in Table 1.

Table 1. Existing Recirculation Pumps

Pump	Flow (gpm)	Head (feet)	HP
Pump #1 (P-7)	1,800	N/A	15.0
Pump #2 (P-8)	1,800	N/A	15.0

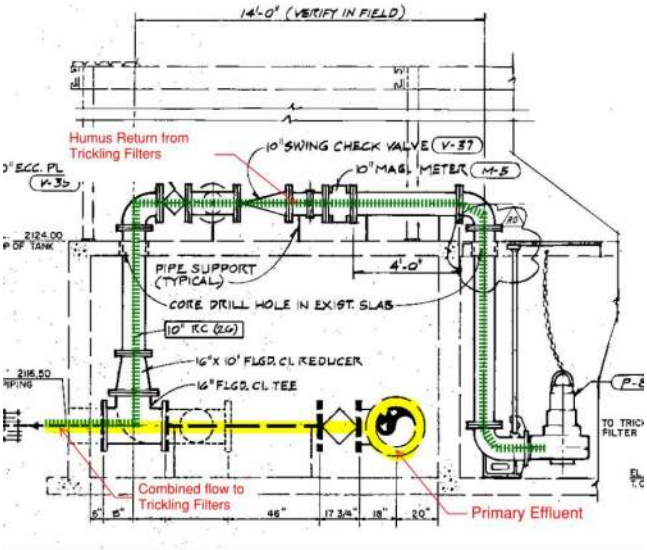


Figure C. Recirculation Pump Station Schematic

This effort did not include an evaluation of the condition of the recirculation pump station. It is assumed that the current piping and recirculation pumps are adequate to accommodate the plant design flows.

3. PROPOSED FACILITIES AND MODIFICATIONS

The main objective of this project is to design and construct flow equalization facilities which will provide daily flow equalization and emergency storage for larger "wet flow" events sporadically experienced by the plant and typically associated with larger storm events and inflow and infiltration (I&I) in the collection system. The City has identified a suitable location on the existing plant site currently occupied by a storm water detention pond as the desired location of the future equalization facilities (See drawing 01C201 in Appendix A).

Following paragraphs describe the approach to sizing the two basins and establish the minimum volume and principal design criteria required for both applications.

3.1. EQUALIZATION BASIN SIZING

Equalization basin sizing for wastewater treatment plants is ideally based on measured plant influent flow data. Historic flow data provided by the City and used in this analysis is summarized below:

- Daily flow data for years 2011 through 2016 – This data was generally used to identify general flow patterns and identify impacts of rainfall events to daily inflow into the plant
- Hourly flow data (Flowcharts – see example in Appendix B) for years 2010 through 2013*
    - (*some daily records missing)
    - Spreadsheets with hourly flow data corresponding to significant wet weather flow events outside the 2010 to 2013 time period

  This data was used to develop the diurnal curves as described in subsequent paragraphs.
- Miscellaneous flow and rainfall (precipitation depth) data associated with wet weather events.

3.1.1. DIURNAL EQUALIZATION BASIN SIZING

Typical approach to sizing equalization basins involves a development of a diurnal curve. In general, diurnal curves are somewhat specific to a given collection system or treatment facility, although some variation based on seasons and specific events is usually observed. To develop a diurnal curve for this facility a representative sample of available hourly flow data was generated and processed. As a result, and as shown in Figure D, a representative "typical" diurnal curve (in red) was developed. For illustration purposes, a sample of diurnal curves used to develop the typical curve are also shown in gray.

Once the typical diurnal curve was defined, it was normalized based on the annual average plant flows to obtain a unit diurnal curve, which is a curve based on an average flow of 1 MGD. A unit diurnal curve allows us to apply the plant design flow rate (or any flow rate for that matter) for subsequent use in sizing of equalization facilities.

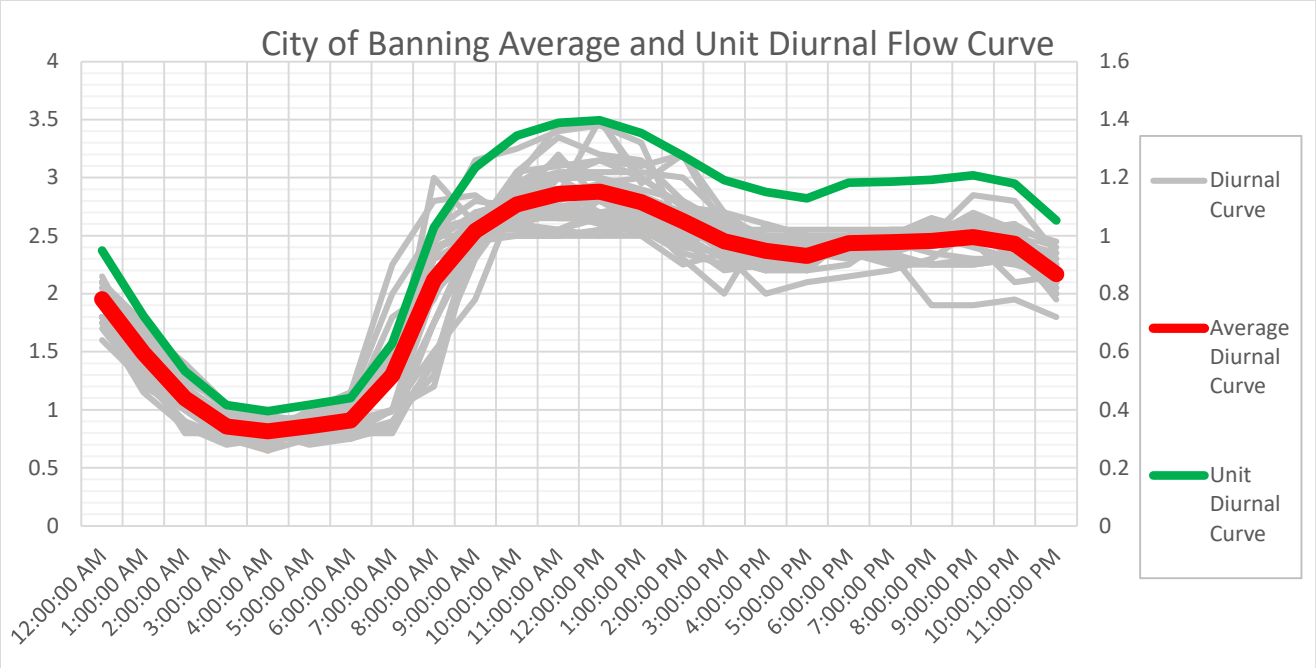


Figure D. City of Banning WWTP Historic Average and Unit Diurnal Flow Curve

With the unit diurnal curve established, the plant design flow of 3.6 MGD (ADF) was applied and a design diurnal curve was developed for actual sizing of the diurnal equalization basin. The sizing of the basin assumes that while the inflow into the equalization basin is represented by the diurnal curve flows, the equalization basin outflow is equal to the average plant design flow of 3.6 MGD. In other words, while the incoming flow varies significantly based on the time of the day, the outflow is constant (equalized) throughout the 24-hour period. An important aspect of equalization basin operation is the ability to empty the equalization basin daily and this is also a factor that impacts the sizing of the equalization basin.

Based on the design diurnal curve, outflow rate of 3.6 MGD, and the requirement to empty the equalization basin daily, a minimum equalization basin volume of 550,000 gallons is established. However, standard industry practice recommends a 10% to 20% volume contingency to account for unforeseen changes in diurnal flows. In this case, it is suggested to increase this volume by 10% to 600,000 gallons due to the additional overflow volume that will be available in the wet weather flow storage basin.

Figure E illustrates the diurnal influent flows, ADF, and storage volume during a 72-hour period operation of the proposed equalization basin. The red line represents the plant influent flow. The green line represents the effluent flow from the diurnal equalization basin and the blue line represents the volume of storage at a given time.

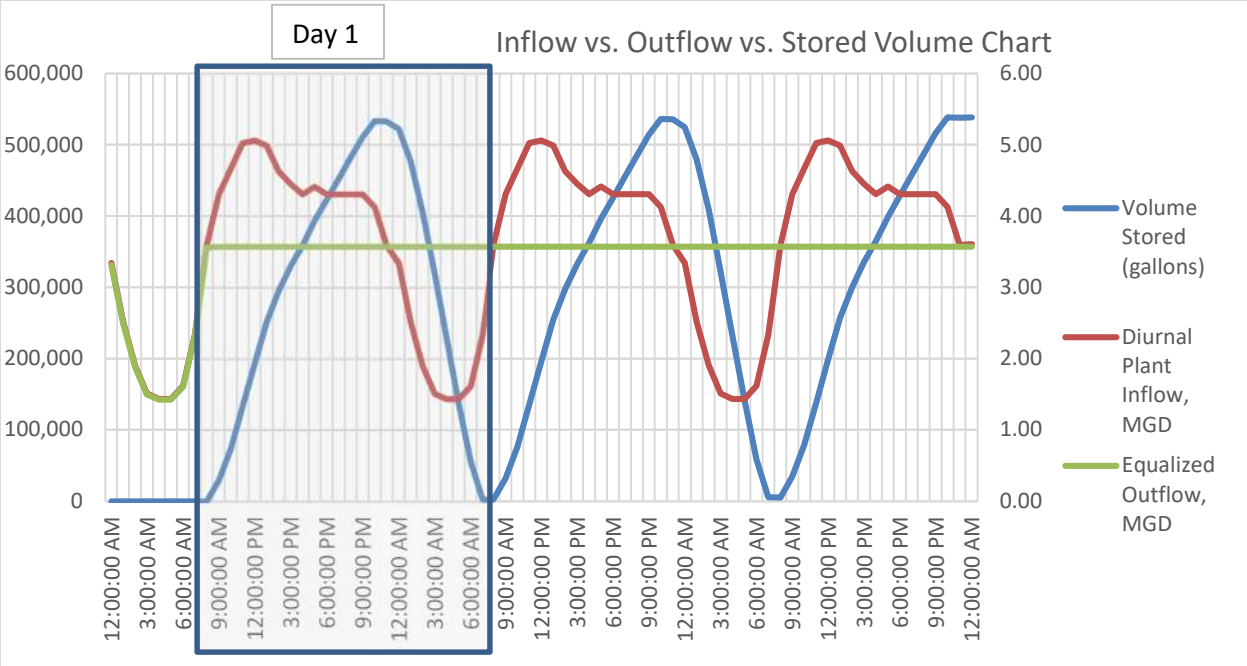


Figure E. Flow vs Equalization Basin Storage Curve

3.2. DIURNAL EQUALIZATION BASIN STRUCTURE

The diurnal equalization basin will be a cast-in place concrete structure. The main reason for this is to minimize footprint and enhance maintenance and operability. Preliminary design parameters for the diurnal equalization basin structure are listed below:

Minimum volume of 600,000 gallons is required.

Operational liquid depth: Based on the overall plant hydraulics and desire to minimize earthwork (excavation and backfill) during construction, a maximum liquid depth of 18 feet is proposed for the diurnal equalization basin. As a result, a minimum area of 4,500 square feet (sf) is required.

Preliminary Diurnal Basin Configuration:

- Shape – Rectangular - with Two Sub-Basins
- Maximum liquid depth = 18 feet
- Wall height = 20 feet (2-foot min. freeboard)
- Nominal length = 100 feet
- Nominal width = 45 feet
- Preliminary wall width = 30 inches
- Preliminary slab thickness = 30 inches
- Typical min. floor slope = 0.5%
- Additional structural requirements:
    - Low flow channel sloped at 1% min.
    - Pump Intake Sump

A cursory review of an alternative circular-shaped equalization basin was completed as part of this effort. Based on the preliminary structural analysis and required volume, an estimated 150 cubic yards (CY) difference in concrete quantity required is approximated. While this difference in material quantity is significant, the labor requirements associated with circular tanks construction are typically higher thus minimizing potential cost savings. As a result, this potential option was not considered

further.

3.3. DIURNAL EQUALIZATION BASIN OPERATION

3.3.1. Flow Control

The equalization basin will work in concert with the equalization basin pump station. Simple and robust operation is desired for equalization basin due to the nature of liquid handled and their continuous use. Drawings attached in Appendix A provide a preliminary basin layout and identify some of the proposed flow control features described below:

The primary effluent will be conveyed from the primary clarifier directly into the equalization pump station. Continuous plant influent flow metering will be provided, and a 15-day average plant influent flow rate will be used to determine the ADF for the period. This normalized flow rate which will control the operation of the equalization basin pumps. In some circumstances (based on liquid levels in the equalization basin) the pumps will have the ability to pump lower or higher rates.

The equalization basin pump station will be hydraulically connected to the diurnal equalization basin. As a result, any influent flow that exceeds the established ADF will be stored in the diurnal equalization basin. Once the influent flow rate is less than the ADF, the equalization basin will start to empty.

In the scenario when the plant is experiencing wet weather flows and the diurnal equalization basin cannot provide the required attenuation and storage, an overflow will be provided that will convey liquid from the diurnal equalization basin into the wet weather storage basin. The overflow will be set at an elevation that is a few inches higher than the maximum operational liquid elevation for the diurnal equalization basin. This configuration ensures that the two basins are not hydraulically connected and that the wet weather storage basin only receives flows when the diurnal equalization basin is out of capacity.

The mechanism to empty the wet weather storage basin will consist of a single or multiple pipe intake(s) at a low spot constructed in the basin and a pipe(s) which will discharge back into the diurnal equalization basin. Flap gates or duckbill check valves (see Figure F below) will be installed at the end of the pipe (inside of the diurnal equalization basin). This configuration will simplify the flow controls (no operator input required) and ensure that the liquid in the diurnal equalization basin is removed prior to removal of liquid from the wet weather storage basin.



Figure F. Duckbill and Flap gates (Courtesy of Red Valve and Hydro-Gate)

3.3.2. Equalization Basin Maintenance

Maintenance of equalization basins is important. If proper maintenance is not performed odor and nuisance solids may be present. Design of the equalization basin and auxiliary facilities, and a number of passive and active features may greatly improve the operability and minimize maintenance

requirements. For this project, several features may be implemented:

- Passive measures:
  - Primary effluent flow will be directed into the pump station wet well (sump) – this will minimize the utilization of the equalization basing during low flows. In other words, if the influent flow is equal or less than the ADF, the main equalization basin volume will not be utilized.
  - Use of sloped floor and low flow channels – this will ensure a level of self-cleaning as the level in the equalization basin is lowered.
  - Corrosion resistant Fiberglass Reinforced Plastic (FRP) access ladders will be provided allowing for easier access into the basin.
  - Protective coatings and non-corrosive materials of construction– ensure longevity and easier cleaning of concrete surfaces.

- Active measures:
  - Automatic tipping buckets (Refer to Figure G) - provide an automated cleaning system based on relatively simple operational strategy. Once the equalization basin is empty or very close to empty solenoid valves located at utility water feed lines to each tipping bucket are opened and start filling the buckets. Once the liquid level in the buckets reaches a certain stage, buckets are "tipped" and the entire volume is discharged onto the sloped basin floor. The quantity and energy of the discharged liquid washes off the basin floor and portion of walls. The principal advantage of this system is that it does not require operator input. However, some disadvantages of the system are noted below:
    - Relatively high capital cost
    - Specific structural requirements
    - Require electrical and controls
    - Relatively high utility water demand.



Figure G. Automatic Tipping Buckets (Courtesy of Ovivo)

  - Wash-down Monitor Hydrants are relatively simple systems typically consisting of

a 2 to 4-inch hydrant with a spray nozzle. The spray nozzle usually can travel 360 degrees horizontally and 90 degrees vertically allowing for wide coverage.



Figure H. Typical Washdown Monitor Hydrant

Main advantage of this system is simplicity and relatively low capital cost. However, manual operation associated with this system increases the long-term operational costs.

Ability to implement any of the active measures is contingent on availability of utility water on site which will be further investigated during detailed design. Review of the available record drawings suggest that the utility water system at the plant has a capacity to deliver 300 gpm at a pressure of 185 feet. Additional review of the current utility water demand at the plant is required to establish if the current system capacity is sufficient for implementation of all or any of the active measures proposed.

3.3.3. Odor Control

No dedicated odor control is proposed for the initial construction project. The structural design of the equalization basin will assume and include provisions for a future aluminum cover and active odor control system.

3.4. EQUALIZATION BASIN PUMP STATION

Main purpose of the equalization basin pump station is to provide a consistent flow to secondary treatment processes (recirculation pump station and trickling filters). As previously noted, the pumped flow will be equivalent to an average day plant influent flow normalized through a 15-day period. To provide operational flexibility and account for potential scenarios when the equalization basins are offline the pump station will also have a capacity to pump peak design flows.

The proposed equalization basin pump station will consist of three self-priming pumps (see Figure I). The pump station wet well (sump) will be incorporated into the main diurnal equalization basin structure. The pumps and majority of suction and discharge piping will be constructed on a concrete pad adjacent to the diurnal equalization basin structure. It is recommended to provide a small metal awning right above the pumps for weather protection.



Figure I. Self-Priming Pump (Courtesy of Gormann-Rupp)

Assuming the pumps will connect into the existing primary effluent pump station discharge piping (See attached drawings in Appendix A for approximate location), a total dynamic head (TDH) of 50 feet is estimated. Table 2 shows the basic design criteria for the equalization basin pumps:

Table 2. Preliminary Equalization Pump Station Design Parameters

Design parameter:	
No. of Pumps	3 (2 Duty +1 Standby)
Flow capacity	2,600 gpm (each)
Estimated TDH	50 feet
Suction Lift	20 feet (+/-)
Drive Size	50 HP (VFD)
Solids handling capacity	3-inch diameter solids

Main pump discharge header will have a magmeter installed allowing for flow measurement and control of pumps.

Submersible pumps may be installed as an alternative to utilizing self-priming pumps in this application. Budgetary costs received for both types of pumps suggest that the capital cost difference is within 10% and cannot be considered significant at this stage of design. However, unless there is a strong preference, or if the detailed design favors or requires the use of submersible pumps, self-priming pumps are recommended for this application. The main reason for this is that the self-priming pumps are a "dry" installation and allow for easy visual inspection and relatively easier maintenance.

3.5. WET WEATHER FLOW STORAGE BASIN

A secondary, wet weather flow storage basin (storage basin) will be constructed adjacent to the diurnal equalization basin structure. The main purpose of this storage basin is to provide an overflow storage (from diurnal equalization basin) for wet weather flows.

3.6. WET WEATHER FLOW STORAGE BASIN SIZING

In general, process of estimating the size of the wet weather storage basin included the following steps:

- Identification of wet weather days from available rainfall data
- Correlation of "rain days" with available hourly flow data (for period of 2010 through 2013 and additional wet weather day hourly flow data provided)
- Development of individual diurnal curves for wet weather days.
- Comparison of wet weather days to design diurnal curve
- Development of the design wet weather flow curve (see Figure J below) – increased by 20% (to account for variability in wet weather flow distribution).

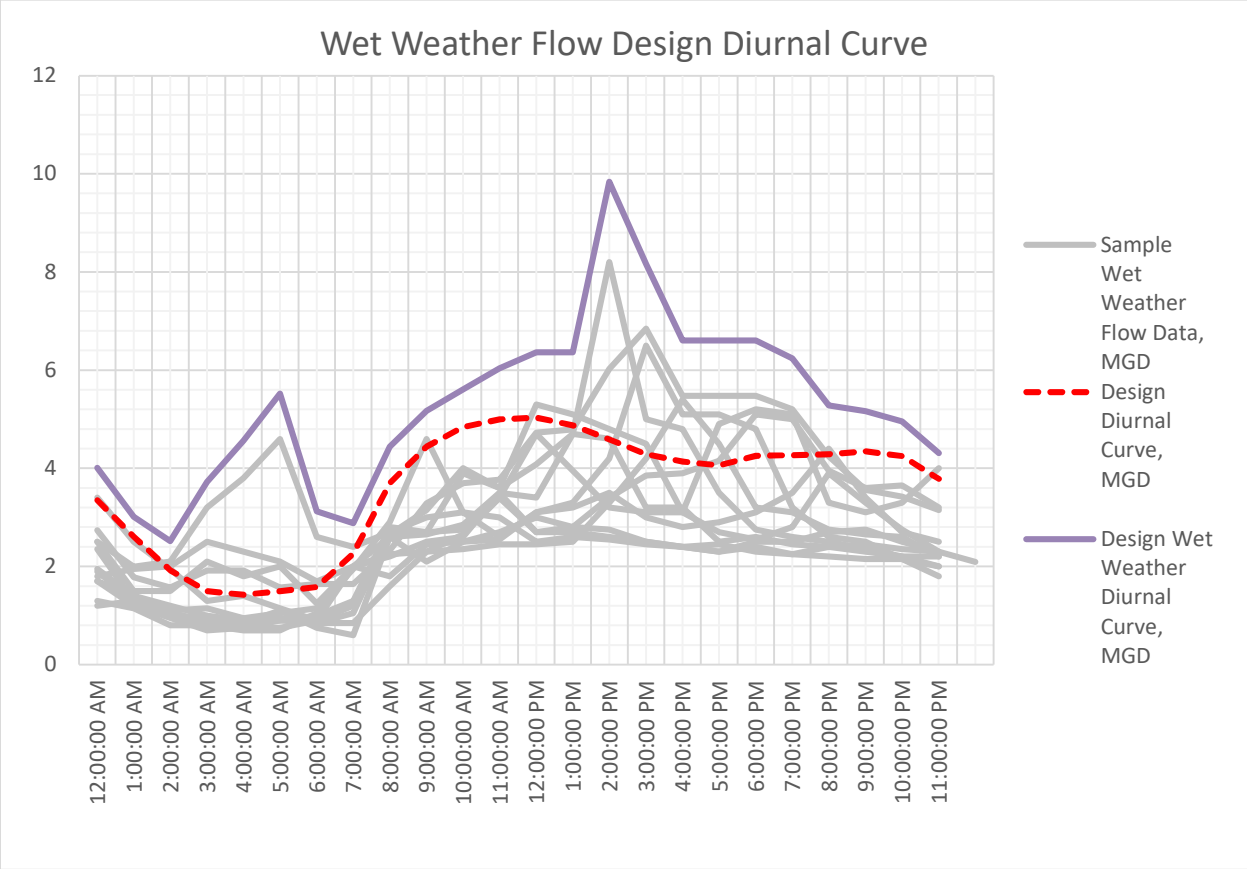


Figure J. Wet Weather Flow Design Diurnal Curve

Once the design wet weather curve was established, it was "routed" through both the diurnal and wet weather flow basins. It is noted that a maximum 72-hour period was assumed to drain the storm drain basin. As a result, the routing was completed based on the assumptions that the wet weather flows (equivalent to design curve) have a 24-hour duration and that the equalization pump station will discharge at a slightly increased rate of 4.0 MGD (+/_) to secondary treatment processes during this time. As a result, a total equalization volume of 1.8 Million Gallons (MG) was determined as the minimum required volume for the wet weather storage flow basin. Figure K below illustrates the routing of wet weather flows through the storage basin and time required to empty the basin.

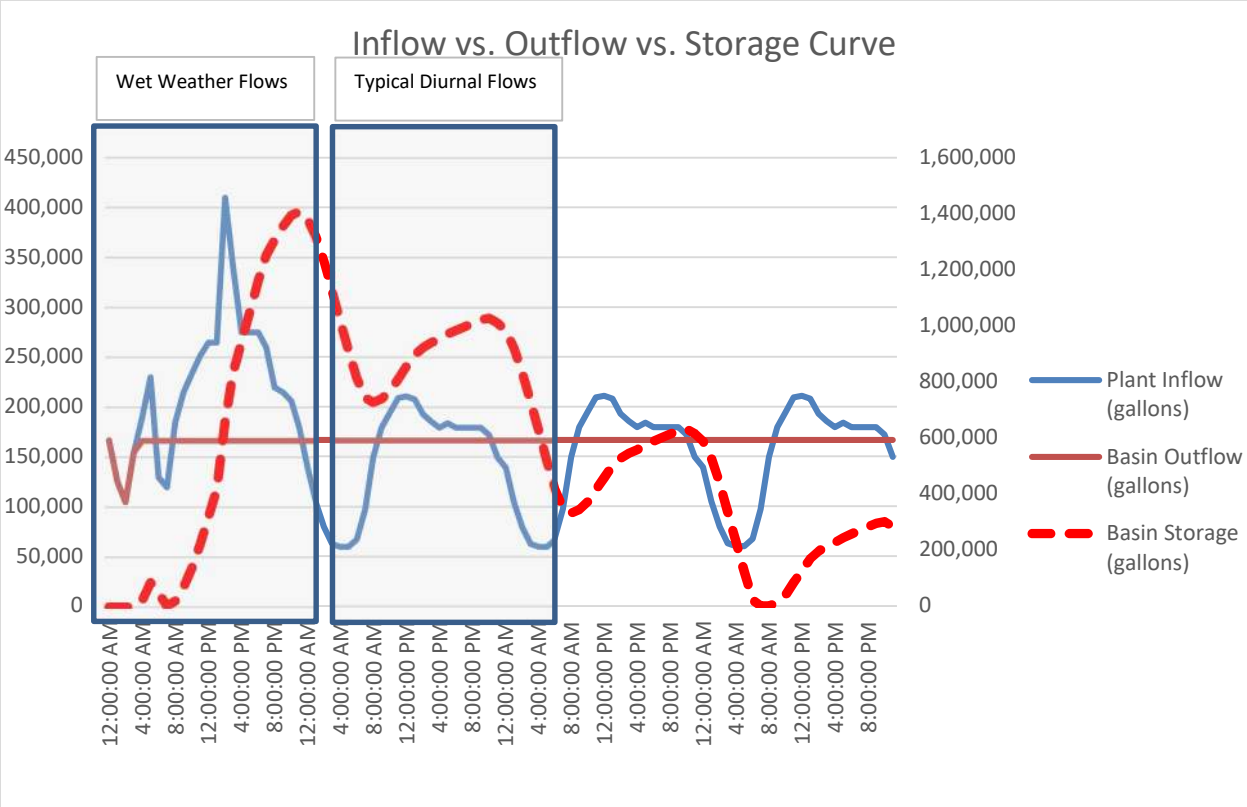


Figure K. Flow vs. Storage Curve for Combined Equalization and Wet Weather Storage Basin

3.7. WET WEATHER FLOW STORAGE BASIN STRUCTURE

Due to the frequency of wet weather events, it is anticipated that the wet weather storage basin will not be used daily. Therefore, the approach to designing this structure is slightly different compared to the diurnal equalization basin. Several options were evaluated:

Option1: Concrete tank – This option assumes that the entire wet weather storage basin structure is a cast-in-place concrete structure. Preliminary, the structure would have the following dimensions:

- Nominal Length = 100 feet
- Nominal Width = 130 feet
- Liquid Depth = 18 feet
- Wall Height = 20 feet

This option offers following advantages:

- Smaller footprint – higher liquid depth possible
- Potential for shared wall construction with diurnal equalization basin
- Easier maintenance.

The main disadvantage of this option is the relatively high capital cost (Refer to Table 3 below).

Option 2: Lined basin (60 mil HDPE) with concrete floor - With this option, a 60 mil HDPE liner would be installed on the sides of the storage basin and a concrete cast-in place floor would be constructed. Following footprint is estimated for this option:

- Bottom Nominal Length = 70 feet
- Bottom Nominal Width = 180 feet
- Side Slopes = 2.5H:1V
- Liquid Depth = 11 feet
- Minimum Freeboard = 3 feet

- Concrete floor thickness = 6 inches

The main advantages and disadvantages associated with this option are listed below:

- Advantages:
  - Lower capital cost relative to Option 1
  - Easier maintenance
- Disadvantages:
  - Larger footprint
  - Higher capital cost associated with concrete floor construction
  - High temperature and UV exposure impacts on liner – may require use of high temperature liner.

Option 3: Lined basin (60 mil HDPE) – Similar to Option 2 with the main difference being the use of a 60-mil HDPE liner for the basin floor. This option would have the same footprint and geometry as Option 2. While this option does not include a concrete basin floor, at a minimum a concrete sump for collection of return flows will be constructed. A summary of advantages and disadvantages associated with this option is provided below:

- Advantages:
  - Least expensive capital cost option
- Disadvantages:
  - Larger footprint
  - Maintenance of the lined floor may be more difficult compared to concrete floor
  - High temperature and UV exposure impacts on liner – may require use of high temperature liner.

Table 3. Storage Basin Options Relative Costs

Option	Relative Construction Cost (Concrete and/or Liner Cost only)
Option 1	**$ 1.8 Million**
Option 2	**$300,000**
Option 3	**$180,000**

Given the relatively infrequent use of the wet weather storage basin and the high cost of Option 1 it is recommended that the detailed design proceeds with Option #3. Layout of the storage basin is shown in the attached drawings in Appendix A.

3.8. WET WEATHER STORAGE BASIN OPERATION

3.8.1. Flow Control

The storage basin is expected to receive flows only in case when the flows into the plant exceed the capacity of the equalization basin. Overflow piping from the equalization basin will convey these additional flows directly into the storage basin. As previously noted, the return piping to equalization basin will be equipped with a flap gate that will prevent the return of flows (emptying of the storage basin) until the liquid level in the equalization basin is a few inches lower than the level in the storage basin. Ultimately, the entire operation is controlled by the equalization pumps and no operator input is required during this process.

3.8.2. Storage Basin Maintenance

Due to the size of the storage basin, when it comes to maintenance, the emphasis will be to design the basins with additional considerations to enhance the maintenance which may include:

- Larger sloped concrete area to direct return flows and enhance maintenance.
- Concrete ramp allowing for access to the basin floor
- Large opening bar screen at the return flow sump to prevent any large debris entering return piping

In addition, yard hydrants will be installed in the vicinity of the return flow sump to facilitate periodic washdown and cleaning.

3.8.3. Odor Control

No dedicated odor control is proposed for the initial construction project. Timely evacuation of liquid from the storage basin along with prompt cleaning after use will need to be implemented to minimize the potential to generate odors.

3.9. SITE WORK AND YARD PIPING

Site work will be limited to construction of proposed basins and installation of required process piping. In general, the location and shape of the existing detention pond along with the proposed design will minimize excavation and backfill requirements. Based on the information presented in the Geotechnical report, the in-situ soils are suitable for use in construction of the proposed structures. Consequently, minimum quantities of import fill material will be required. Paved areas disturbed by excavation and other construction activities will be replaced in kind. Specifically, paved areas disturbed by excavation required to install yard piping will be replaced. Gravel (road base) will be placed around the new equalization basin pump station diurnal equalization basin structure.

The proposed project will require installation of relatively large diameter process piping (18 to 24-inch diameter). The Geotechnical report indicates a severe potential for metal loss due to soil resistivity characteristics. As a result, the design will incorporate plastic piping (PVC, C-900) with coated and polyethylene wrapped ductile iron fittings.

3.10. ELECTRICAL

3.10.1. Proposed Electrical Design

As described in preceding sections, this project will incorporate an equalization and wet weather storage basins and three 50 HP VFD controlled equalization basin pumps to attenuate flow variations into the plant's secondary treatment processes. Two of the pumps will be used as duty pumps and one will remain on standby.

Following the review of available record drawings, potential existing system deficiencies are identified and listed below:

- The motor control center (MCC) 3M located in the existing Boiler/MCC building has spare breakers that could potentially feed the equalization basin pumps VFDs. There are concerns however, that the MCC would be overloaded with additional loads generated by two duty 50HP pumps.
- The MCC utilizes a standby 200KW generator with a 350A breaker. The breaker size is nearly half of the trip rating of the MCC which is concerning if much of the existing plant equipment is needed during a power outage. It is required to evaluate the current MCC loads and verify size of the existing or recommend a new generator size.
- There are also some concerns regarding availability of physical space needed for three (3) 50HP VFDs. A site visit is required to verify availability of space in this location.

Considering the overall design approach and potential deficiencies of the existing system, three

preliminary electrical design options are identified. Each option offers its own advantages and disadvantages as described in section below. To properly evaluate these options, additional site visit(s) will be completed to evaluate and confirm the condition of the existing electrical system.

Option 1 – Provide a power feed from existing MCC 3M located in the MCC/Boiler building to pump VFD's installed in a metal or pre-cast electrical enclosure (Refer to Figure L) adjacent to the equalization pumps. The small electrical enclosure will be air conditioned to maintain satisfactory conditions for VFD operation. The VFD's would be fed from a single 300A breaker located in the MCC 3M. Ideally, existing electrical pullboxes located in the yard will be used to route the required conduits. The main advantage of this option is that a single feeder from the MCC would reduce cost and mitigate problems of voltage drop associated with VFDs being located remotely from the pumps.



Figure L. Electrical Enclosure Options (precast concrete or metal panels)

Option 2 – This option assumes that the new pump VFDs will be installed in or near MCC 3M and fed from the motor control center spare breakers. The main advantage of this option is that it would not require the construction of a new electrical enclosure near the equalization basin pumps. However, additional investigation is required to determine if sufficient space is available for the installation of VFDs. Furthermore, due to distance to pumps (more than 400 feet), frequency irregularities and voltage drops would require use of larger and more expensive cables that would offset some of the cost associated with the electrical enclosure.

Option 3 - This option is similar to option 1 as it requires VFD's to be installed in a pre-cast electrical enclosure adjacent to the EQ Pumps. This option is presented with the assumption that there is insufficient electrical or physical space in MCC 3M for the new equipment. An existing and available breaker space in SWBD-MS would feed MCC-EQ from a 400A breaker. This would reduce the electrical load and harmonics on MCC-3M generated by the VFDs. Existing pullboxes and conduits in between SWBD-MS and the EQ electrical room would be utilized to route power. Further investigation of routing and conduit availability may be required with this option.

Regardless of the option selected, the existing standby generator will need to be evaluated. Preliminary analysis indicates that a new, larger generator (300 KW) may be required for options 1 and 2. With option 3, a new (150KW) generator and ATS will likely need to be installed near the equalization basin Electrical room.

All three options are feasible however, option 3 appears to be the most economical, efficient and robust. Therefore, the current engineering design is based on option.

3.10.2. Controls and Instrumentation

PLC locations and hardware manufacturers are unknown at this time and will need to incorporate the proposed VFD I/O and controls for tipping buckets if utilized. VFDs will need discrete and analog inputs and outputs which may require new hardware to be installed if existing I/O cards are at or near capacity. Control conduits will run alongside power conduits from the existing PLC to the equalization pump station. Instrumentation, such as level and flow indicators will be used in the equalization basins and pump station and incorporated into the SCADA system to monitor and control performance and operation.

3.10.3. NFPA Classifications

Equalization basins storing raw or partially treated wastewater fall into one of the following categories:

- Open to Atmosphere (design condition):
  - Class 1, Division 2 (within a 10-foot envelope)
- Enclosed (potential future condition) –
  - No ventilation or less than 12 air exchanges per hour (ACH) – Class 1, Division 1
  - Continuously ventilated at 12 ACH - Class 1, Division 2

3.11. SEQUENCE OF CONSTRUCTION

Majority of new facilities may be constructed with no or very little interruptions to existing plant operations. The basins, pump station, and the electrical enclosure may be constructed without disruptions to plant operations. Construction of yard piping and connections to existing process piping may require bypass pumping and relatively short disruptions. Electrical system modifications and potential standby generator change will require short duration disruptions. Alternative standby power sources will be provided during these activities to ensure continued operation of existing plant.

3.12. VALUE ENGINEERING CONSIDERATIONS

Based on the input form the City staff and engineering evaluation of potential cost reduction measures an alternative project scope approach as outlined below may be implemented.

- Construct one half of the diurnal equalization basin – one half (300,000 gallons of storage volume) of the concrete diurnal equalization basin would be constructed. While this volume is borderline adequate at current plant flows, any potential excess liquid would be transferred to the wet weather storage basin. Alternatively, the excess flows could be handled by increasing the flow rate of the equalization basin pumps.
- Remove active cleaning system (tipping buckets) – Tipping buckets would be replaced with monitor washdown hydrants. This approach will result in relatively significant capital cost savings.
- Remove concrete coating – While not ideal installation of protective coatings may be omitted or postponed until the construction of the second half of the diurnal equalization basin.

The cumulative effect on the project capital cost of these scope modifications is illustrated in Table 5. It is noted that not all items listed above need to be removed from the scope. Each item listed above may be removed individually from the scope to decrease the capital cost if needed.

4. OPINION OF COST

Table 4 below presents the opinion of cost for the project as described in this report and outlined in the attached drawings. Table 5 illustrates the potential cost savings associated with the reduced project scope. As appropriate for this level of design development a 15% contingency is used.

Table 4. Project Opinion of Cost

Banning WWTP - Equalization Basin Project					
Opinion of Cost (Base Bid)					
ITEM	**DESCRIPTION**	**Quantity**	**Unit**	**Unit Cost**	**COST**
1.0	General Conditions, Overhead / Profit, Markup	15%	percent	$ 3,346,200	$ 502,000
2.0	Civil				
2.1	Site Demolition	1	LS	$ 10,000	$ 10,000
2.2	General Site Grading	1	LS	$ 10,000	$ 10,000
2.3	Site Paving - Asphalt	3,000	SF	$ 8	$ 24,000
2.4	Site Paving - Gravel	7,500	SF	$ 6	$ 45,000
2.5	Misc. Improvements (PC Effluent Box, New and Existing SD Modifications)	1	LS	$ 44,500	$ 44,500
2.5	Yard Piping (incl. valves and stand pipes/hydrants)	1	LS	$ 254,000	$ 254,000
3.0	Diurnal Equalization Basin				
3.1	Excavation	3,600	CY	$ 8	$ 28,800
3.2	Backfill	1,600	CY	$ 14	$ 22,400
3.3	Concrete	1,350	CY	$ 1,100	$ 1,485,000
3.4	Process Piping and Gates	1	LS	$ 54,450	$ 54,500
3.5	Tipping Buckets	4	EA	$ 27,000	$ 108,000
3.6	Protective Coatings	7,900	SF	$ 20	$ 158,000
3.7	Mechanical Installation	1	LS	$ 50,000	$ 50,000
4.0	Wet Weather Storage Basin				
4.1	Excavation	2,600	CY	$ 8	$ 20,800
4.2	Backfill	4,000	CY	$ 14	$ 56,000
4.3	Liner	40,200	SF	$ 1.90	$ 76,400
4.4	Misc. Concrete Structures	1	LS	$ 22,500	$ 22,500
4.5	Misc. Metals	1	LS	$ 6,500	$ 6,500
5.0	Equalization Basin Pump Station				
5.1	Concrete	23	CY	$ 1,000	$ 23,000
5.2	Metal Awning	425	SF	$ 110	$ 46,800
5.3	Pumps	1	LS	$ 101,500	$ 101,500
5.4	Process piping and valves	1	LS	$ 86,310	$ 86,300
5.5	Mechanical Installation	1	LS	$ 45,000	$ 45,000
6.0	Electrical Building				
6.1	Excavation	11	CY	$ 8	$ 100
6.2	Backfill	6	CY	$ 14	$ 100
6.3	Concrete	8	CY	$ 1,000	$ 7,500
6.4	Pre-Engineered Metal Building	150	SF	$ 200	$ 30,000
6.5	HVAC	1	LS	$ 4,500	$ 4,500
7.0	Electrical/I&C				
7.1	Electrical Gear and Installation (incl. new standby generator)	1	LS	$ 525,000	$ 525,000
				Project Subtotal	**$ 3,848,200**
				Contingency (15%)	$ 577,200
				Construction Cost Total	**$ 4,425,400**

Table 5. Alternate Project Opinion of Cost

Banning WWTP - Equalization Basin Project					
Opinion of Cost (BID Alternate)					
ITEM	**DESCRIPTION**	**Quantity**	**Unit**	**Unit Cost**	**COST**
1.0	General Conditions, Overhead / Profit, Markup	15%	percent	$ 2,365,000	$ 354,800
2.0	Civil				
2.1	Site Demolition	1	LS	$ 10,000	$ 10,000
2.2	General Site Grading	1	LS	$ 10,000	$ 10,000
2.3	Site Paving - Asphalt	3,000	SF	$ 8	$ 24,000
2.4	Site Paving - Gravel	10,000	SF	$ 6	$ 60,000
2.5	Misc Improvements (PC Effluent Box, Influent Flow Measurement)	1	LS	$ 44,500	$ 44,500
2.5	Yard Piping	1	LS	$ 249,300	$ 249,300
3.0	Diurnal Equalization Basin				
3.1	Excavation	2100	CY	$ 8	$ 16,800
3.2	Backfill	950	CY	$ 14	$ 13,300
3.3	Concrete	750	CY	$ 1,100	$ 825,000
3.4	Process Piping and Gates	1	LS	$ 49,600	$ 49,600
3.5	Washdown Monitor Hydrants	2	EA	$ 5,500	$ 11,000
3.6	Mechanical Installation	1	LS	$ 24,500	$ 24,500
4.0	Wet Weather Storage Basin				
4.1	Excavation	2600	CY	$ 8	$ 20,800
4.2	Backfill	4000	CY	$ 14	$ 56,000
4.3	Liner	40,200	SF	$ 1.90	$ 76,400
4.4	Misc. Concrete Structures	1	LS	$ 22,500	$ 22,500
4.5	Misc. Metals	1	LS	$ 6,500	$ 6,500
5.0	Equalization Basin Pump Station				
5.1	Concrete	23	CY	$ 1,000	$ 23,000
5.2	Metal Awning	425	SF	$ 110	$ 46,800
5.3	Pumps	1	LS	$ 101,500	$ 101,500
5.4	Process piping	1	LS	$ 86,310	$ 86,300
5.5	Mechanical Installation	1	LS	$ 45,000	$ 45,000
6.0	Electrical Building				
6.1	Excavation	11	CY	$ 8	$ 100
6.2	Backfill	6	CY	$ 14	$ 100
6.3	Concrete	8	CY	$ 1,000	$ 7,500
6.4	Pre-Engineered Metal Building	150	SF	$ 200	$ 30,000
6.5	HVAC	1	LS	$ 4,500	$ 4,500
7.0	Electrical/I&C				
7.1	Electrical Gear and Installation (incl. new standby generator)	1	LS	$ 500,000	$ 500,000
				Project Subtotal	**$ 2,719,800**
				Contingency (15%)	$ 408,000
				Construction Cost Total	**$ 3,127,800**

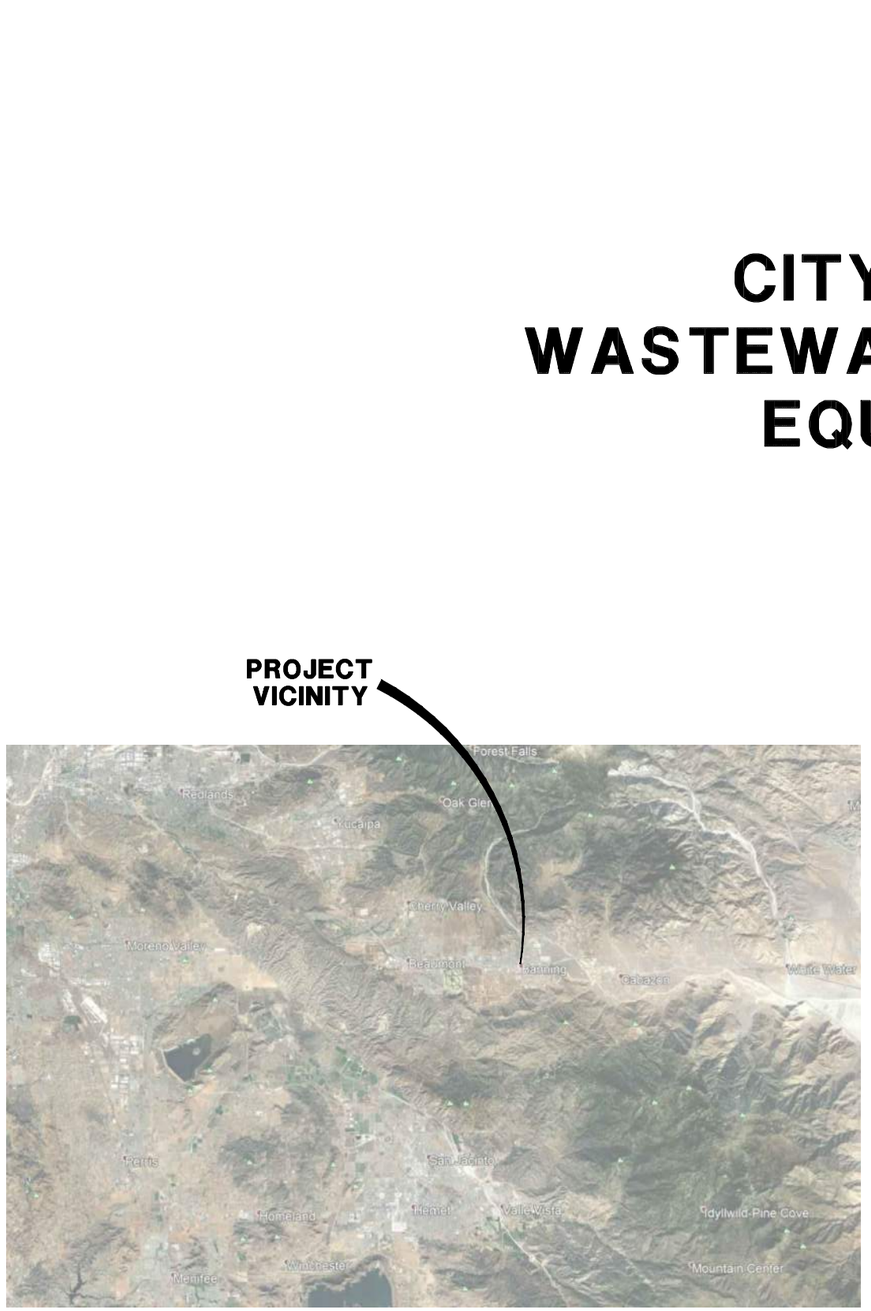
APPENDIX A

60% Design Drawings

DRAWINGS
FOR
CITY OF BANNING, CA
WASTEWATER TREATMENT PLANT
EQUALIZATION BASIN

MAY 2021

60% REVIEW



LOCATION MAP

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SITE VICINITY MAP

DRAWING INDEX

DWG#	SHT#	GENERAL
G001	-	COVER
G002	-	INDEX
G003	-	LEGEND, SYMBOLS, AND ABBREVIATIONS
G004	-	GENERAL NOTES
G005	-	STRUCTURAL NOTES - 1
G006	-	STRUCTURAL NOTES - 2
G007	-	STRUCTURAL NOTES - 3
G008	-	PROCESS FLOW SCHEMATIC AND DESIGN CRITERIA
G009	-	HYDRAULIC PROFILE
		DEMOLITION
01C101	-	OVERALL DEMOLITION/REMOVAL PLAN
01C102	-	DEMOLITION/REMOVAL PLAN/DETAILS
		CIVIL
01C201	-	OVERALL SITE PLAN
01C202	-	PARTIAL SITE PLAN - 1
01C203	-	PARTIAL SITE PLAN - 2
01C501	-	EQUALIZATION BASIN SECTIONS
01C601	-	YARD PIPING PROFILE - 1
01C801	-	YARD PIPING SCHEDULE AND NOTES
01C901	-	PRIMARY CLARIFIER REHABILITATION
01C902	-	CIVIL DETAILS
		EQUALIZATION BASIN
11S101	-	STRUCTURAL PLAN
11S201	-	STRUCTURAL PLAN - 2
11S401	-	STRUCTURAL SECTION - 1
11S402	-	STRUCTURAL SECTION - 2
11S403	-	STRUCTURAL SECTION - 3
11S901	-	STRUCTURAL DETAILS
11M101	-	OVERALL MECHANICAL PLAN
11M201	-	PUMP STATION MECHANICAL PLAN
11M401	-	MECHANICAL SECTIONS - 1
11M402	-	MECHANICAL SECTIONS - 2
11M403	-	MECHANICAL SECTIONS - 3
11M901	-	MECHANICAL DETAILS - 1
		ELECTRICAL BUILDING
60A201	-	ARCHITECTURAL PLAN AND SECTION
60A301	-	ARCHITECTURAL ELEVATIONS - 1
60S101	-	STRUCTURAL PLAN AND SECTION
60H201	-	HVAC PLAN
		SCHEDULES
81A801	-	DOOR AND GLASS SCHEDULE
81A802	-	PROTECTIVE COATINGS
81M801	-	EQUIPMENT SCHEDULE
		STANDARD DETAILS
91C901	-	CIVIL - 1
91C902	-	CIVIL - 2
92A901	-	ARCHITECTURAL
93S901	-	STRUCTURAL - 1
93S902	-	STRUCTURAL - 2
93S903	-	STRUCTURAL - 3
94M901	-	MECHANICAL - 1
94M902	-	MECHANICAL - 2
		ELECTRICAL AND INSTRUMENTATION CONTROLS
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I101	-	P&ID EQUALIZATION BASIN
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E202	-	EQUALIZATION BASIN ELECTRICAL PLAN
E501	-	ONE LINE DIAGRAM - 1
E502	-	ONE LINE DIAGRAM - 2
E901	-	ELECTRICAL DETAILS - 1
E902	-	ELECTRICAL DETAILS - 2
E903	-	ELECTRICAL DETAILS - 3

1582

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

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ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	-	-	-	-

REVISIONS

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT
EQUALIZATION BASIN
GENERAL
INDEX

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DRAWING NO.

G002

SHEET OF

C:\USERS\DANIEL.SANDOVAL\ACCDOCS\AQUA ENGINEERING\00181S.C EQUALIZATION BASIN\PROJECT FILES\000 GENERAL\000-00\G002 INDEX.DWG

5/5/2021

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LEGEND

	EXISTING	PROPOSED
PLAN VIEW		
PROPERTY OR R/W LINE		
EASEMENT LINE		
FENCE	x x	x x
EDGE OF ASPHALT		
EDGE OF CONCRETE		
EDGE OF GRAVEL		
CONTOUR LINE	4250	4250
SPOT ELEVATION	+ 4250.00	○ 550.00 TOA
BANK SLOPES		
STORM DRAIN LINE	SD	SD
WATER LINE	W	W
GAS LINE	G	G
TELEPHONE CABLE	T	T
ELECTRIC CABLE	E	E
SANITARY SEWER LINE	SS	SS
FIRE HYDRANT		
WATER VALVE	WV	WV
WATER METER	WM	WM
MANHOLE		
CATCH BASIN	CB	
CLEAN OUT BOX	COB	
OVERHEAD POWER LINE	OP	OP
POLE & ANCHOR		
STREET LIGHT		
STRUCTURE		
ASPHALT PAVING		
CONCRETE PAVING		
GRAVEL PAVING		
FLOW DIRECTION		

NOTICE:

EXISTING UTILITIES ARE SHOWN ON PLANS FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES. THE ENGINEER BEARS NO RESPONSIBILITY FOR THE UTILITIES NOT SHOWN OR SHOWN INCORRECTLY.

AVOID CUTTING UNDERGROUND UTILITIES. IT'S COSTLY

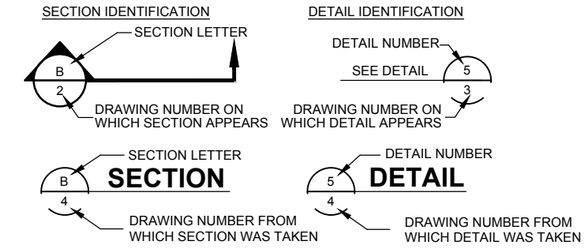
Call
BLUE STAKES
BEFORE YOU
Dig

1-800-662-4111
UNDERGROUND SERVICE (USA)

ABBREVIATIONS

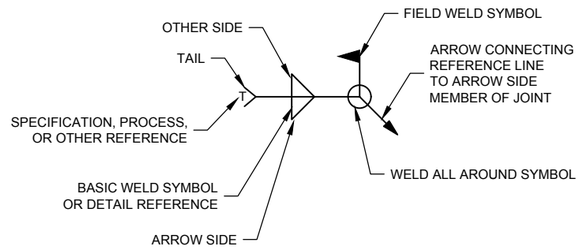
@	AT
Ø	DIAMETER
AB	ANCHOR BOLT
ABUT	ABUTMENT
AD	ANAEROBIC DIGESTER /AEROBIC DIGESTER
ADF	AVERAGE DAILY FLOW
ADT	AVERAGE DAILY TRAFFIC
AL	AIR LINE
ALUM	ALUMINUM
APPROX	APPROXIMATELY
APV	AIR PINCH VALVE
ASPH	ASPHALT
AZ	AZIMUTH
BAL	BALANCE
BEG	BEGINNING / BEGIN
BDRY	BOUNDARY
BK	BACK
BKFL	BACKFILL
BLD FLG	BLIND FLANGE
BLDG	BUILDING
BLM	BUREAU OF LAND MANAGEMENT
BM	BENCH MARK
BLK	BLOCK
BOD	BLOCK
BOT	BOTTOM
BRG	BEARING
BSMT	BASEMENT
BT	BIOTOWER
BTU	BRITISH THERMAL UNIT
BTWN	BETWEEN
BV	BUTTERFLY VALVE
CB	CATCH BASIN
CCW	COUNTER CLOCKWISE
C-C	CENTER TO CENTER
C&G	CURB AND GUTTER
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CJ	CONSTRUCTION JOINT
CL	CENTERLINE
CLR	CLEARANCE
CIP	CAST IRON PIPE
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
COB	CLEAN OUT BOX
COL	COLUMN
CONC	CONCRETE
CONN	CONNECT
CONT	CONTINUOUS
COR	CORNER
CTR	CENTER
CU FT	CUBIC FEET
CU YD	CUBIC YARD
CUL	CULINARY
CULV	CULVERT
CV	CHECK VALVE
CW	CLOCKWISE
D	DRAIN
DEG	DEGREE
DET	DETAIL
DIA	DIAMETER
DIG	DIGESTER
DIP	DUCTILE IRON PIPE
DIST	DISTANCE
DL	DRAIN LINE
DMH	DRAINAGE MANHOLE
DTH	DEKATHERM
DN	DOWN
D/W	DISHWASHER
DWG	DRAWINGS
DWV	DRAIN WASTE VENT
E	EAST
EA	EACH
EB	ELECTRICAL BOX
EF	EACH FACE
EG	EXISTING GROUND
EL	ELBOW
ELEC	ELECTRIC / ELECTRICAL
ELEV	ELEVATION
EMB	EMBANKMENT
EMH	ELECTRICAL MANHOLE
ENGR	ENGINEER
ENT	ENTRANCE
EO	EDGE OF OIL
EOA	EDGE OF ASPHALT
EOC	EDGE OF CONCRETE
EOG	EDGE OF GRAVEL
EOS	EDGE OF SHOULDER
EQ	EQUAL
EQUIP	EQUIPMENT
ES	EXIT SIGN
EST	ESTIMATE
EW	EACH WAY
EXC	EXCAVATION
EX	EXISTING
FEN COR	FENCE CORNER
FE	FIRE EXTINGUISHER
FD	FLOOR DRAIN
FDN	FOUNDATION
FF	FINISHED FLOOR
FG	FINISHED GRADE
FH	FIRE HYDRANT
FIN	FINISH
FLG	FLANGE
FLR	FLOOR
FP	FLOOR PENETRATION
FPS	FEET PER SECOND
FRP	FIBERGLASS REINFORCED PIPE/PANEL
FT	FEET
FTG	FOOTING
FW	FLAT WASHER
G	GAS
GA	GAUGE
GAL	GALLONS
GALV	GALVANIZED
GEN	GENERAL
GLB	GLUED LAMINATED BEAM
GM	GAS METER
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GT	GRAVITY THICKENER
GV	GATE VALVE
GSP	GALVANIZED STEEL PIPE
GYP	GYPSUM
HB	HOSE BIBB
HDG	HOT DIPPED GALVANIZED
HDPE	HIGH DENSITY POLYEURETHANE PIPE
HDWL	HEADWALL
H&T	HUB & TACK
HP	HORSE POWER
HR	HOUR
HRT	HYDRAULIC RETENTION TIME
HORIZ	HORIZONTAL
HSS	HOLLOW STRUCTURAL SECTION
HW	HOT WATER
HWL	HIGH WATER LEVEL
HWY	HIGHWAY
HYD	HYDRANT
IC	INTERMEDIATE CLARIFIER
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IJ	ISOLATION JOINT
IN	INCH
INFO	INFORMATION
IRR	IRRIGATION
INV	INVERT
JCT	JUNCTION
L	LENGTH
LB	POUND
LG	LONG / LENGTH
LIC	LICENSE
LIN	LINEAR / LINEAL
LP	LIGHT POLE
LS	LAND SURVEYOR
LT	LEFT
LWL	LOW WATER LEVEL
MAINT	MAINTENANCE
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MBR	MEMBRANE BIOREACTOR
MFR	MANUFACTURER
MKR	MARKER
MH	MANHOLE
MI	MILE
MIN	MINIMUM / MINUTE
MJ	MECHANICAL JOINT
ML	MIXED LIQUOR
MISC	MISCELLANEOUS
MON	MONUMENT
MPH	MILES PER HOUR
N	NORTH
NO OR #	NUMBER
NPW	NON-POTABLE WATER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
O-O	OUTSIDE TO OUTSIDE
OFF REV	OFFICE REVISION
ORIG	ORIGINAL
OSB	ORIENTED STRAND BOARD
PVMT	PAVEMENT
PBR	PHOTOBIOREACTOR
PC	POINT OF CURVATURE/PRIMARY CLARIFIER
PCC	POINT OF COMPOUND CURVATURE
PD	POND EFFLUENT
PE	PLANT EFFLUENT
PERF	PERFORATED
PI	POINT OF INTERSECTION
PI	PRIMARY INFLUENT
PL	PROPERTY LINE
POC	POINT ON CURVE
PP	POWER POLE
PRC	POINT OF REVERSE CURVE
PROJ	PROJECT
PROP	PROPERTY
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
POB	POINT OF BEGINNING
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
PW	POTABLE WATER
QTY	QUANTITY
R	RANGE / RADIUS
RAA	RETURN ACTIVATED ALGAE
RAS	RETURN ACTIVATED SLUDGE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REF	REFERENCE
REINF	REINFORCED
REV	REVISION
RR	RAILROAD
RT	RIGHT / ROUTE
R/W	RIGHT OF WAY
S	SOUTH / SLOPE
SAN	SANITARY
SC	SECONDARY CLARIFIER
SCH	SCHEDULE
SD	STORM SEWER
SEC COR	SECTION CORNER
SHT	SHEET
SKT	SOCKET
SP	SPACING OR SPACE
SPECS	SPECIFICATIONS
SQ	SQUARE
SQ FT	SQUARE FEET
SQ YD	SQUARE YARD
SS	STAINLESS STEEL
ST	STREET
STL	STEEL
STN STL	STAINLESS STEEL
STA	STATION
STD	STANDARD
STRUCT	STRUCTURE
T	TOWNSHIP
TAN	TANGENT
TBC	TOP BACK CURB
TEMP	TEMPORARY
TF	TRICKLING FILTER
THD	THREADED
THK	THICK
TKN	TOTAL KIELDAHL NITROGEN
TOA	TOP OF ASPHALT
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOG	TOP OF GRAVEL
TOM	TOP OF MANHOLE
TOP	TOP OF PIER
TOS	TOP OF SLAB
TOW	TOP OF WALL
TP	TELEPHONE POLE
TSS	TOTAL SUSPENDED SOLIDS
TYP	TYPICAL
UB	UTILITY BOX
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
UV	ULTRA VIOLET
UW	UTILITY WATER
V	VOLTS
VC	VERTICAL CURVE
VERT	VERTICAL
VIC	VICTAULIC COUPLING
VOL	VOLUME
VPI	VERTICAL POINT OF INTERSECTION
VPC	VERTICAL POINT OF CURVE
VPT	VERTICAL POINT OF TANGENCY
VTR	VENT TO ROOF
W	WEST / WATER
WAS	WASTE ACTIVATED SLUDGE
WC	WATER CLOSET
W/H	WATER HEATER
WM	WATER METER
WO	WEIR OVERFLOW
W/	WITH
W/O	WITHOUT
XING	CROSSING
X-SEC	CROSS SECTION
YH	YARD HYDRANT

SECTION AND DETAIL IDENTIFICATION



NOTE: IF PLAN AND SECTION (OR DETAIL REFERENCE AND DETAIL) ARE SHOWN ON THE SAME DRAWING, THE DRAWING NUMBER IS REPLACED WITH A LINE.

SECTION AND DETAIL NOTES:



B - BUTT JOINT
C - CORNER JOINT
T - T-JOINT
BC - BUTT OR CORNER JOINT
P - PARTIAL JOINT PENETRATION

1583

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

NO.	DATE	DESIGN	DRAWN	CHECKED
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ORIGINAL

REVISIONS

CITY OF BANNING, CA
WASTEWATER TREATMENT PLANT
EQUALIZATION BASIN
GENERAL
LEGEND, SYMBOLS, AND ABBREVIATIONS

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DRAWING NO.
G003

SHEET OF

12/11/2020 C:\USERS\DEREK.HYDE\BIM 360\AQUA ENGINEERING\001815.C EQUALIZATION BASIN\PROJECT FILES\000 GENERAL\000-G0G003 LEGEND.DWG

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5/4/2021 C:\USERS\DANIEL.SANDOVAL\ACCDOCS\AQUA ENGINEERING\001815 C EQUALIZATION BASIN\PROJECT FILES\000 GENERAL\000-00\G004 GENERAL PROJECT NOTES.DWG

0 1/2 1
DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

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REVISIONS

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT
EQUALIZATION BASIN
GENERAL
GENERAL PROJECT NOTES

1584

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DRAWING NO.

G004

SHEET OF

GENERAL NOTES:

1. THE PROJECT SPECIFICATIONS SHALL BE PART OF THE CONTRACT DOCUMENTS.

2. THE STRUCTURAL DRAWINGS ARE TO BE USED IN CONJUNCTION WITH CIVIL, MECHANICAL, AND ELECTRICAL DRAWINGS. NO PORTION OF STRUCTURAL RELATED WORK, INCLUDING SHOP DRAWING DEVELOPMENT, SHALL BE PERFORMED WITHOUT CONSIDERING REQUIREMENTS OF CONTRACT DOCUMENTS IN THEIR ENTIRETY.

3. DETAILS AND SCHEDULES INDICATED AS "TYPICAL" MAY NOT BE SPECIFICALLY REFERENCED ON DRAWINGS. DETERMINE WHERE EACH TYPICAL DETAIL OR SCHEDULE APPLIES BEFORE PROCEEDING WITH WORK. IF CONDITIONS ARE FOUND WHICH ARE NOT SPECIFICALLY DETAILED AND NO TYPICAL DETAIL OR SCHEDULE APPLIES, PROMPTLY NOTIFY THE STRUCTURAL ENGINEER.

4. OPENINGS, POCKETS, CORE DRILLING, ETC. SHALL NOT BE PLACED IN STRUCTURAL WALLS, SLABS, AND MEMBERS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS. NOTIFY THE STRUCTURAL ENGINEER OF RECORD WHEN DRAWINGS BY OTHERS INDICATE OPENINGS, POCKETS, CORE DRILLING, ETC., NOT INDICATED ON THE STRUCTURAL DRAWINGS, BUT WHICH ARE LOCATED IN STRUCTURAL MEMBERS.

5. THE CONTRACTOR SHALL REVIEW EXISTING CONDITIONS ON THE SITE DURING THE BIDDING. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING WORK. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES PRIOR TO PROCEEDING.

6. UNLESS NOTED OR SHOWN OTHERWISE, ALL PHASES OF WORK ARE TO CONFORM TO THE MINIMUM STANDARDS OF THE CALIFORNIA BUILDING CODE (LATEST EDITION), AND ANY ASTM SPECIFICATIONS ON WHICH THESE STANDARDS ARE BASED. WHERE CONFLICT BETWEEN BUILDING CODES AND SPECIFICATIONS OCCUR, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.

7. ALL ASTM DESIGNATIONS REFERRED TO ON THESE DRAWINGS SHALL BE THE LATEST ADOPTED OR REVISED SPECIFICATION, AS OF THE DATE OF THESE DRAWINGS.

8. ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS AND DETAILS. DRAWINGS SHALL NOT BE SCALED FOR CONSTRUCTION PURPOSES.

9. NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.

10. THE STRUCTURAL DRAWINGS SHOW ONLY THE BASIC STRUCTURAL REQUIREMENTS. REFER TO CIVIL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR NON-STRUCTURAL ITEMS, SUCH AS:

    A. SIZE AND LOCATION OF ALL OPENINGS.
    B. SIZE AND LOCATION OF ALL CONCRETE CURBS, WALKS, ROOF AND FLOOR DRAINS, SLOPES, DEPRESSED SLAB AREAS, ETC.
    C. FLOOR, ROOF, AND WALL FINISHES.
    D. DIMENSIONS WHICH ARE NOT SHOWN ON STRUCTURAL DRAWINGS.

11. THE STRUCTURAL CONTRACT DOCUMENTS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE NOTED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION.

12. NEITHER THE OWNER NOR THE STRUCTURAL ENGINEER WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, DESIGN, CONSTRUCT, AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE, AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS. SITE OBSERVATION VISITS BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE SAFETY ITEMS.

13. SATISFACTORY EXECUTION OF CONSTRUCTION IS DEPENDENT UPON CONFORMANCE WITH THE INTENT OF THESE DRAWINGS. THE OWNER OR CONTRACTOR SHALL RETAIN A CALIFORNIA LICENSED CIVIL OR STRUCTURAL ENGINEER DURING CONSTRUCTION TO OBSERVE THE CONSTRUCTION AND STATE THAT THE STRUCTURE HAS BEEN BUILT IN GENERAL CONFORMANCE WITH THE INTENT OF THESE DRAWINGS.

14. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOF. LOAD SHALL NOT EXCEED DESIGN LIVE LOAD FOR EACH PARTICULAR LEVEL. WHEN WEIGHT OF MATERIALS OR EQUIPMENT MAY EXCEED DESIGN LOAD, STRUCTURAL SYSTEMS SHALL BE SHORED.

15. WHERE NO CONSTRUCTION DETAILS ARE SHOWN OR NOTED FOR ANY PART OF THE WORK, THE DETAILS SHALL BE THE SAME AS FOR OTHER SIMILAR WORK.

16. FOR BELOW GRADE STRUCTURES BACKFILL SHALL NOT BE PLACED UNTIL ALL FLOOR AND ROOF FRAMING IS COMPLETE.

FOUNDATION:

1. ATTACH ONE COPY OF SOILS REPORT TO THE APPROVED SET OF CONSTRUCTION DOCUMENTS. SOILS REPORT SHALL BE PART OF THESE NOTES. PRIOR TO THE POURING OF CONCRETE AND PRIOR TO THE CONTRACTOR REQUESTING A BUILDING DEPARTMENT FOUNDATION INSPECTION, THE GEOTECHNICAL ENGINEER SHALL INSPECT AND APPROVE THE FOOTING EXCAVATIONS. THE GEOTECHNICAL ENGINEER SHALL POST NOTICE ON THE JOB SITE AND ADVISE THE BUILDING INSPECTOR IN WRITING THAT THE WORK SO INSPECTED MEETS THE CONDITIONS OF THE REPORT. THE GEOTECHNICAL ENGINEER WRITTEN CERTIFICATION SHALL VERIFY THE FOLLOWING:

    A. THE BUILDING PAD WAS PREPARED IN ACCORDANCE WITH THE SOILS REPORT.
    B. THE UTILITY TRENCHES HAVE BEEN PROPERLY BACKFILLED AND COMPACTED.
    C. THE FOUNDATION EXCAVATIONS COMPLY WITH THE INTENT OF THE SOILS REPORT.

2. SOILS REPORT PREPARED BY: LANDMARK GEO-ENGINEERS AND GEOLOGISTS GEOTECHNICAL REPORT PROPOSED BANNING WWTP UPGRADES BANNING, CALIFORNIA LCI REPORT NO. LP20157 DATED OCTOBER 28, 2020

3. SOIL REMOVAL, BACKFILLING, AND RECOMPACTION SHALL BE PERFORMED PER SOILS REPORT RECOMMENDATIONS UNDER GEOTECHNICAL ENGINEER'S SUPERVISION AND INSPECTION.

4. SPECIAL INSPECTION AND TESTING IS REQUIRED IN ACCORDANCE WITH SECTIONS 1704 AND 1705 OF THE CALIFORNIA BUILDING CODE AND THE "STATEMENT OF SPECIAL INSPECTIONS" ON THESE CONSTRUCTION DOCUMENTS.

5. TYPE OF FOOTING:
    A. SHALLOW FOOTING SYSTEM-MINIMUM EMBEDMENT 18" BELOW LOWEST ADJACENT GRADE.

    DESIGN SOIL PRESSURE:

FOOTING TYPE	STATIC BEARING PRESSURE
SPREAD FOOTING	2,000 PSF
CONTINUOUS FOOTING	2,000 PSF

    ALLOWABLE BEARING CAPACITIES MAY BE INCREASED TO 2,500 PSF WHEN FOUNDATION IS LOCATED A MINIMUM OF 3'-6" BELOW GRADE AND BY ONE-THIRD WHEN CONSIDERING LOADS OF SHORT DURATION SUCH AS WIND OR SEISMIC FORCES.

6. FOOTING ELEVATIONS SHALL BE LOCATED SUCH THAT THEIR BEARING IS A MINIMUM HORIZONTAL DISTANCE OF 7 FEET FROM THE DAYLIGHT OF AN ADJACENT SLOPE OR AS RECOMMENDED WITHIN THE SOILS REPORT.

7. FOUNDATION EXCAVATIONS, FILLING, AND COMPACTION ARE TO BE OBSERVED BY AND DEEMED ACCEPTABLE TO THE GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE PRIOR TO PLACEMENT OF REINFORCING STEEL OR CONCRETE.

8. A MOISTURE BARRIER MEMBRANE SHALL BE PLACED PER THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.

9. ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING WALLS BEFORE WALLS HAVE ATTAINED FULL DESIGN STRENGTH. CONTRACTOR SHALL BRACE OR PROTECT ALL BUILDING AND PIT WALLS BELOW GRADE FROM LATERAL LOADS UNTIL ATTACHING FLOORS ARE COMPLETELY IN PLACE AND HAVE ATTAINED FULL STRENGTH. CONTRACTOR SHALL PROVIDE FOR DESIGN, PERMITS, AND INSTALLATION OF SUCH BRACING.

10. SLAB BASE AND COMPACTION ARE TO BE IN ACCORDANCE WITH SOILS REPORT.

11. NO PIPES OR DUCTS SHALL BE PLACED IN SLABS OR WALLS UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE ENGINEER.

12. FOR ALL DIMENSIONS, CURBS, SLAB DEPRESSIONS, STEPS, FLOOR DRAINS, FLOOR SINKS, TRENCHES, UNDER FLOOR DUCTS, AND CONDUITS, SEE ARCHITECTURAL, MECHANICAL, REFRIGERATION, AIR CONDITIONING, PLUMBING, ELECTRICAL, AND FOOD SERVICES DRAWINGS. TRENCH BACK FILL AS PER SOILS REPORT REQUIREMENTS.

13. ALL WALLS RETAINING EARTH SHALL DRAIN TO DAYLIGHT OR OTHER DRAINAGE.

14. ALL ABANDONED FOOTINGS, UTILITIES, ETC., THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED

15. THE CONTRACTOR SHALL DETERMINE THE LOCATION OF UTILITY SERVICE IN AREAS TO BE EXCAVATED BEFORE BEGINNING EXCAVATION. EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING. DAMAGE CAUSED AS A RESULT OF FAILING TO EXACTLY LOCATE AND PRESERVE ALL EXISTING UNDERGROUND UTILITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR.

16. THE CONTRACTOR SHALL PROVIDE FOR DESIGN, APPROVALS, PERMITS, INSTALLATION, AND MONITORING OF ALL CRIBBING, SHEATHING, AND SHORING REQUIRED TO SAFELY RETAIN TEMPORARY EXCAVATIONS.

17. ALL PLANTERS IN CLOSE PROXIMITY TO THE STRUCTURE SHALL HAVE ADEQUATE DRAINAGE OF SURFACE WATER TO PREVENT SATURATION OF SOIL UNDER FOUNDATION.

DESIGN BASIS:

CODE: 2019 CBC (CALIFORNIA BUILDING CODE) CCR, TITLE 24, PART 2.

GRAVITY LOADS:

1. FLAT ROOF LIVE LOAD : 20 PSF (REDUCIBLE)
2. FLOOR LIVE LOAD : 100 PSF
3. PLATFORM/WALKWAY LIVE LOAD : 100 PDF

LATERAL LOADS:

1. EARTHQUAKE DESIGN DATA :
    RISK CATEGORY = III
    SEISMIC DESIGN CATEGORY = D
    SITE CLASS = C
    S_s = 1.885g
    S_1 = 0.782g
    F_a = 1.20
    F_v = 1.40
    S_{MS} = 2.262g
    S_{M1} = 1.095g
    S_{DS} = 1.508g
    S_{D1} = 0.730g
    I_e = 1.25
    STRUCTURE:
    CONCRETE BASINS:
    RESPONSE MODIFICATION FACTORS PER ACI 350.3 FOR FIXED OR HINGE BASE TANKS
    R_i = 2.0
    R_c = 1.0

2. WIND DESIGN DATA:
    BASIC WIND SPEED = 105MPH
    EXPOSURE C
    ANALYSIS PROCEDURE USED: ASCE 7 METHOD 2 MWFRS DIRECTION PROCEDURES - ALL HEIGHTS

SOIL LOADS:

1. BRACED RETAINING/FOUNDATION WALLS:
    AT-REST PRESSURE = 60H PSF/FT
    CANTILEVER RETAINING WALLS:
    ACTIVE PRESSURE = 45H PSF/FT
    SOIL SEISMIC (ULTIMATE) = 40H PSF/FT (UNIFORM PRESSURE)
    PASSIVE PRESSURE = 300 PSF
2. TRAFFIC SURCHARGE = 120 PSF
3. COEFFICIENT OF FRICTION = 0.35

DEFERRED SUBMITTALS

1. THE FOLLOWING PORTIONS OF THE PROJECT ARE DEFERRED SUBMITTAL ITEMS AND HAVE NOT BEEN DESIGNED BY THE ENGINEER OF RECORD.

    A. STAIRS
    B. GRATING, PLANKING, WALKWAYS, AND SUPPORTS
    C. HANDRAILS AND GUARDRAILS
    D. MECHANICAL UNITS/COMPONENTS/PIPE SUPPORTS AND ANCHORAGE (EXCEPT AS INDICATED ON PLANS)
    E. PRE-ENGINEERED METAL BUILDING
    F. PRE-ENGINEERED SELF-FRAMED BUILDING

2. DEFERRED SUBMITTAL ITEMS SHALL BE DESIGNED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA. STRUCTURAL CALCULATIONS AND SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW.

3. DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE ENGINEER OF RECORD HAS REVIEWED THE SUBMITTAL DOCUMENTS AND INDICATED THAT THEY HAVE BEEN REVIEWED AND THAT THEY HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN DOCUMENTS.

1585

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
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REVISIONS

CITY OF BANNING, CA
WASTEWATER TREATMENT PLANT
EQUALIZATION BASIN
STRUCTURAL
GENERAL NOTES - 1

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Bright people. Right Solutions.
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DRAWING NO.
G005
SHEET

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4/20/2021

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CONCRETE:

1. CONCRETE CONSTRUCTION SHALL CONFORM TO CHAPTER 19 OF THE CALIFORNIA BUILDING CODE, ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND ACI 350 "CODE REQUIREMENT FOR ENVIRONMENTAL CONCRETE STRUCTURES" (LATEST EDITIONS), EXCEPT AS MODIFIED BY THE SUPPLEMENTAL REQUIREMENTS CONTAINED HEREIN OR SHOWN ON THE DRAWINGS.
2. SPECIAL INSPECTION AND TESTING IS REQUIRED IN ACCORDANCE WITH SECTIONS 1704 AND 1705 OF THE CALIFORNIA BUILDING CODE AND THE "STATEMENT OF SPECIAL INSPECTIONS" ON THESE CONSTRUCTION DOCUMENTS.
3. ALL CONCRETE SHALL BE 150 PCF HARDROCK, AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI AT 28 DAYS.
4. THE MAXIMUM SIZE AGGREGATE IN FOUNDATION AND MASS CONCRETE WORK SHALL BE 1 INCH. THE MAXIMUM SIZE AGGREGATE IN SLABS ON GRADE, WALLS, AND ALL OTHER CONCRETE SHALL BE 3/4 INCH. PEA GRAVEL SHALL NOT BE USED FOR STRUCTURAL CONCRETE, UON.
5. CEMENT SHALL CONFORM TO ASTM C150, TYPE II/V, LOW ALKALI. AGGREGATES FOR NORMAL WEIGHT SHALL CONFORM TO ASTM C33.
6. ADMIXTURES AND COLORS (EXCEPT AS NOTED HEREIN) SHALL NOT BE USED UNLESS SUBSTANTIATING DATA IS SUBMITTED TO AND REVIEWED BY THE ENGINEER AND ARCHITECT OF RECORD.
7. CONCRETE MIXES SHALL BE DESIGNED BY A QUALIFIED TESTING LABORATORY. THE MIX DESIGNS SHALL CONFORM TO CBC CHAPTER 19 UNLESS OTHERWISE NOTED.
8. NON-STRUCTURAL STEEL EMBEDDED IN CONCRETE SHALL BE GALVANIZED OR PAINTED. ALL DAMAGED GALVANIZED AREAS SHALL BE REPAIRED PRIOR TO EMBEDMENT.
9. PROVIDE 2- #5 DIAGONAL BARS AT CORNERS OF WALL, FLOOR, AND ROOF OPENINGS AND INSIDE CORNERS OF FLOORS.
10. PROVIDE WATERSTOPS IN ALL BELOW GRADE FOUNDATION WALL CONSTRUCTION JOINTS.
11. READY MIXED CONCRETE SHALL CONFORM TO ASTM C94.
12. PLACEMENT OF CONCRETE SHALL CONFORM TO ACI 304. CLEAN AND ROUGHEN TO 1/4" AMPLITUDE FOR ALL CONCRETE SURFACES AGAINST WHICH CONCRETE IS TO BE PLACED.
13. ALL EXPOSED CONCRETE SHALL HAVE A SMOOTH FORM FINISH USING B-B PLYFORM, CLASS I, EXT-APA PLYWOOD.
14. ALL SLABS SHALL HAVE A TROWEL FINISH EXCEPT AS NOTED ON THE DRAWINGS.
15. ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS, AND INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
16. IF THE CONTRACTOR REQUESTS TO MAKE ANY CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON THESE DRAWINGS, THEY SHALL SUBMIT DETAILS OF CHANGES TO THE ENGINEER OF RECORD FOR REVIEW BEFORE STARTING WORK.
17. NO BRICK OR POROUS MATERIAL SHALL BE USED TO SUPPORT FOUNDATION STEEL OFF THE GROUND.
18. PROVIDE 3/4 INCH CHAMFER ON ALL EXPOSED CONCRETE CORNERS, UON.
19. SLEEVE PLUMBING OPENINGS IN SLABS WITH NON-CORROSIVE SLEEVE BEFORE PLACING CONCRETE AND BEND REINFORCING AROUND SLEEVES.
20. ALL REINFORCING BARS SHALL BE PROVIDED WITH THE FOLLOWING CONCRETE MINIMUM COVER:

FOOTINGS CAST AGAINST EARTH	3"
FORMED CONCRETE EXPOSED TO EARTH, WEATHER, OR LIQUID	2"
BEAMS AND GIRDERS	2"
WALLS	2"
COLUMN TIES	2"
SLABS (#11 AND SMALLER)	2"

21. CONCRETE CURING: TYPICALLY REQUIRED A MINIMUM OF 7 DAYS.

REINFORCING STEEL:

1. ALL REINFORCING STEEL SHALL BE PLACED IN CONFORMANCE WITH THE CBC, AND THE "MANUAL OF STANDARD PRACTICE" BY THE CRSI OR AS MODIFIED BY THE CONSTRUCTION DOCUMENTS.
2. SPECIAL INSPECTION AND TESTING IS REQUIRED IN ACCORDANCE WITH SECTIONS 1704 AND 1705 OF THE CALIFORNIA BUILDING CODE AND THE "STATEMENT OF SPECIAL INSPECTIONS" ON THESE CONSTRUCTION DOCUMENTS.
3. REINFORCING BARS SHALL CONFORM TO ASTM A615, DEFORMED GRADE 60. REINFORCING BARS THAT ARE TO BE WELDED SHALL CONFORM TO ASTM A706, DEFORMED GRADE 60.
4. DETAILS OF REINFORCEMENT SHALL COMPLY WITH ACI 318 (LATEST EDITION).
5. WELDING OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH ASTM A706 WITH LOW HYDROGEN ELECTRODES AND STRUCTURAL WELDING CODE REINFORCING STEEL SHALL CONFORM TO ANSI / AWS D1.4. MINIMUM TENSILE STRENGTH OF WELD METAL SHALL BE 90 KSI. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS.
6. REINFORCING BARS FOR COLUMNS AND REINFORCING IN SEISMIC ELEMENTS INCLUDING SHEAR WALL VERTICAL REINFORCING STEEL, MOMENT FRAME BEAMS AND COLUMNS, AND DIAPHRAGM CHORD BARS SHALL CONFORM TO ASTM A706, GRADE 60, U.O.N.
7. ALL REINFORCING BAR BENDS SHALL BE MADE COLD, UNLESS OTHERWISE PERMITTED BY THE BUILDING OFFICIAL.
8. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185, AND SHALL BE LAPPED 1 SPACE AND 12" MINIMUM.
9. DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE LAPPED WITH THE SAME GRADE, SIZE, SPACING, AND NUMBER AS THE VERTICAL REINFORCEMENT.
10. REINFORCING SPLICES SHALL BE MADE AS INDICATED ON THE DRAWINGS.
11. ALL VERTICAL REINFORCING SHALL BE CONTINUOUS BETWEEN TWO LEVELS, UNLESS OTHERWISE NOTED.
12. SLAB ON GRADE REINFORCING SHALL BE POSITIONED AT MID-DEPTH, UNLESS OTHERWISE NOTED.
13. PROVIDE #3 SPACER TIES AT 2'-6" ON CENTER IN ALL BEAMS AND FOOTINGS TO SECURE REINFORCING BARS IN PLACE, UNLESS OTHERWISE NOTED.
14. PIPING AND CONDUIT SHALL BE SO FABRICATED AND INSTALLED THAT CUTTING, BENDING, OR DISPLACEMENT OF REINFORCEMENT FROM ITS PROPER LOCATION WILL NOT BE REQUIRED.
15. REINFORCING BAR LAP SPLICES SHALL NOT BE PERMITTED IN MOMENT FRAMES OR SHEAR WALLS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE ENGINEER IN WRITING.
16. MINIMUM CLEAR DISTANCES BETWEEN REINFORCING STEEL, INCLUDING SPLICED REINFORCEMENT, SHALL BE 1" OR 1 BAR DIAMETER, WHICHEVER IS GREATER. MINIMUM CLEAR DISTANCE AT COLUMNS SHALL BE 1 1/2" OR 1 1/2 BAR DIAMETERS, WHICHEVER IS GREATER.
17. ALL REINFORCEMENT SHALL BE CENTERED ON MEMBER UNLESS OTHERWISE INDICATED.

STRUCTURAL OBSERVATION:

1. PER CBC CHAPTER 17 SECTION 1704, THE OWNER SHALL EMPLOY A LICENSED ENGINEER RESPONSIBLE FOR THE STRUCTURAL DESIGN, OR HIS DESIGNATED ENGINEER TO MAKE SITE VISITS TO OBSERVE GENERAL COMPLIANCE WITH THE APPROVED STRUCTURAL PLANS, SPECIFICATIONS AND CHANGE ORDERS. THE ENGINEER SHALL SUBMIT A STATEMENT IN WRITING TO THE BUILDING OFFICIAL STATING THAT THE SITE VISIT HAS BEEN MADE AND THAT ANY DEFICIENCIES NOTED HAVE BEEN CORRECTED. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE INSPECTIONS REQUIRED BY SECTIONS 110, 1704, 1705 OR OTHER SECTIONS OF THE CODE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 72 HOURS PRIOR TO THE COMPLETION OF ANY WORK THAT REQUIRES OBSERVATIONS. STRUCTURAL OBSERVATIONS ARE REQUIRED FOR THE FOLLOWING WORK PERFORMED BY THE CONTRACTOR:
   a. 90% OF FOUNDATION REINFORCEMENT PRIOR TO FIRST CONCRETE PLACEMENT FOR EACH STRUCTURE.
   b. 90% OF WALL REINFORCEMENT PRIOR TO FIRST CONCRETE PLACEMENT FOR EACH STRUCTURE.
   c. 90% OF ANY INTERMEDIATE FLOOR REINFORCEMENT PRIOR TO FIRST CONCRETE PLACEMENT/50% OF ANY INTERMEDIATE FRAMING FOR EACH STRUCTURE.
   d. 90% OF ROOF REINFORCEMENT PRIOR TO FIRST CONCRETE PLACEMENT/50% OF ROOF FRAMING FOR EACH STRUCTURE.

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DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

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CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

STRUCTURAL

GENERAL NOTES - 2

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DRAWING NO.

G006

SHEET

STATEMENT OF SPECIAL INSPECTIONS

REQUIRED VERIFICATION AND INSPECTION OF SOILS		
VERIFICATION AND INSPECTION	CONTINUOUS INSPECTION	PERIODIC INSPECTION
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	–	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	–	X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	–	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	–
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	–	X

REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION		
VERIFICATION AND INSPECTION	CONTINUOUS INSPECTION	PERIODIC INSPECTION
1. INSPECTION OF REINFORCING STEEL, AND PLACEMENT.	–	X
2. REINFORCING BAR WELDING:		
a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706;	–	X
b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; AND	–	X
c. INSPECT ALL OTHER WELDS.	X	–
3. INSPECTION ANCHORS CAST IN CONCRETE.	X	–
4. INSPECTION ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBER.		
a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	X	–
b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.	–	X
5. VERIFYING USE OF REQUIRED DESIGN MIX.	–	X
6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	–
7. INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	–
8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	–	X
9. VERIFICATION OF IN-SITU CONCRETE STRENGTH PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	–	X
10. INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	–	X

SPECIAL INSPECTION PROGRAM – APPLIES TO ALL TABLES

THE SPECIAL INSPECTIONS LISTED ARE IN ADDITION TO THE CALLED INSPECTIONS REQUIRED BY LATEST EDITION OF THE CBC CHAPTER 1 SECTION 110. THE SPECIAL INSPECTIONS IDENTIFIED ON PLANS ARE, IN ADDITION TO, AND NOT SUBSTITUTE FOR, THOSE INSPECTIONS REQUIRED TO BE PERFORMED BY THE GOVERNING JURISDICTION'S BUILDING INSPECTOR. THE GOVERNING JURISDICTION IS DEFINED AS THE CITY, COUNTY, OR GOVERNMENTAL UNIT THAT IS RESPONSIBLE FOR THE INSPECTIONS OF CONSTRUCTION OR WORK AS SPECIFIED IN THE CONTRACT DOCUMENTS.

A. PROVIDE SPECIAL INSPECTION AND TESTING FOR SEISMIC AND WIND RESISTANCE AS REQUIRED BY CBC SECTIONS 1704, AND 1705.

B. THE SPECIAL INSPECTORS MUST BE CERTIFIED BY THE GOVERNING JURISDICTION, TO PERFORM THE TYPE OF INSPECTION SPECIFIED.

EXCEPTIONS:
1. SOILS INSPECTIONS BY THE GEOTECHNICAL SOILS ENGINEER OF RECORD.
2. SMOKE CONTROL SYSTEM, BY THE MECHANICAL ENGINEER OF RECORD.
3. WHEN WAIVED BY THE BUILDING OFFICIAL.

C. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE SPECIAL INSPECTOR OR INSPECTION AGENCY AT LEAST ONE WORKING DAY PRIOR TO PERFORMING ANY WORK THAT REQUIRES SPECIAL INSPECTION.

D. SPECIALLY INSPECTED WORK THAT IS INSTALLED OR COVERED WITHOUT THE APPROVAL OF THE INSPECTOR IS SUBJECT TO REMOVAL OR EXPOSURE.

E. THE CONSTRUCTION MATERIALS TESTING LABORATORY MUST BE APPROVED BY THE GOVERNING JURISDICTION, FOR TESTING OF MATERIALS, SYSTEMS, COMPONENTS AND EQUIPMENTS.

F. A PROPERTY OWNER'S FINAL REPORT OF WORK REQUIRING SPECIAL INSPECTION MUST BE COMPLETED BY THE PROPERTY OWNER, PROPERTY OWNER'S AGENT OF RECORD, ARCHITECT OF RECORD, OR ENGINEER OF RECORD AND SUBMITTED TO THE INSPECTION SERVICES DIVISION.

G. AN APPLICATION TO PERFORM OFF-SITE FABRICATION MUST BE SUBMITTED TO THE INSPECTION SERVICES DIVISION FOR APPROVAL PRIOR TO FABRICATION.

H. A CERTIFICATE OF COMPLIANCE OF OFF-SITE FABRICATION MUST BE COMPLETED AND SUBMITTED TO THE INSPECTION SERVICES DIVISION PRIOR TO ERECTION OF PREFABRICATED COMPONENTS.

I. FABRICATOR MUST BE REGISTERED AND APPROVED BY THE GOVERNING JURISDICTION FOR THE FABRICATION OF MEMBERS AND ASSEMBLIES ON THE PREMISES OF THE FABRICATOR'S SHOP.

J. THE SPECIAL INSPECTOR MUST BE CERTIFIED BY THE GOVERNING JURISDICTION IN THE CATEGORY OF WORK REQUIRED TO HAVE SPECIAL INSPECTION.

K. FABRICATION OF MEMBERS AND ASSEMBLIES DONE IN A FABRICATOR'S SHOP APPROVED BY INSPECTION SERVICES NEED NOT HAVE CONTINUOUS OR PERIODIC SPECIAL INSPECTION. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT THE CERTIFICATE OF COMPLIANCE FORM TO INSPECTION SERVICES.

L. CONTRACTOR RESPONSIBILITY PER CBC SECTION 1704.4 :
EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND- OR SEISMIC-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC SYSTEM OR A WIND- OR SEISMIC-RESISTING COMPONENT LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS IN CBC SECTION 1704.

REQUIRED REPORTS:

1. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE.

2. SPECIAL INSPECTION REPORTS SHALL INDICATE THAT THE WORK INSPECTED WAS PERFORMED IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.

3. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.

4. IF DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO COMPLETION OF THAT PHASE OF WORK.

5. A FINAL REPORT DOCUMENTING THE REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED AT A POINT IN TIME AGREED UPON BY THE PERMIT APPLICANT AND THE BUILDING OFFICIAL PRIOR TO THE START OF WORK.

CONTINUOUS AND PERIODIC INSPECTIONS:

1. WHERE CONTINUOUS SPECIAL INSPECTION IS REQUIRED, THE SPECIAL INSPECTOR SHALL CONTINUOUSLY PROVIDE FULL-TIME VERIFICATION OF THE WORK.

2. WHERE PERIODIC SPECIAL INSPECTION IS REQUIRED, THE SPECIAL INSPECTOR SHALL PROVIDE VERIFICATION THAT THE PERIODIC INSPECTION WAS PERFORMED.

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WASTEWATER TREATMENT PLANT

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GENERAL NOTES - 3

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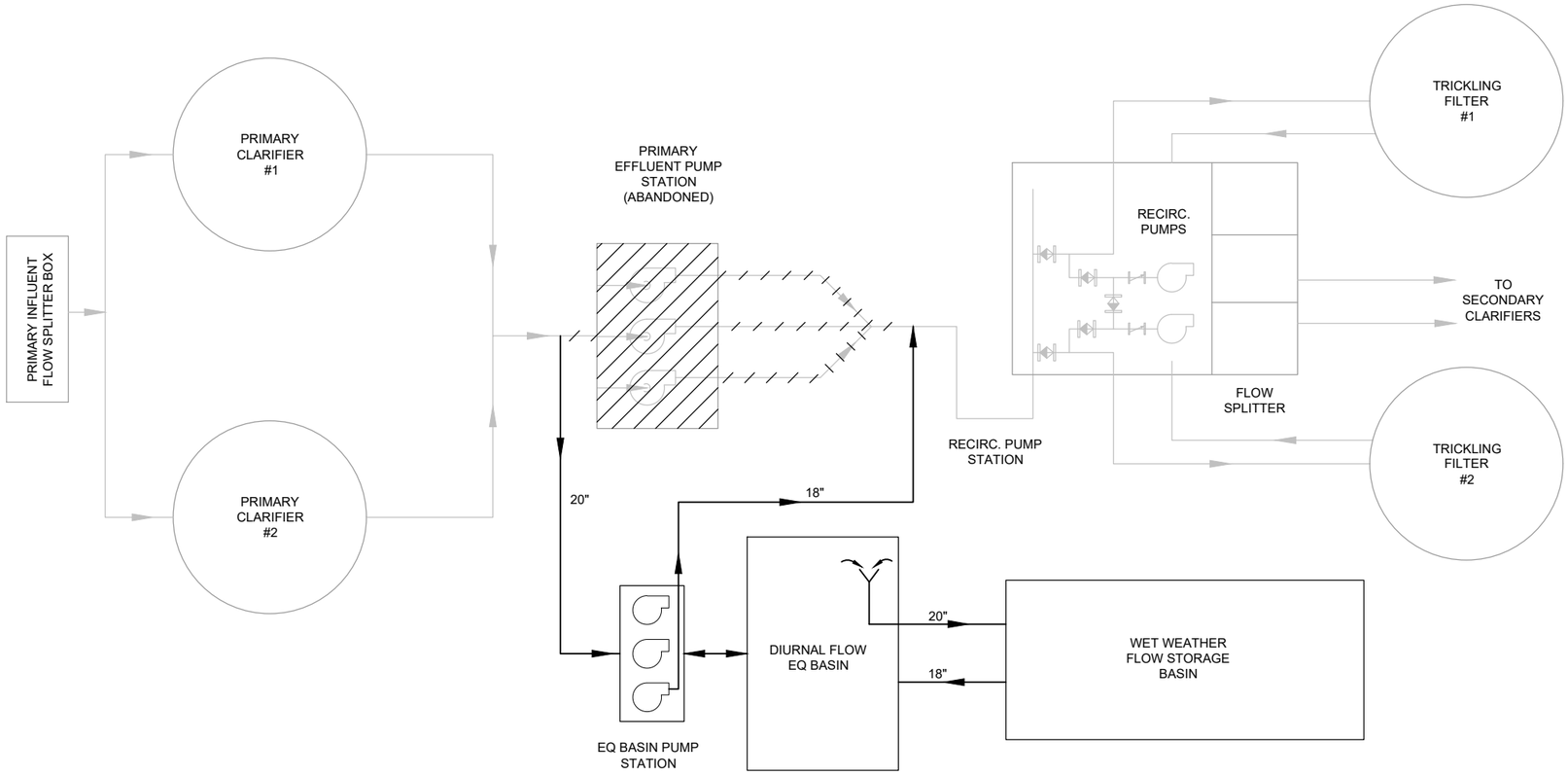

DESIGN CRITERIA

DESIGN FLOWS

AVERAGE DAY FLOW	3.6 MGD
PEAK HOUR FLOW	7.2 MGD

DIURNAL FLOW EQUALIZATION BASIN

QUANTITY	1
VOLUME	600,000 GALLONS
LIQUID DEPTH	18'-0"

EQUALIZATION BASIN PUMPS

QUANTITY	3 (2 DUTY, 1 STANDBY)
TYPE	SELF-PRIMING
FLOW	2,600 GPM (EACH)
TDH	50'

WET WEATHER STORAGE BASIN

STORAGE VOLUME	1.5 MG
MAX LIQUID DEPTH	11'

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C:\USERS\DANIEL.SANDOVAL\ACCDOCS\AQUA ENGINEERING\001815.C EQUALIZATION BASIN\PROJECT FILES\000 GENERAL\000-00G008 FLOW SCHEMATIC.DWG

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1588

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WASTEWATER TREATMENT PLANT

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PROCESS FLOW SCHEMATIC AND DESIGN CRITERIA

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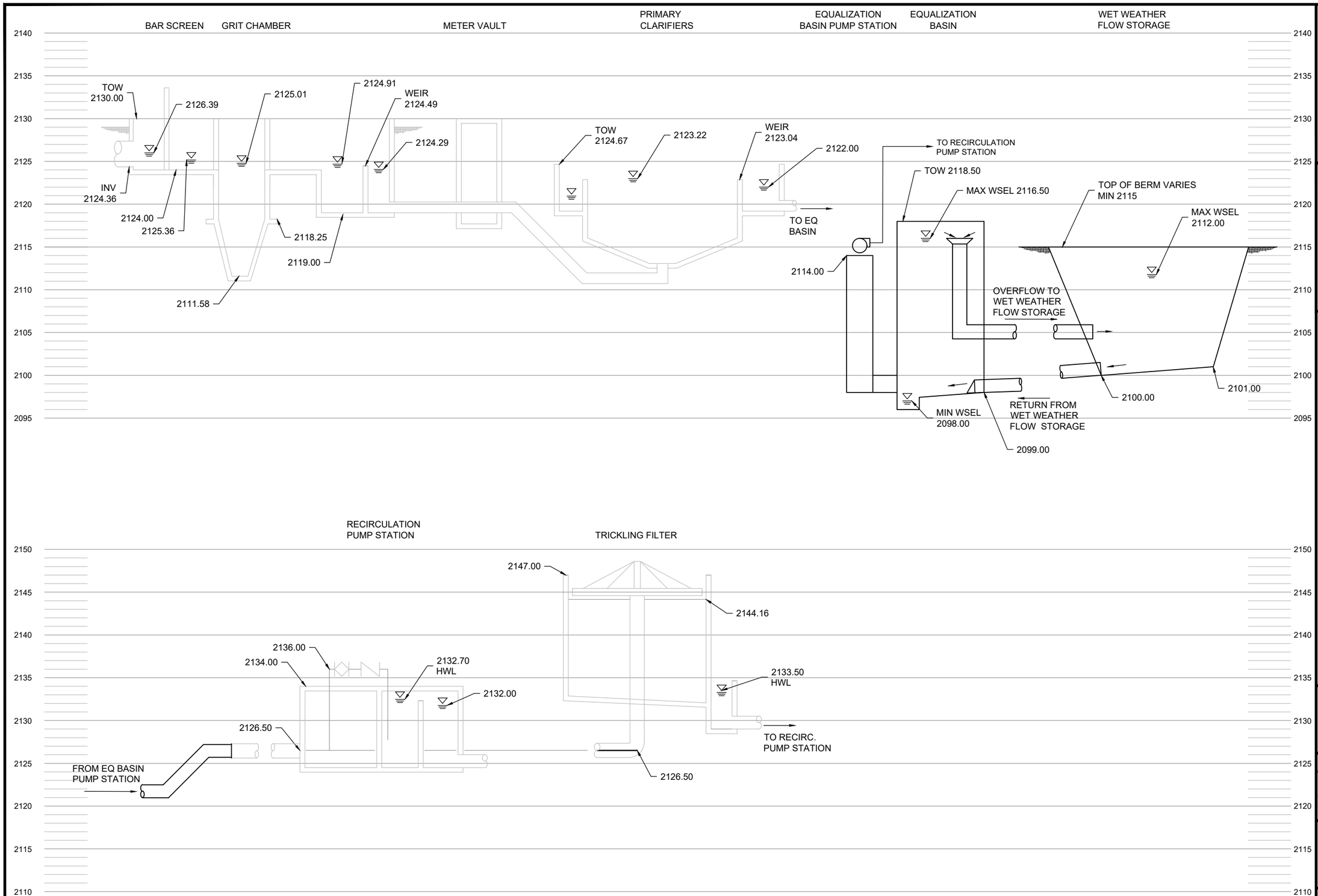

HYDRAULIC PROFILE

1589

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

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WASTEWATER TREATMENT PLANT
EQUALIZATION BASIN
GENERAL
HYDRAULIC PROFILE

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HORIZONTAL CONTROL				
PNT	NORTHING	EASTING	ELEVATION	DESCRIPTION
101	2276893.14	6378722.63	2127.47	BOILER BUILDING (CONTROL POINT)
102	2276871.04	6378759.51	2127.30	BOILER BUILDING (CONTROL POINT)
201	2276840.10	6379027.09	2118.50	DIURNAL FLOW EQUALIZATION BASIN -TOW
202	2276732.60	6379077.42	2118.50	DIURNAL FLOW EQUALIZATION BASIN -TOW
203	2276808.85	6379010.59	2114.00	PUMP STATION - FF
204	2276783.85	6379010.59	2114.00	PUMP STATION -FF
205	2276835.07	6379283.42	2101.00	STORAGE BASIN
206	2276815.07	6379303.42	2101.10	STORAGE BASIN
207	2276789.07	6379303.42	2101.10	STORAGE BASIN
208	2276769.07	6379283.42	2101.00	STORAGE BASIN
209	2276835.07	6379143.42	2100.50	STORAGE BASIN
210	2276815.07	6379123.42	2100.40	STORAGE BASIN
211	2276789.07	6379123.42	2100.40	STORAGE BASIN
212	2276769.07	6379143.42	2100.50	STORAGE BASIN
213	2276842.44	6379018.37	2118.50	ELECTRICAL BUILDING - FF
214	2276827.44	6379008.37	2118.50	ELECTRICAL BUILDING -FF

LEGEND

- EXISTING STRUCTURE
- ABANDONED STRUCTURE
- NEW STRUCTURE
- MODIFIED STRUCTURE

PARTIAL SITE PLAN 1
SEE SHEET 01C202

PARTIAL SITE PLAN 2
SEE SHEET 01C203

WET WEATHER FLOW STORAGE BASIN

SLUDGE DRYING BEDS

DIURNAL FLOW EQUALIZATION BASIN

CHLORINE CONTACT BASIN

CHLORINE EQUIPMENT BUILDING

RECIRC PUMP STATION

TRICKLING FILTER #2

FINAL CLARIFIER #2

PRIMARY CLARIFIER #1

PRIMARY EFFLUENT PUMP STATION

DIGESTER

DIGESTER CONTROL HOUSE

OFFICE AND MAINTENANCE FACILITY

SECONDARY SLUDGE PUMP STATION

TRICKLING FILTER #1

FINAL CLARIFIER #1

PRIMARY CLARIFIER #2

CONTROL HOUSE

SLUDGE THICKENER

CHEMICAL STORAGE PAD

HEADWORKS

GENERATOR

BOILER AND MCC BUILDING

OVERALL SITE PLAN

SCALE: 1"=40'-0"

0 40 80

Scale in Feet

1590

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

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CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT EQUALIZATION BASIN

CIVIL

OVERALL SITE PLAN

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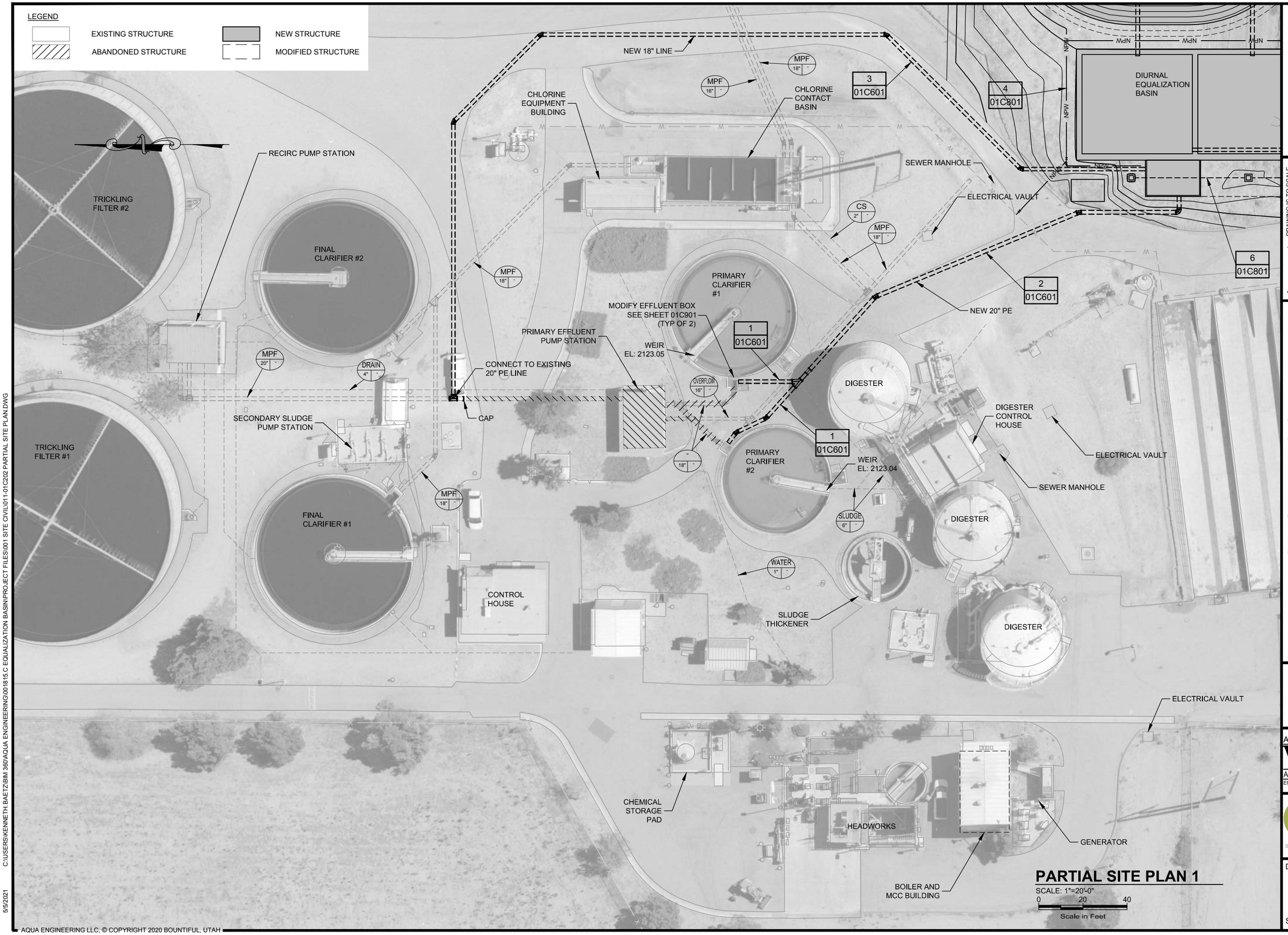

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DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

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WASTEWATER TREATMENT PLANT EQUALIZATION BASIN CIVIL PARTIAL SITE PLAN 1

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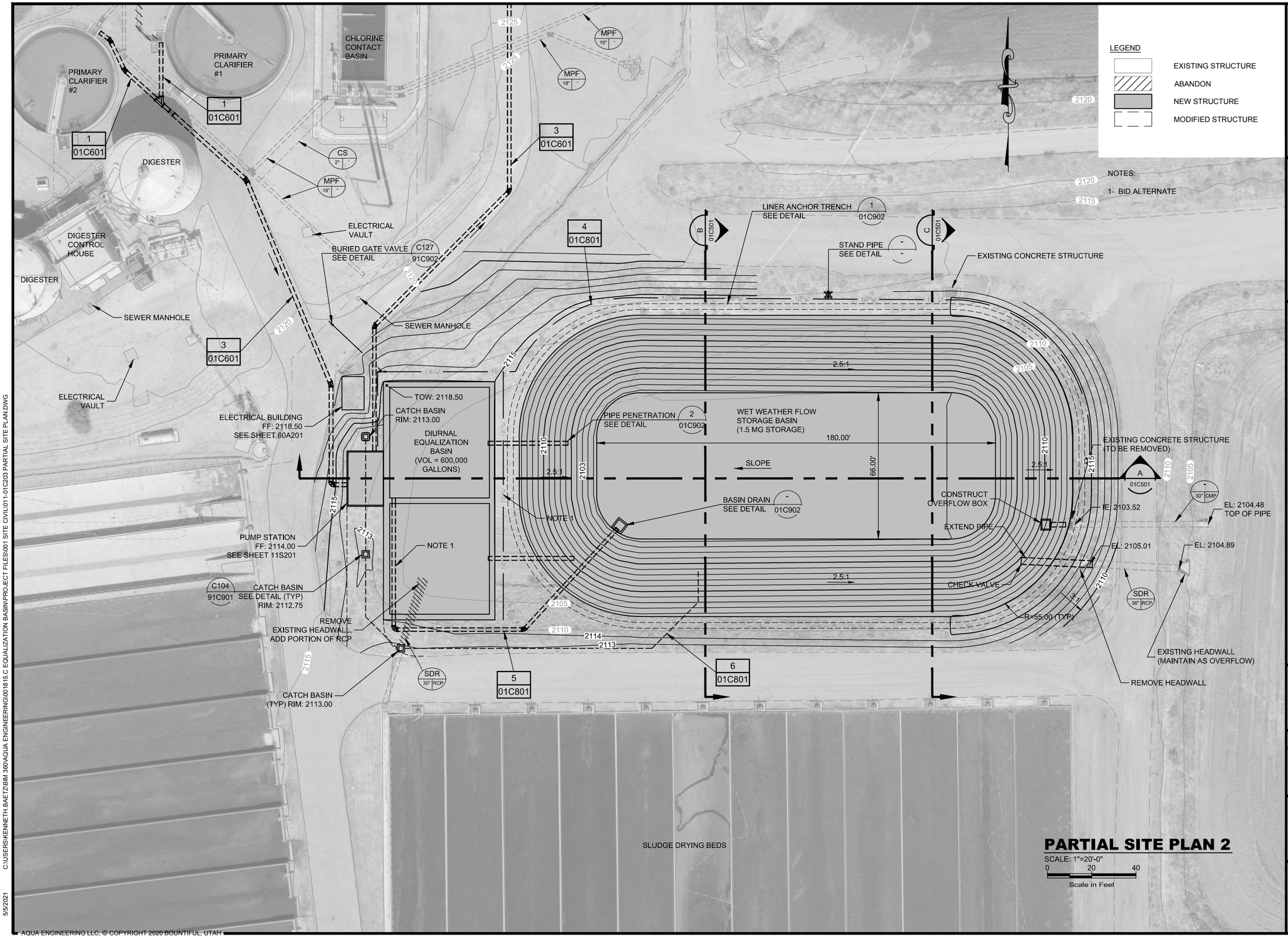

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DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

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CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

CIVIL

PARTIAL SITE PLAN 2

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DRAWING NO.

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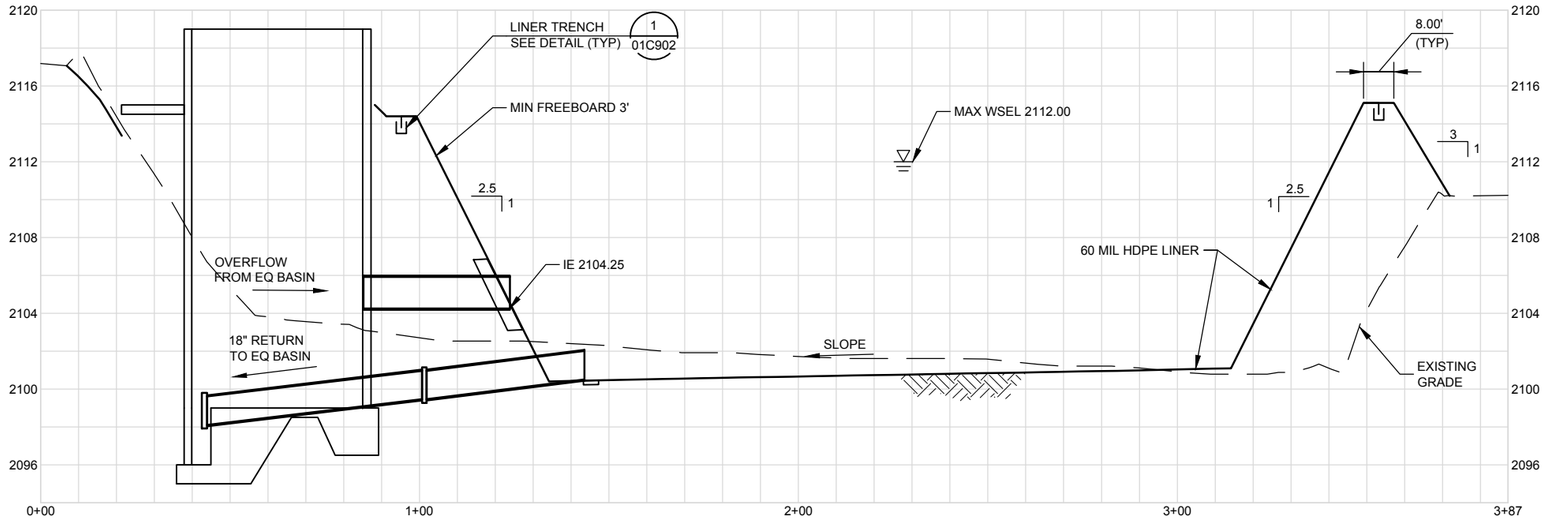
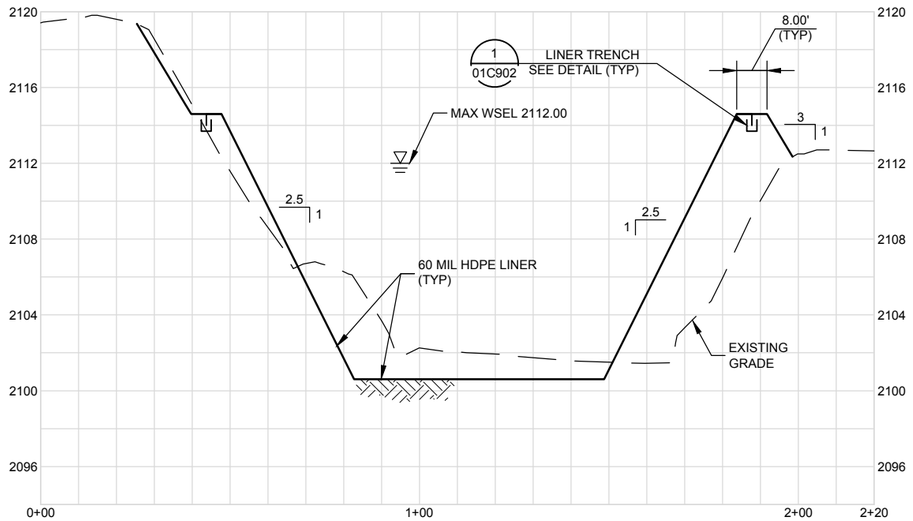
SHEET OF



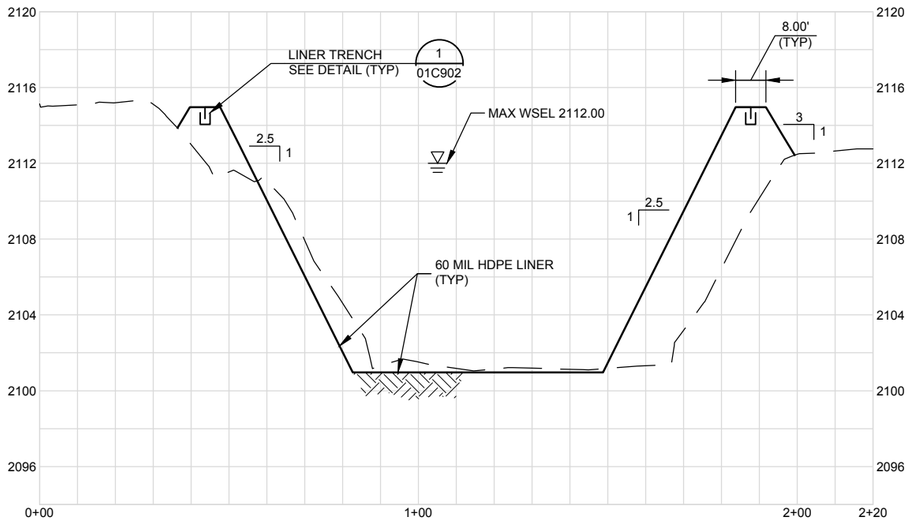
SECTION A

HORIZ SCALE: 1"=20'-0"
VERT SCALE: 1"=4'-0"



SECTION B

HORIZ SCALE: 1"=20'-0"
VERT SCALE: 1"=4'-0"



SECTION C

HORIZ SCALE: 1"=20'-0"
VERT SCALE: 1"=4'-0"

1593

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE, 1/2" = HALF SCALE

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	-	-	-	-

REVISIONS

CITY OF BANNING, CA
WASTEWATER TREATMENT PLANT
EQUALIZATION BASIN
CIVIL
SECTIONS

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DRAWING NO.

01C501

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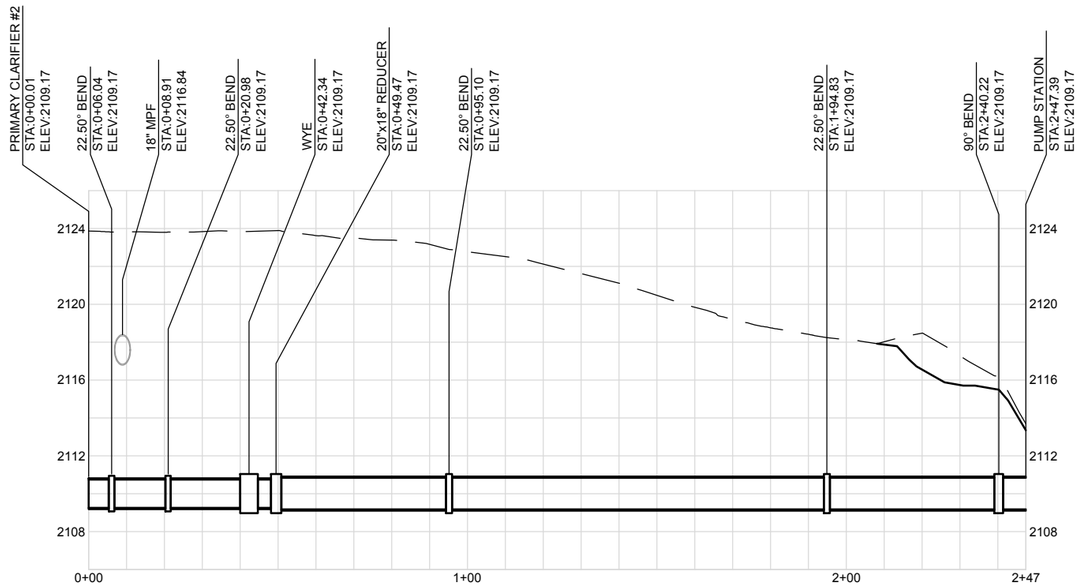
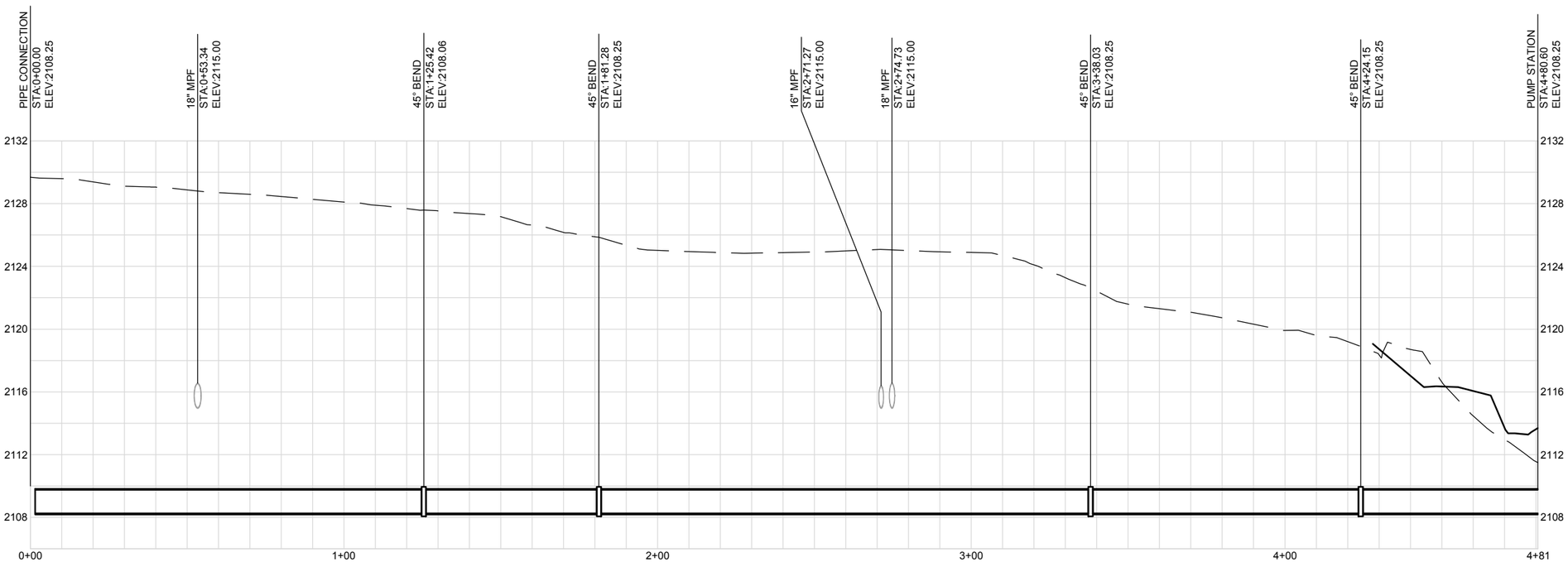


SECTION

HORIZ SCALE: 1"=20'-0"
HORIZ SCALE: 1"=4'-0"

1 - 2 -



SECTION

HORIZ SCALE: 1"=20'-0"
VERT SCALE: 1"=4'-0"

3 -

C:\USERS\DEREK.HYDE\ACCDOCS\AQUA ENGINEERING\001815 C EQUALIZATION BASIN\PROJECT FILES\001 SITE CIVIL\001-01C601 PIPE PROFILES.DWG

4/28/2021

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1594

DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE

0 1/2 1

ORIGINAL

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0	-	BP	DCH	-

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CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT
EQUALIZATION BASIN
CIVIL
PIPE PROFILE

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DRAWING NO.

01C601

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YARD PIPING SCHEDULE									
PIPE NO.	SIZE	SERVICE	SYMBOL	INSTALLATION (See Note 1)	MATERIAL	REMARKS	PRESSURE, PSI (See Note 3)		PROFILE SHEET
							Operating	Test	
1	18"	PRIMARY CLARIFIER EFFLUENT	PE	BUR	DIP & C900	NOTE 2,4	0-10	20, HL	01C601
2	20"	PRIMARY CLARIFIER EFFLUENT	PE	BUR	DIP & C900	NOTE 2,4	0-10	20, HL	01C601
3	18"	EQ BASIN PRIMARY EFFLUENT	PE	BUR	DIP & C900	NOTE 2,4	0-30	50, HH	01C601
4	6",4"	NON-POTABLE WATER	NPW	BUR	HDPE DR-11	NOTE 5	0-100	150, HH	N/A
5	18"	RETURN FROM WET WEATHER STORAGE BASIN	PE	BUR	DIP & C900	NOTE 2,4	0-10	20, HL	N/A
6	8",30"	STORM DRAIN	SD	BUR	DIP & C900	NOTE 2, 4	0-5	10, G	N/A

ABBREVIATION KEY	
PI	PRIMARY INFLUENT
PE	PRIMARY EFFLUENT
PD	PLANT DRAIN
NPW	NON-POTABLE WATER
SD	STORM DRAIN

NOTES:

1- INSTALLATION TYPES:
- BUR - BURIED PIPE
- OUT - OUTSIDE EXPOSED
- IN - INSIDE EXPOSED

2- PIPE RESTRAINT REQUIREMENTS:
- BURIED DIP:
  - FITTINGS - MEGALUG SERIES 1100, OR EQUAL
  - JOINTS - MEGALUG SERIES 1700, OR EQUAL
  - COUPLINGS - MEGALUG SERIES 3800, OR EQUAL
- BURIED PVC (C-900, 905):
  - FITTINGS - MEGALUG SERIES 2000 OR 2200, OR EQUAL
  - JOINTS - MEGALUG SERIES 1900 OR 2800, OR EQUAL
- WELDED STEEL PIPE:
  - FULLY WELDED JOINTS OR FLANGED WHERE SHOWN
- EXPOSED DIP AND PVC (C-900, 905):
  - FLANGED

3- ALL PIPING TESTS SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 330505.
- AL - AIR LOW HEAD
- AH - AIR HIGH HEAD
- HH - HYDROSTATIC HIGH HEAD
- HL - HYDROSTATIC LOW HEAD
- G - GRAVITY

4- EXPOSED DIP SHALL BE COATED AND LABELED IN ACCORDANCE WITH SPECIFICATION SECTIONS 098000 AND 220553.

5- UNLESS NOTED OTHERWISE, ALL POTABLE AND NON-POTABLE WATER LINES SHALL BE BURIED MINIMUM 36" BELOW FINISHED GROUND.

6- FOR YARD PIPING NOT SPECIFICALLY LISTED IN THIS SCHEDULE, USE SIMILAR PIPE MATERIALS AND TESTING STANDARDS TO MATCH PIPES OF SIMILAR SERVICE THAT ARE LISTED IN THIS SCHEDULE.

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DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	-	-	-	-

REVISIONS

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

CIVIL

YARD PIPING SCHEDULE AND NOTES

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DRAWING NO.

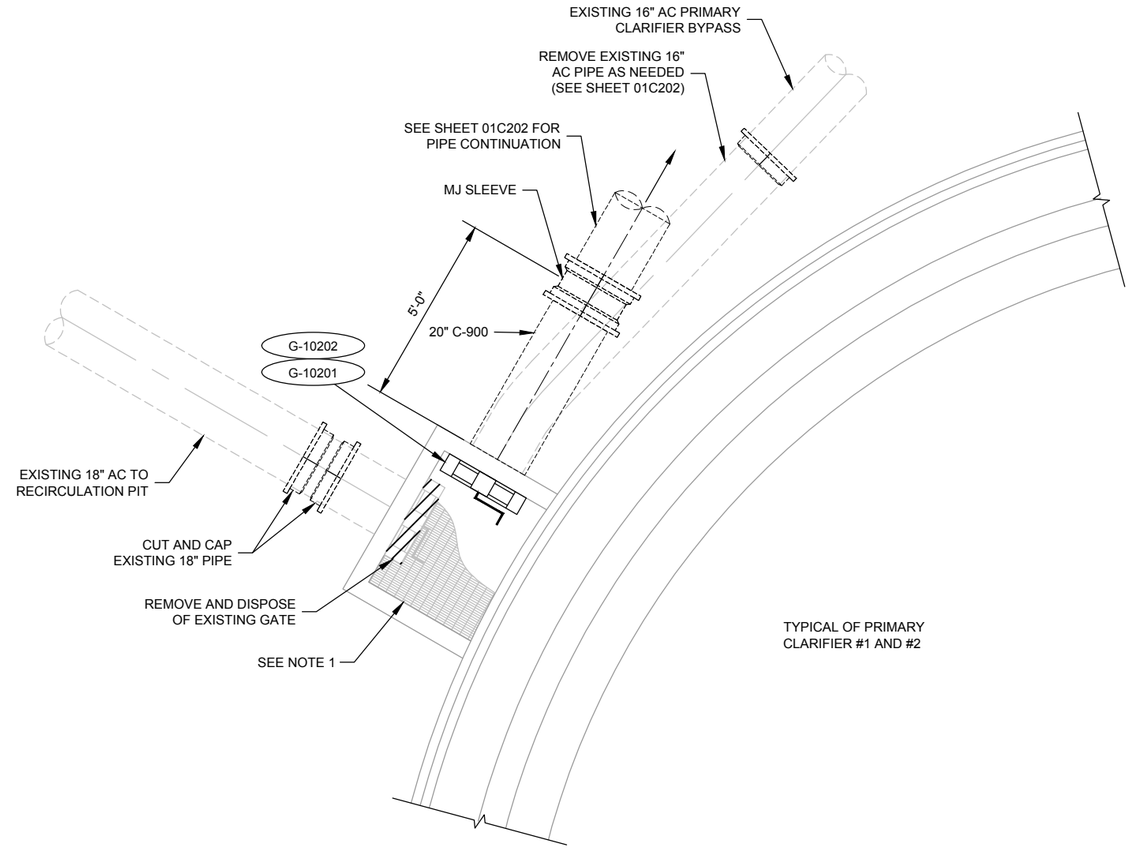
01C801

SHEET OF



REMOVE AND DISPOSE OF EXISTING GATE

PHOTO 1
SCALE: NTS



REHAB PLAN
SCALE: 1/2"=1'-0"
0 2 4
Scale in Feet



REMOVE AND DISPOSE OF EXISTING GATE

PHOTO 2
SCALE: NTS

NOTES:

1- POWER WASH AND SEAL CONCRETE SURFACE.

2- DETAIL IS TYPICAL OF TWO PRIMARY CLARIFIERS.

3- LOCATIONS OF EXISTING EQUIPMENT AND PIPING ARE BASED ON PLANS PROVIDED TO THE ENGINEER AND SHOULD NOT BE RELIED UPON AS COMPLETE AND ACCURATE. CONTRACTOR SHALL VERIFY PRIOR TO REMOVAL AND CONSTRUCTION.

4- PRIOR TO START OF WORK, THE CONTRACTOR SHALL PREPARE AND SUBMIT TO ENGINEER FOR REVIEW/ DEMOLITION PLAN IDENTIFYING DEMOLITION/ REMOVAL ACTIVITIES AND THEIR SEQUENCE.

1596

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE
0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	-	EIT	BDP	JRL

REVISIONS

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PRIMARY CLARIFIER REHABILITATION

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DRAWING NO.
01C901

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5/4/2021

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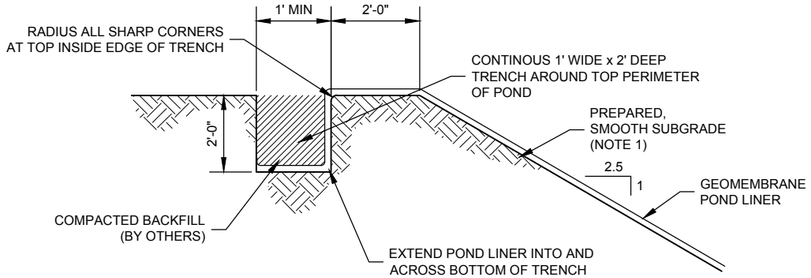
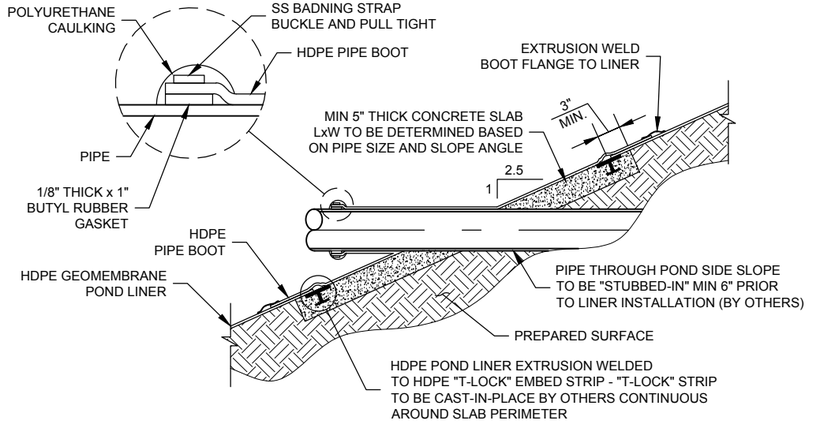


TYPICAL POND LINER ANCHOR TRENCH

1
-

SCALE: NTS



TYPICAL PIPE PENETRATION THROUGH LINER

2
-

SCALE: NTS

NOTES:

1-

C:\USERS\DANIEL.SANDOVAL\ACCDOCS\AQUA ENGINEERING\001815.C EQUALIZATION BASIN\PROJECT FILES\02 STRUCTURES\EQ BASIN\01C902 - EQ BASIN DETAILS.DWG

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1597

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0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	-	-	-	-

REVISIONS

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

CIVIL

DETAILS

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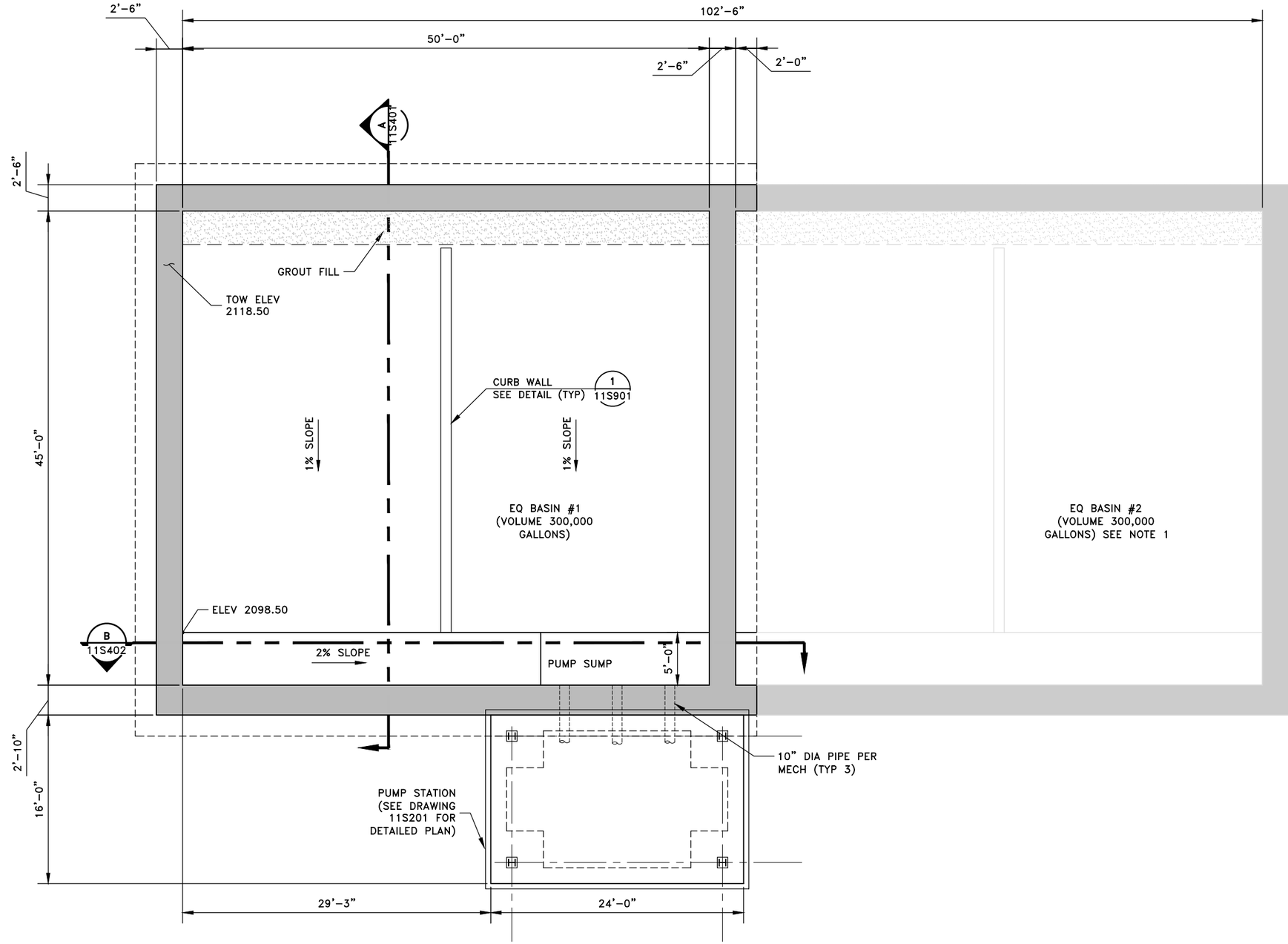
DRAWING NO.

01C902

SHEET



NOTES:
1. THERE ARE TWO OPTIONS FOR EQ BASIN #2. OPTION A – EQ BASIN #2 IS BUILT AS PART OF THIS PROJECT. OPTION B – EQ BASIN #2 IS BUILT AS PART OF A FUTURE PROJECT. OPTION B IS DEPICTED ON THIS PLAN. OPTION B FOUNDATON AND WALLS IS SIMILAR TO OPTION A.

STRUCTURAL PLAN

SCALE: 3/16"=1'-0"

0 4 8
Scale in Feet

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5/5/2021

1598

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	-	-	-	-

REVISIONS

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

STRUCTURAL PLAN

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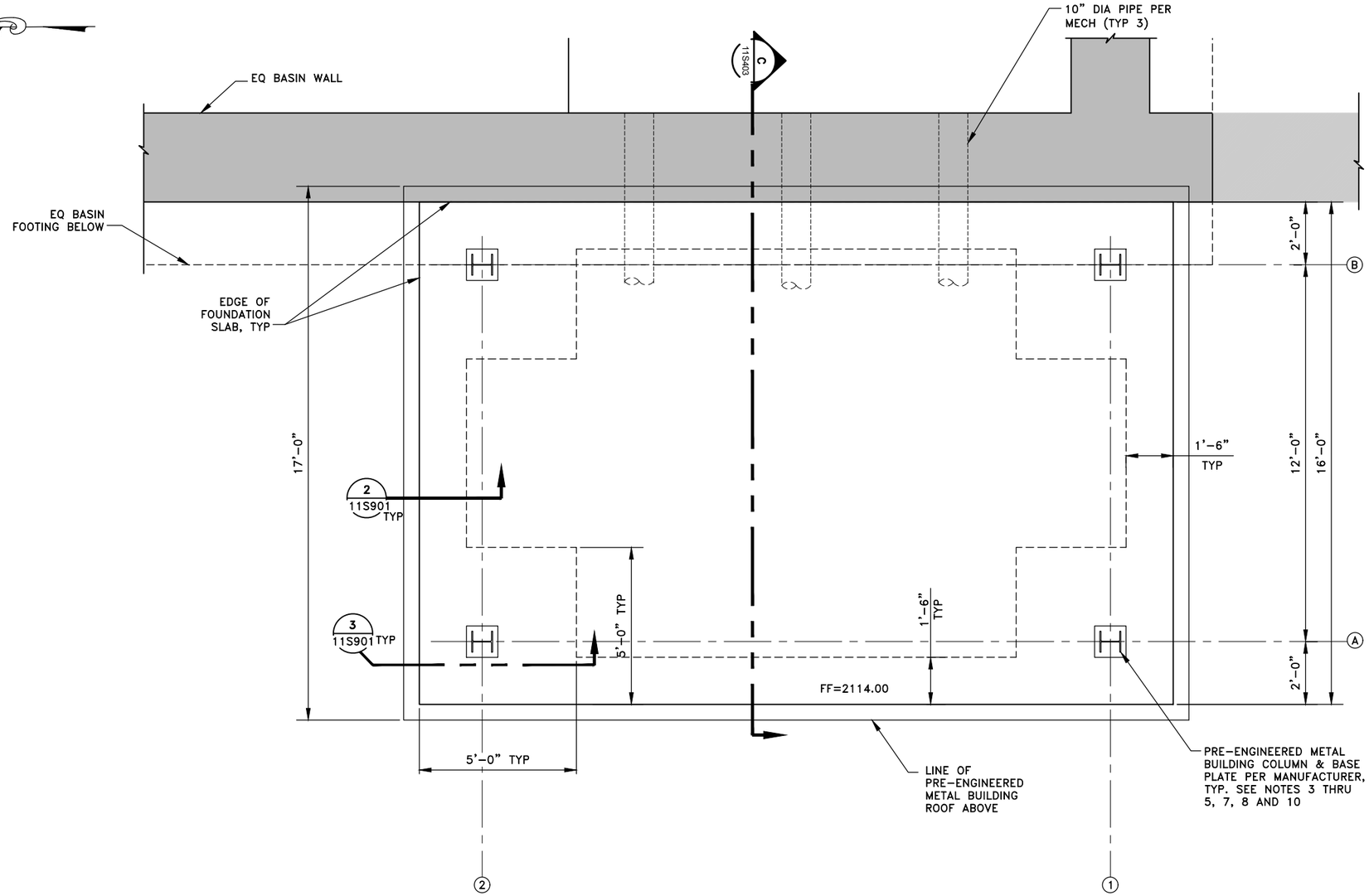
DRAWING NO.

11S101

SHEET



NOTES:

1. SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
2. SEE MECHANICAL DRAWINGS FOR LOCATION, SIZE, AND ADDITIONAL INFORMATION REGARDING EQUIPMENT.
3. ALL STRUCTURAL MEMBERS OF THE PRE-ENGINEERED METAL BUILDING SHALL BE HOT-DIPPED GALVANIZED.
4. PRE-ENGINEERED METAL BUILDING COLUMN FOOTING DESIGN IS BASED ON PRELIMINARY LOADS. FINAL COLUMN FOOTING SIZES WILL BE VERIFIED BY THE SEOR AFTER THE RECEIPT OF OTHER PRE-ENGINEERED METAL BUILDING DEFERRED SUBMITTAL. FOOTING REVISIONS (IF ANY WILL BE ADDRESSED BY ADDENDUM OR REVISION).
5. NO COLUMNS FOR THE PRE-ENGINEERED METAL BUILDING SHALL BE MANUFACTURED OR INSTALLED PRIOR TO SEOR REVIEW AND APPROVAL OF PRE-ENGINEERED BUILDING DEFERRED SUBMITTAL.
6. CONTRACTOR SHALL VERIFY ALL EQUIPMENT PAD SIZE, LOCATIONS, AND ANCHORING REQUIREMENTS WITH THE MANUFACTURER OR SUPPLIER
7. ANCHOR BOLTS FOR PRE-ENGINEERED BUILDING AND EQUIPMENT SHALL BE:
   A. POST-INSTALLED ANCHORS.
   B. DESIGNED, SEALED, AND SIGNED BY A CALIFORNIA LICENSED CIVIL OR STRUCTURAL ENGINEER. DESIGN SHALL BE SUBMITTED TO SEOR FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
   C. PROVIDED BY THE CONTRACTOR.
   D. DESIGNER SHALL COORDINATE ANCHOR BOLT SIZE, SPACING, AND EMBEDMENT DEPTH WITH SUPPLIER REQUIREMENTS AND BASE MATERIAL & CONFIGURATION PER THESE DRAWINGS.
8. SEE SPECIFICATION SECTION 133400 FOR PRE-ENGINEERED METAL BUILDING REQUIREMENTS.
9. FOR SUBGRADE PREPARATION REQUIREMENTS SEE SPECIFICATION SECTION 312000.
10. PRE-ENGINEERED METAL BUILDING SHALL BE DESIGNED TO HAVE ALL OPEN BAYS, I.E. NO CROSS-BRACING ALLOWED.

STRUCTURAL PLAN

SCALE: 1/2"=1'-0"

0 2 4

Scale in Feet

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5/5/2021

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1599

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
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REVISIONS

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

STRUCTURAL

PUMP STATION PLAN

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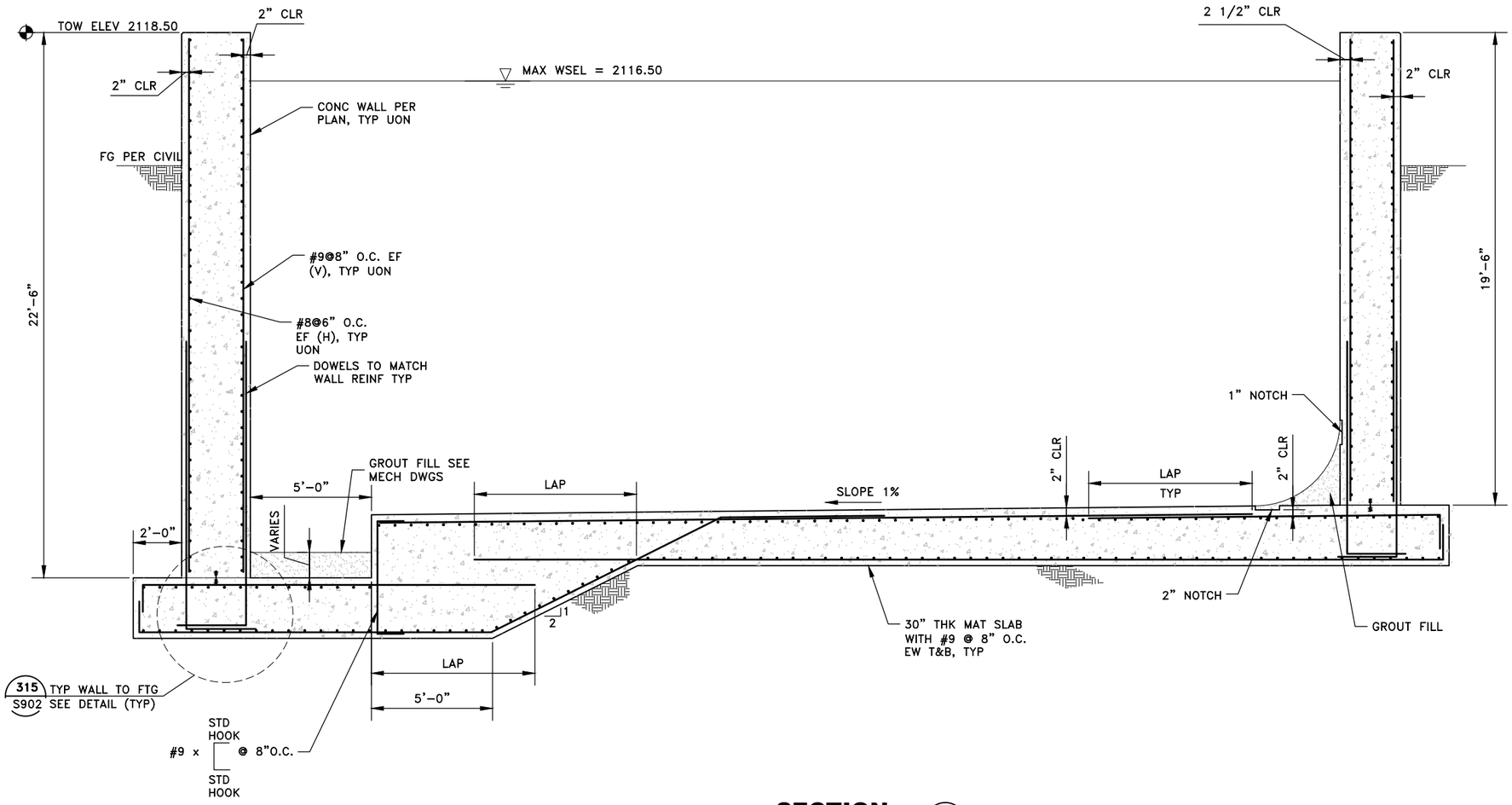
DRAWING NO.

11S201

SHEET



SECTION A 11S101

SCALE: 3/8"=1'-0"

0 2 4

Scale in Feet

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1600

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
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WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

STRUCTURAL

SECTION 1

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DRAWING NO.

11S401

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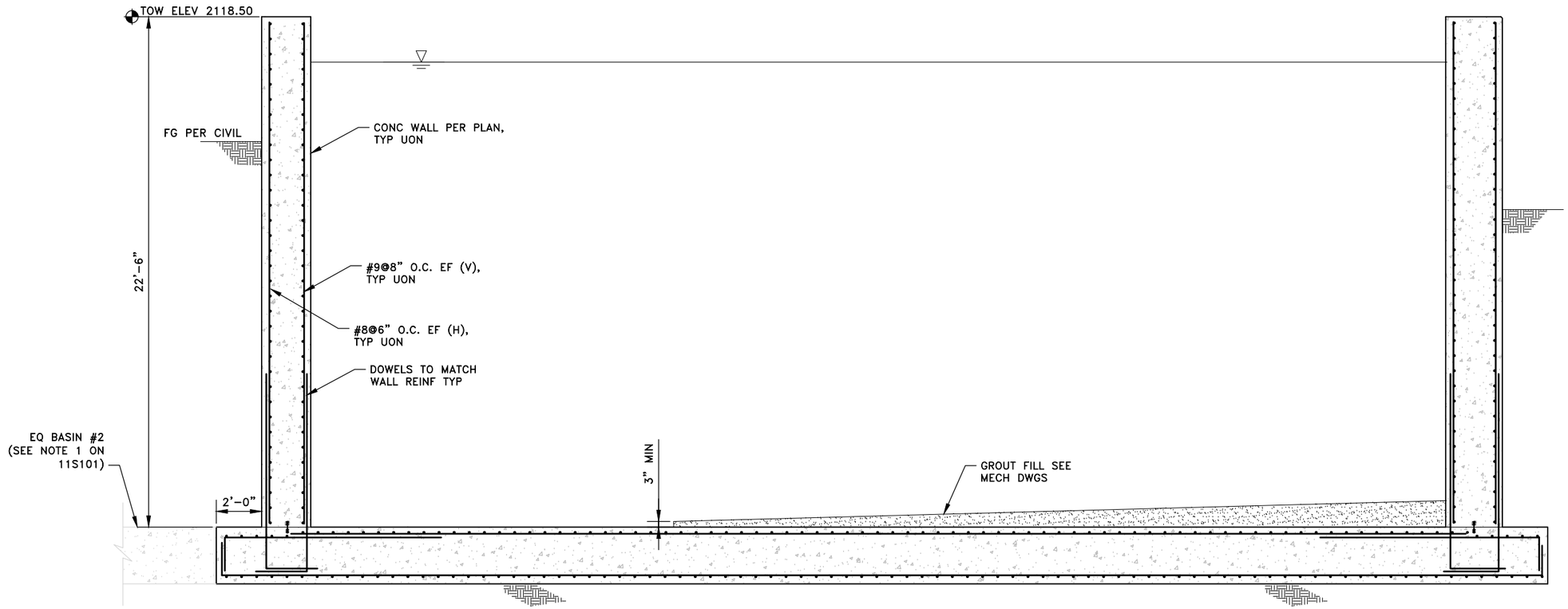
FOR INFOMATION NOT NOTED SEE A 11S401



SECTION B 11S101
SCALE: 3/8"=1'-0"
0 2 4
Scale in Feet

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE
0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	-	CN	SML	EN

REVISIONS

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WASTEWATER TREATMENT PLANT
EQUALIZATION BASIN
STRUCTURAL
SECTION 2

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DRAWING NO.
11S402
SHEET

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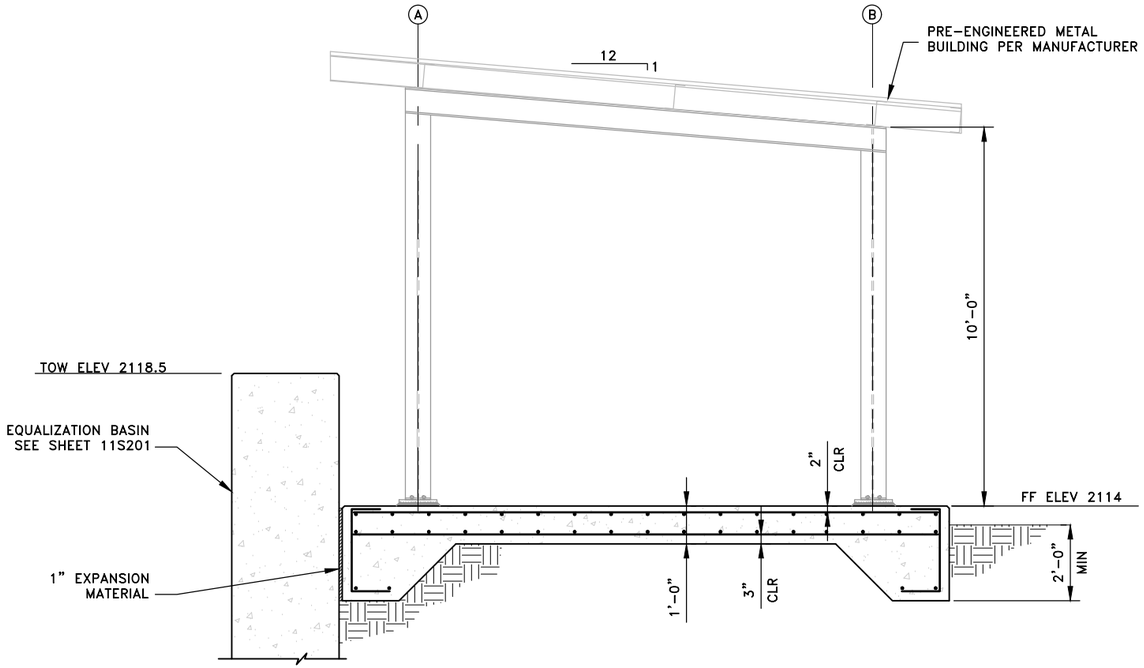
NOTES:

1. SEE NOTES ON SHEET 11S201.



SECTION (C, 11S201)
SCALE: 1/2" = 1'-0"

0 2 4
Scale in Feet

1602

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
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CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

STRUCTURAL

SECTION 3

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DRAWING NO.

11S403

SHEET

4/20/2021

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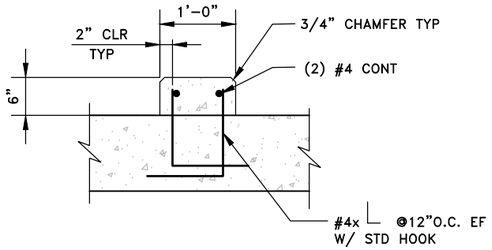


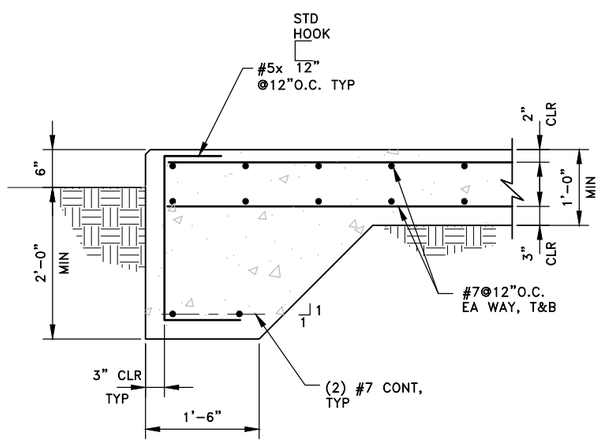
CURB WALL DETAIL

SCALE: 1" = 1'-0"

1 / 11S101

0 1 2

Scale in Feet



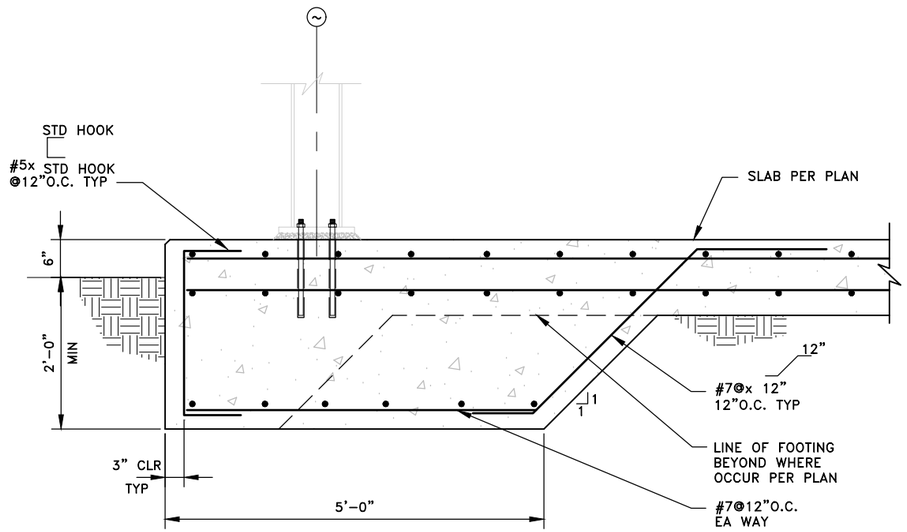
TYP TURN DOWN FOOTING DETAIL

SCALE: 1" = 1'-0"

2 / 11S201

0 1 2

Scale in Feet



TYP COLUMN FOOTING DETAIL

SCALE: 1" = 1'-0"

3 / 11S201

0 1 2

Scale in Feet

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4/20/2021

1603

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	-	-	-	-

REVISIONS

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

STRUCTURAL

DETAILS

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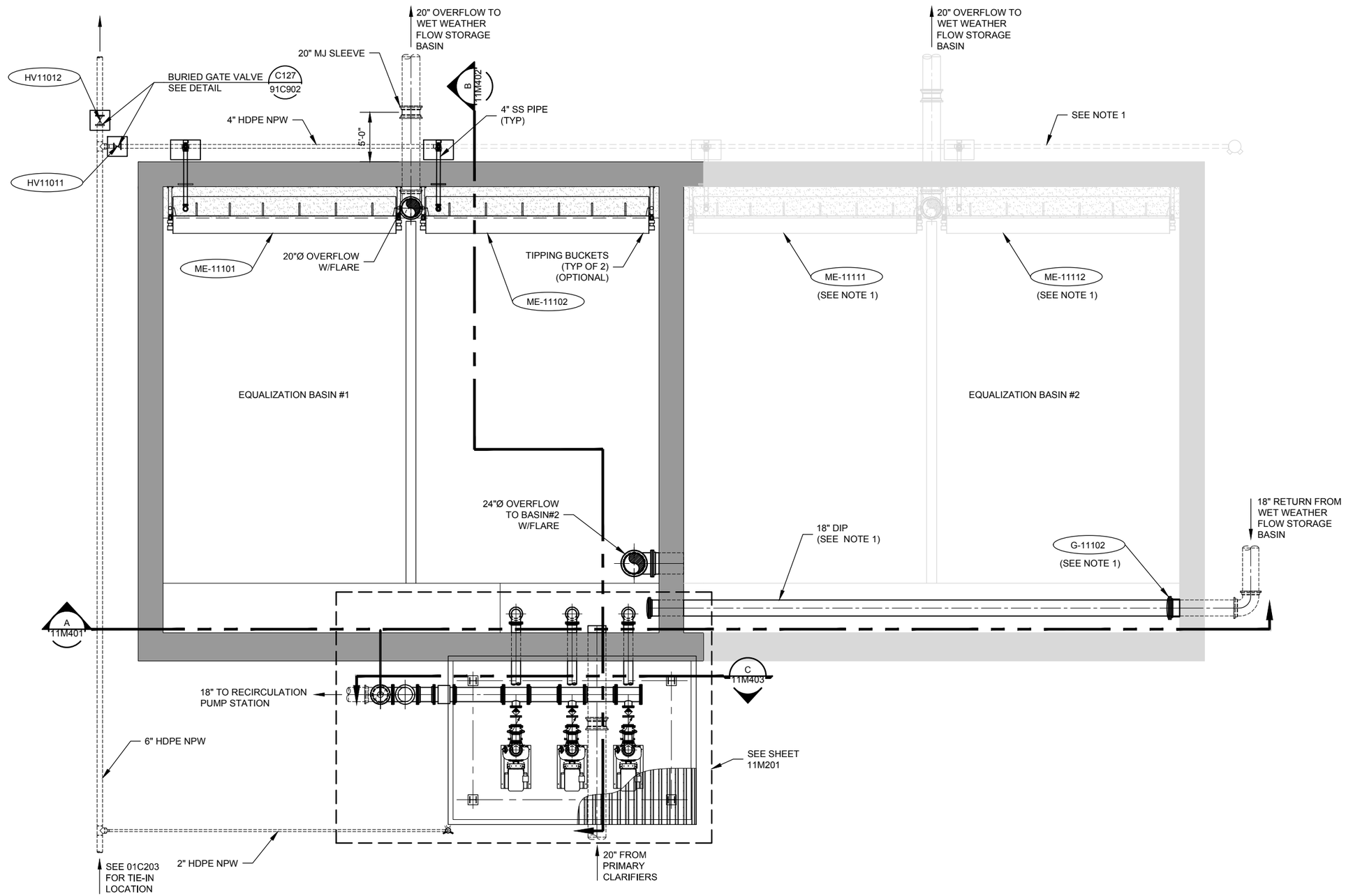
DRAWING NO.

11S901

SHEET



OVERALL MECHANICAL PLAN

SCALE: 3/16"=1'-0"

0 4 8

Scale in Feet

NOTES:

1- BID ALTERNATE.

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5/5/2021

1604

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	-	-	-	-

REVISIONS

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

OVERALL MECHANICAL PLAN

ALBERT A. WEBB ASSOCIATES
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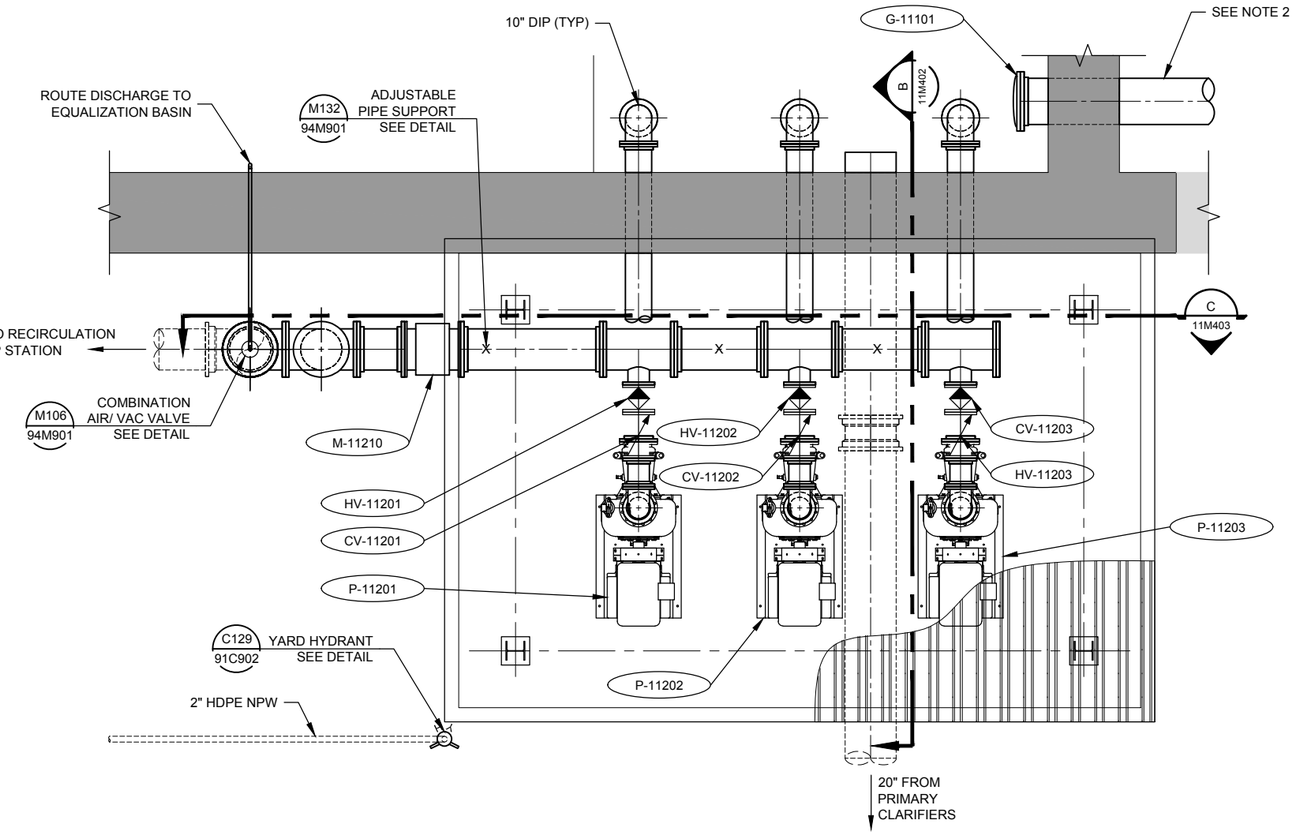
FAX (951) 788-1256

AQUA ENGINEERING
533 W 2600 S, SUITE 275, BOUNTIFUL, UT 84010
PHONE (801) 299-1327 FAX (801) 299-0153

DRAWING NO.

11M101

SHEET



PUMP STATION MECHANICAL PLAN

SCALE: 3/8"=1'-0"

0 2 4

Scale in Feet

NOTES:

1- PROVIDE PIPE SUPPORTS AS SHOWN IN DETAILS M132 AND M144 IN SHEETS 94M901 AND 94M902 IN LOCATIONS MARKED WITH AN "X" OR AS REQUIRED.

2- BID ALTERNATE.

5/5/2021 C:\USERS\BRETT.PRATT\ACCDOCS\AQUA ENGINEERING\001815.C EQUALIZATION BASIN\PROJECT FILES\002 STRUCTURES\EQ BASIN\11M201 - MECH PLAN.DWG

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1605

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0 1/2 1

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0	-	-	-	-

REVISIONS

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

PUMP STATION MECHANICAL PLAN

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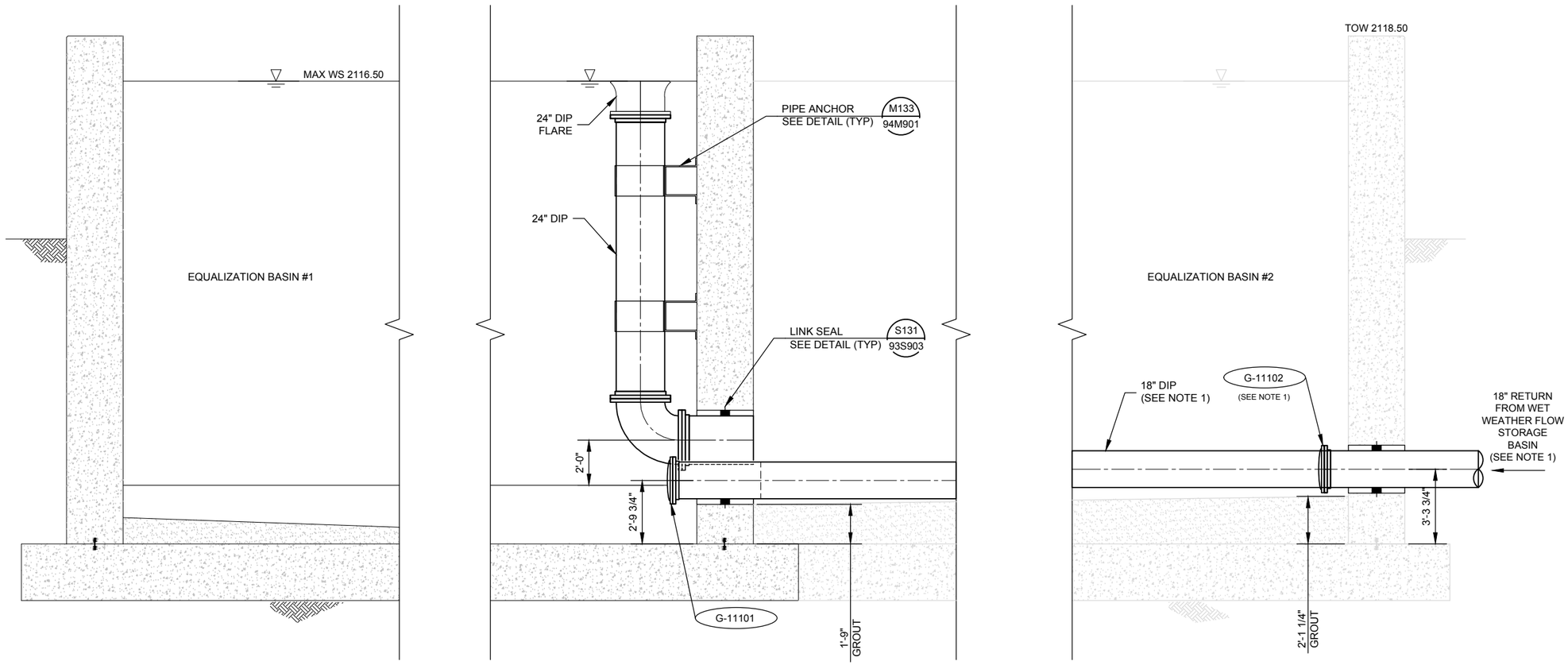
DRAWING NO.

11M201

SHEET



SECTION

SCALE: 3/8"=1'-0"

A
11M101

NOTES:

1- BID ALTERNATE.

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5/5/2021

1606

DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	-	-	-	-

REVISIONS

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT
EQUALIZATION BASIN
MECHANICAL
SECTION

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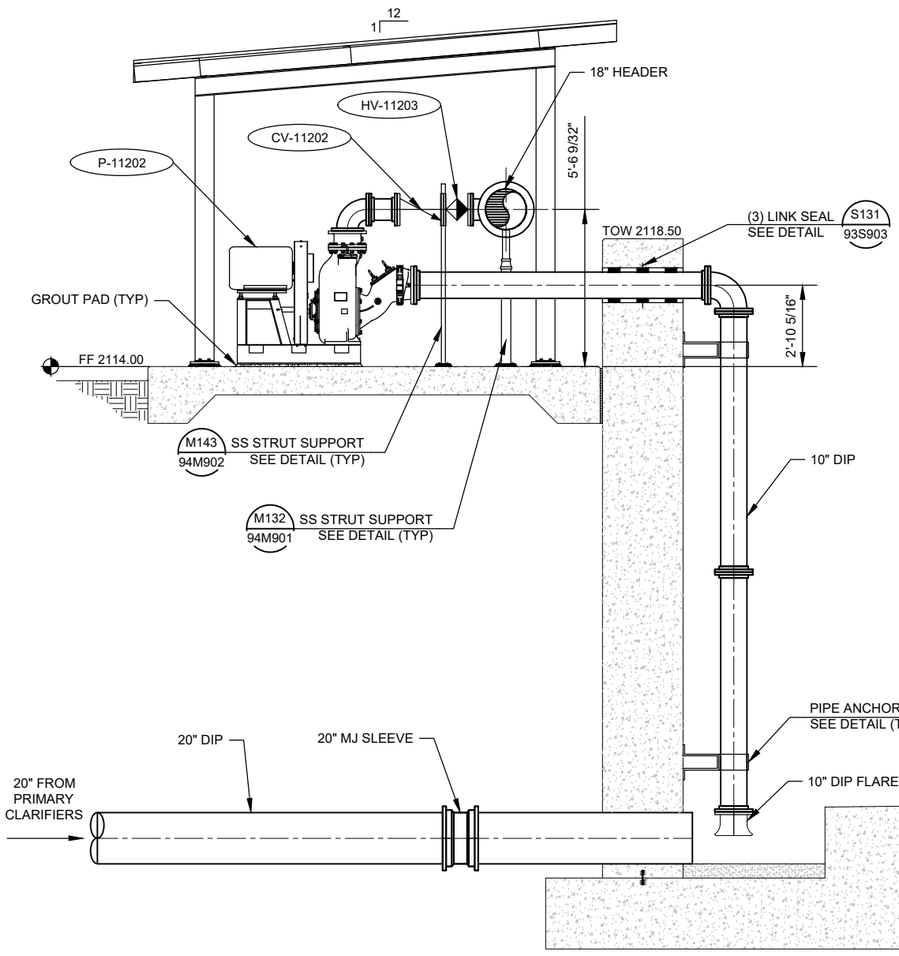
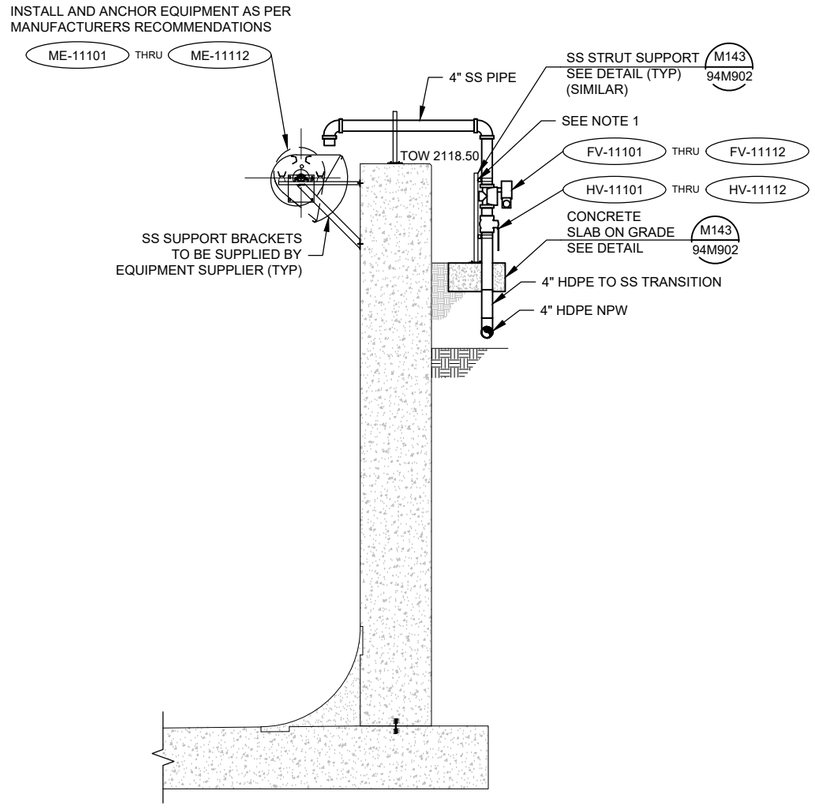
DRAWING NO.

11M401

SHEET





SECTION B
SCALE: 3/8"=1'-0" — 11M101

0 2 4
Scale in Feet

NOTES:

1- CONTRACTOR SHALL PROVIDE STRUT SUPPORT SYSTEM SIZED TO MOUNT VALVE AND TIPPING BUCKET CONTROL PANEL. SEE ELECTRICAL SHEETS FOR ADDITIONAL INFORMATION.

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5/5/2021

1607

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

NO.	DATE	DESIGN	DRAWN	CHECKED
0	-	-	-	-

ORIGINAL

REVISIONS

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

MECHANICAL SECTION

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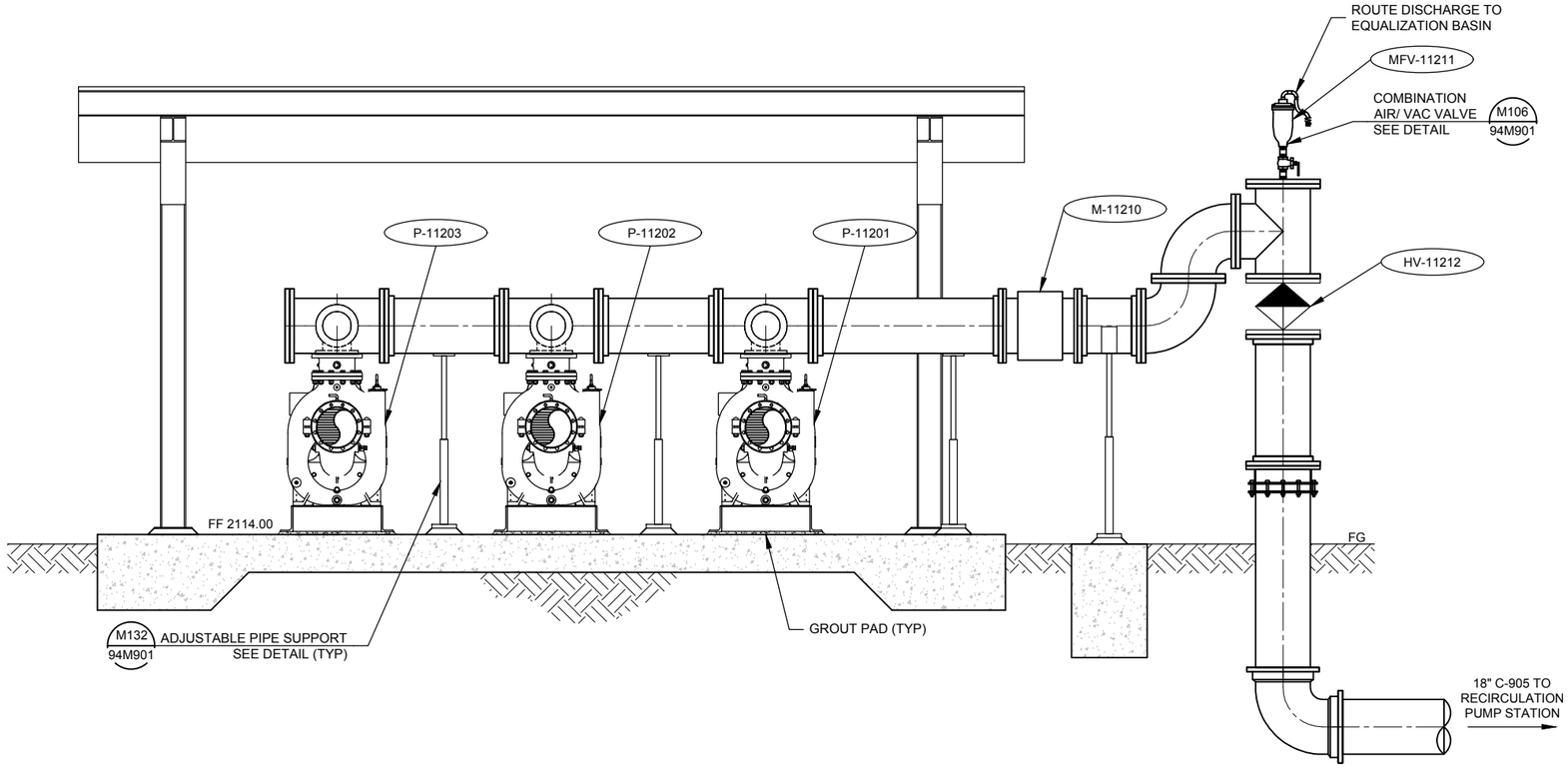
DRAWING NO.

11M402

SHEET



SECTION

C
11M101

SCALE: 1/2"=1'-0"

0 2 4
Scale in Feet

C:\USERS\BRETT PRATT\ACCDOCS\AQUA ENGINEERING\001815.C EQUALIZATION BASIN\PROJECT FILES\002 STRUCTURES\EQ BASIN 11M403 - PUMP STATION SECTION.DWG

5/6/2021

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1608

DRAWING IS TO SCALE IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE
0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	-	-	-	-

REVISIONS

CITY OF BANNING, CA
WASTEWATER TREATMENT PLANT
EQUALIZATION BASIN
MECHANICAL
SECTION

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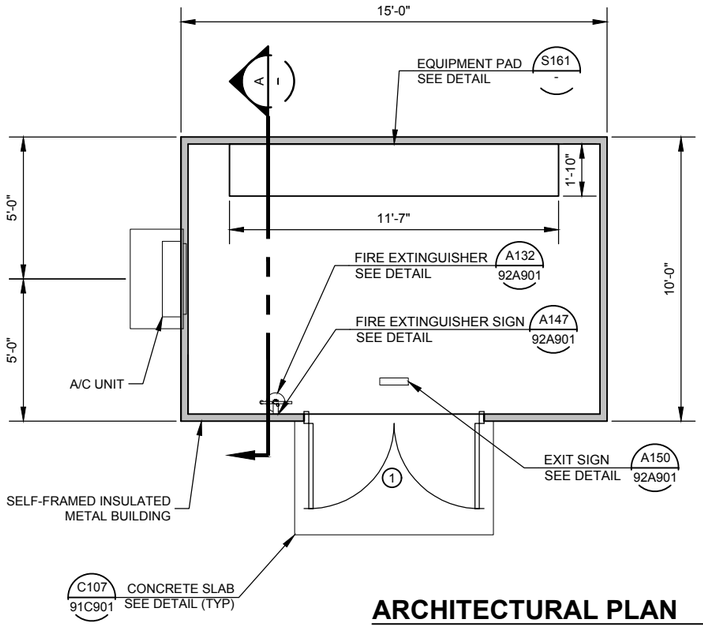
DRAWING NO.

11M403

SHEET

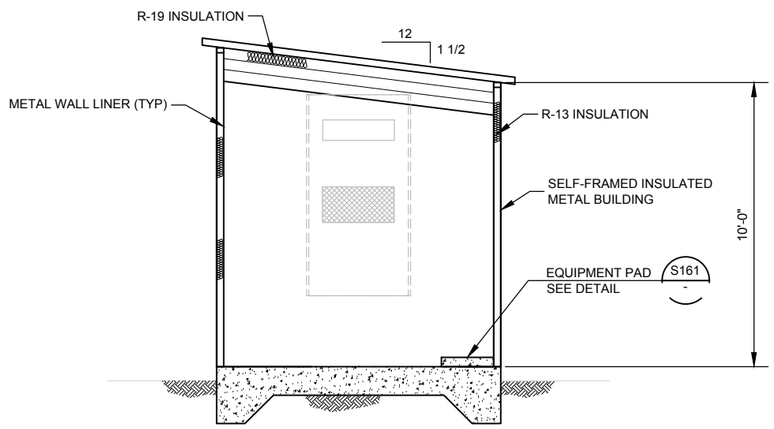


ARCHITECTURAL PLAN

SCALE: 3/8"=1'-0"

0 2 4

Scale in Feet



SECTION

A

-

SCALE: 3/8"=1'-0"

0 2 4

Scale in Feet

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5/4/2021

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1609

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	-	-	-	-

REVISIONS

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

ELECTRICAL BUILDING ARCHITECTURAL

PLAN AND SECTION

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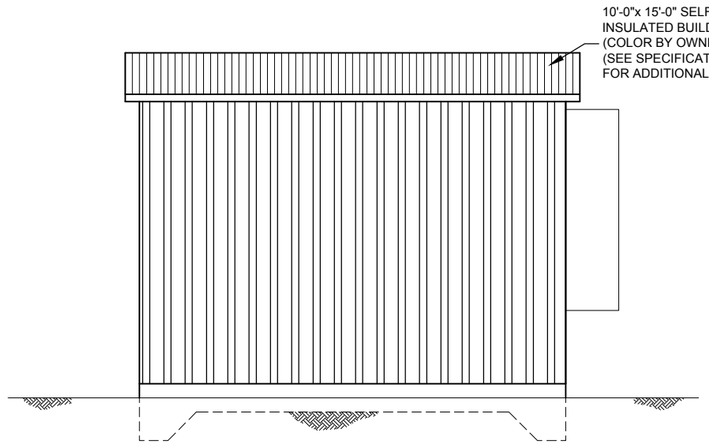
PHONE (801) 299-1327 FAX (801) 299-0153

DRAWING NO.

60A201

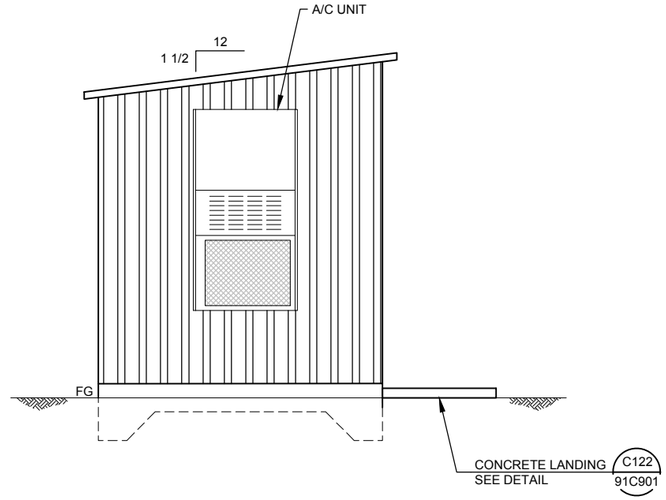
SHEET OF



EAST ELEVATION

SCALE: 3/8"=1'-0"

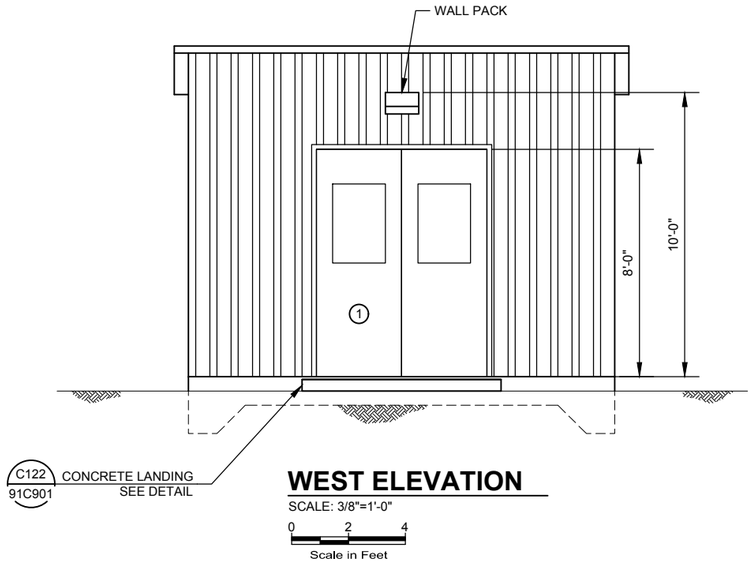
0 2 4
Scale in Feet



NORTH ELEVATION

SCALE: 3/8"=1'-0"

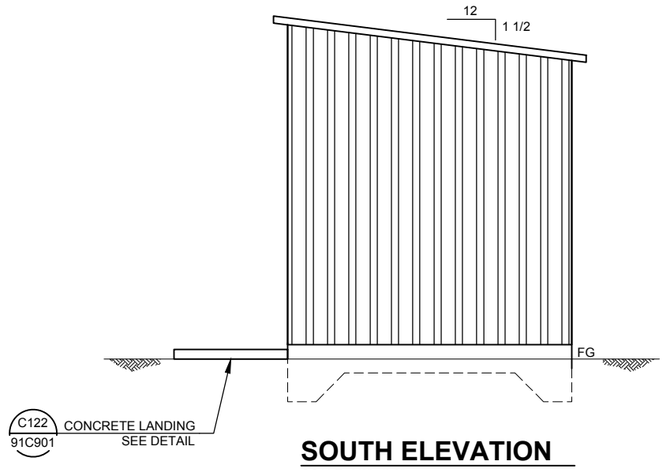
0 2 4
Scale in Feet



WEST ELEVATION

SCALE: 3/8"=1'-0"

0 2 4
Scale in Feet



SOUTH ELEVATION

SCALE: 3/8"=1'-0"

0 2 4
Scale in Feet

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5/4/2021

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1610

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

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0	-	-	-	-

REVISIONS

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT
EQUALIZATION BASIN
ELECTRICAL BUILDING ARCHITECTURAL
ELEVATIONS

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533 W 2600 S, SUITE 275, BOUNTIFUL, UT 84010
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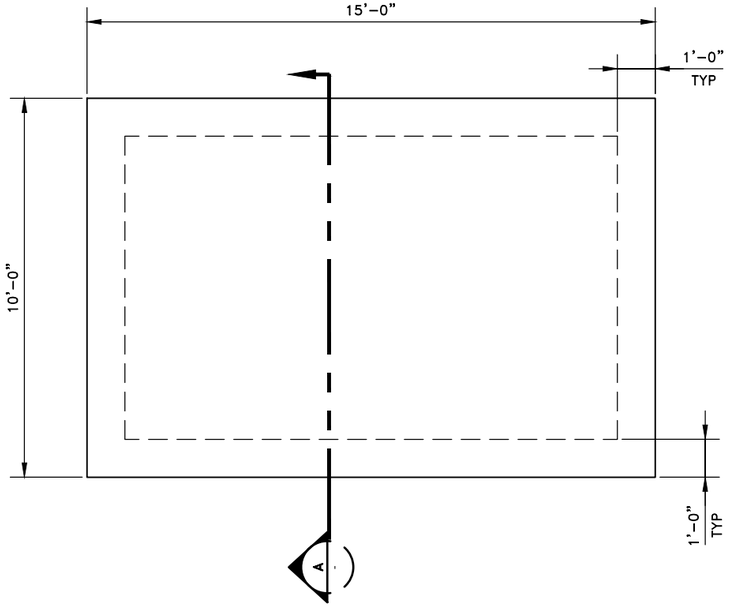
DRAWING NO.

60A301

SHEET OF

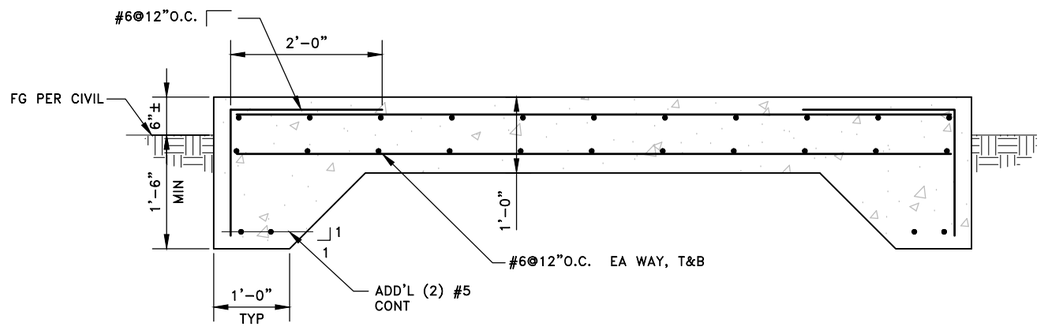


STRUCTURAL PLAN

SCALE: 1/2"=1'-0"

0 2 4

Scale in Feet



SECTION

SCALE: 1" = 1'-0"

A

0 1 2

Scale in Feet

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	-	-	-	-

REVISIONS

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

ELECTRICAL BUILDING

STRUCTURAL PLAN AND SECTION

KLEINFELDER
Bright people. Right Solutions.
550 West C Street Suite : 1200 San Diego, CA 92101
Tel. (619) 831-4600 Kleinfelder.com

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DRAWING NO.

60S101

SHEET

1611

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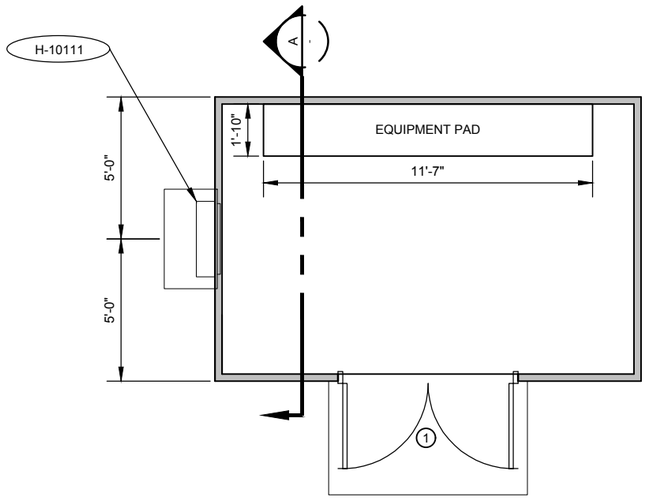
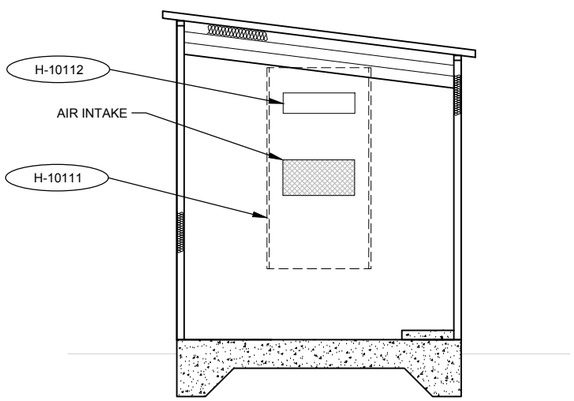


HVAC PLAN

SCALE: 3/8"=1'-0"

0 2 4

Scale in Feet



SECTION

A

SCALE: 3/8"=1'-0"

0 2 4

Scale in Feet

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5/4/2021

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1612

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	-	-	-	-

REVISIONS

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

ELECTRICAL BUILDING HVAC

PLAN AND SECTION

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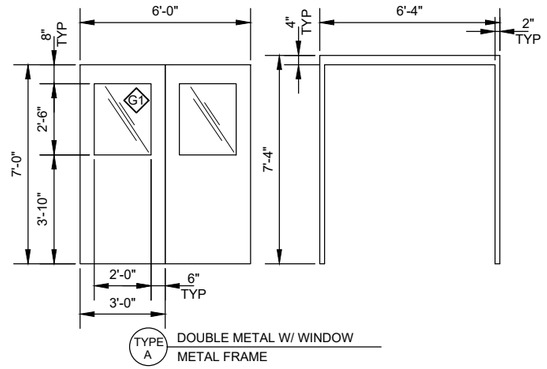
DRAWING NO.

60H201

SHEET OF

DOOR SCHEDULE

SYMBOL	TYPE	SIZE	HINGE	CLOSER	LOCKSET	KICKPLATE	DOOR STOP	THRESHOLDS	WEATHERSTRIPPING	DESCRIPTION
1	A	6'-0"x7'-0"	D	NO	YALE 5401 LN 619 693	NO	YES	NO	NO	GALVANIZED METAL INSULATED DOOR W/ WINDOW



TYPE A — DOUBLE METAL W/ WINDOW METAL FRAME

NOTES:

1- DIMENSIONS OF DOORS MAY VARY ACCORDING TO MANUFACTURER.

DOOR SCHEDULE

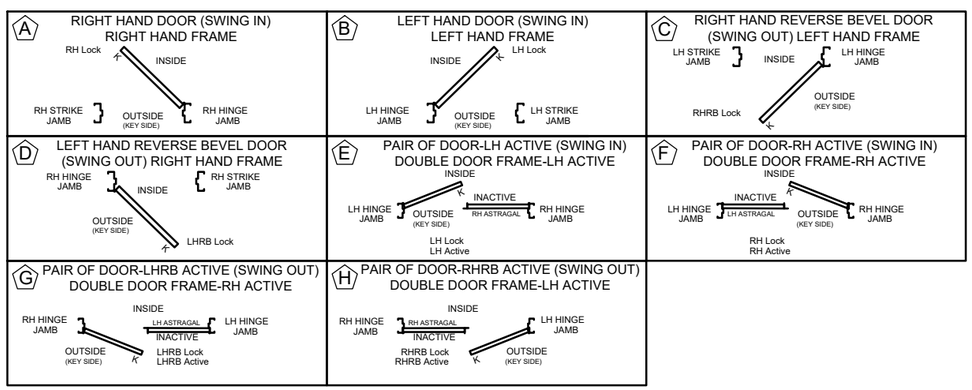
SCALE: 3/8"=1'-0"

0 2 4

Scale in Feet

GLASS SCHEDULE

SYMBOL	GLASS TYPE
G1	TEMPERED CLEAR INSULATING GLASS



HINGE AND SWING SCHEDULE

K = KEY SIDE OF THE ACTIVE DOOR

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5/4/2021

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1613

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	-	-	-	-

REVISIONS

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

SCHEDULES

DOOR AND GLASS SCHEDULE

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DRAWING NO.

81A801

SHEET

PROTECTIVE COATINGS SCHEDULE		
AREA	ITEM	COATING
GENERAL PIPING		
	NON-SUBMERGED EXTERIOR STEEL PIPING, VALVES, FITTINGS, AND APPURTENANCES	COATING SYSTEM 102
	INTERIOR STEEL PIPING, VALVES, FITTINGS, AND APPURTENANCES	COATING SYSTEM 103
	SUBMERGED STEEL PIPING, VALVES, FITTINGS, AND APPURTENANCES	COATING SYSTEM 104
	SUBMERGED AND NON-SUBMERGED STEEL PIPNG, VALVES, FITTINGS AND APPURTENANCES - MODERATE H2S EXPOSURE	COATING SYSTEM 106
	BURIED STEEL PIPING AND FITTINGS	COATING SYSTEM 107
	BURIED DUCTILE IRON OR CAST IRON PIPE, VALVES, FITTINGS, AND APPURTENANCES	COATING SYSTEM 211
	NON-SUBMERGED EXTERIOR DUCTILE IRON OR CAST IRON PIPE, VALVES, FITTINGS, AND APPURTENANCES	COATING SYSTEM 212
	INTERIOR DUCTILE IRON OR CAST IRON PIPE, VALVES, FITTINGS, AND APPURTENANCES	COATING SYSTEM 213
	SUBMERGED EXTERIOR DUCTILE IRON OR CAST IRON PIPE, VALVES, FITTINGS, AND APPURTENANCES	COATING SYSTEM 213
	EXPOSED EXTERIOR PVC OR CPVC PIPING, VALVES, FITTINGS, AND APPURTENANCES	COATING SYSTEM 221
	EXPOSED INTERIOR PVC OR CPVC PIPING, VALVES, FITTINGS, AND APPURTENANCES	NO COATING REQUIRED
	EXPOSED INTERIOR/EXTERIOR GALVANIZED STEEL PIPING	NO COATING REQUIRED
	STAINLESS STEEL PIPE	NO COATING REQUIRED
	PIPE BOLLARDS	COATING SYSTEM 102
MISC. METALS		
	STRUCTURAL STEEL (NON HDG)	COATING SYSTEM 101
	ALUMINUM PLANK OR GRATING	NO COATING REQUIRED
	STRUCTURAL ALUMINUM	NO COATING UNLESS EMBEDED OR IN CONTACT WITH CONCRETE - SYSTEM 203
	ALUMINUM HANDRAIL	FACTORY FINISH - CLEAR ANODIC
	ALUMINUM STAIRS	NO COATING UNLESS EMBEDED OR IN CONTACT WITH CONCRETE - SYSTEM 203
PRIMARY CLARIFIERS		
		NO COATING REQUIRED
		NO COATING REQUIRED
		COATING SYSTEM 307
		COATING SYSTEM 307
		FACTORY FINISH - TOUCH UP/REPAIR PER MANUFACTURER'S RECOMMENDATIONS
		FACTORY FINISH - TOUCH UP/REPAIR PER MANUFACTURER'S RECOMMENDATIONS
		NO COATING UNLESS EMBEDED OR IN CONTACT WITH CONCRETE - SYSTEM 203
EQUALIZATION BASIN		
		NO COATING REQUIRED
		NO COATING REQUIRED
		NO COATING REQUIRED
		NO COATING REQUIRED
		NO COATING REQUIRED
		STAINLESS STEEL FACTORY FINISH -NO COATING REQUIRED
		FACTORY FINISH - TOUCH UP/REPAIR PER MANUFACTURER'S RECOMMENDATIONS
		NO COATING UNLESS EMBEDED OR IN CONTACT WITH CONCRETE - SYSTEM 203
EQUALIZATION BASIN PUMP STATION		
		NO COATING REQUIRED
		NO COATING REQUIRED
		NO COATING REQUIRED
		NO COATING REQUIRED
		COATING SYSTEM 312
		HDG FACTORY FINISH - TOUCH-UP/REPAIR PER MFG RECOMMENDATIONS

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5/4/2021

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1614

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	-	-	-	-

REVISIONS

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

SCHEDULES

FINISH AND PROTECTIVE COATING

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PHONE (801) 299-1327 FAX (801) 299-0153

DRAWING NO.

81A802

SHEET

MECHANICAL EQUIPMENT SCHEDULE					
ME#	LOCATION	ITEM	SERVICE	HP (KW)	REMARKS
ME-11101	EQUALIZATION BASIN 1	TIPPING BUCKET	EQUALIZATION BASIN CLEANING	N/A	GRANDE MODEL ACU-TIP MODEL 20
ME-11102	EQUALIZATION BASIN 1	TIPPING BUCKET	EQUALIZATION BASIN CLEANING	N/A	GRANDE MODEL ACU-TIP MODEL 20
ME-11111	EQUALIZIATION BASIN 2	TIPPING BUCKET	EQUALIZATION BASIN CLEANING	N/A	GRANDE MODEL ACU-TIP MODEL 20
ME-11112	EQUALIZATION BASIN 2	TIPPING BUCKET	EQUALIZATION BASIN CLEANING	N/A	GRANDE MODEL ACU-TIP MODEL 20

PUMP SCHEDULE								
P#	LOCATION	SERVICE	TYPE	HP (KW)	FLOW	TDH	MIN. EFFICIENCY @ DESIGN POINT	REMARKS
P-11201	EQUALIZATION BASIN	EQUALIZIED FLOW PUMPING	SELF-PRIMING CENTRIFUGAL	50.0	1,267 - 2,517 GPM	56-70 FT	75%	GORMAN RUPP MODEL T10A3-B
P-11202	EQUALIZATION BASIN	EQUALIZIED FLOW PUMPING	SELF-PRIMING CENTRIFUGAL	50.0	1,267 - 2,517 GPM	56-70 FT	75%	GORMAN RUPP MODEL T10A3-B
P-11203	EQUALIZATION BASIN	EQUALIZIED FLOW PUMPING	SELF-PRIMING CENTRIFUGAL	50.0	1,267 - 2,517 GPM	56-70 FT	75%	GORMAN RUPP MODEL T10A3-B

GATE SCHEDULE										
G#	LOCATION	SERVICE	TYPE	OPENING (H x W OR DIA)*	MATERIAL	OPERATOR	FRAME	SEATING HEAD (FT)	UNSEATING HEAD (FT)	REMARKS
G-10201	PRIMARY CLARIFIER #1	EFFLUENT BOX ISOLATION	UPWARD OPENING SLIDE GATE	48" X 36"	SS	CRANK	WALL MOUNTED	3.00000	5.00000	GOLDEN HARVEST MODEL GH-60 OR EQUAL
G-10202	PRIMARY CLARIFIER #2	EFFLUENT BOX ISOLATION	UPWARD OPENING SLIDE GATE	48" X 36"	SS	CRANK	WALL MOUNTED	3.00000	5.00000	GOLDEN HARVEST MODEL GH-60 OR EQUAL
G-11101	EQUALIZATION BASIN #1	FLOW CONTROL	CIRCULAR FLAP GATE	18"	SS	N/A	N/A	N/A	N/A	GOLDEN HARVEST MODEL GH-39P OR EQUAL
G-11102	EQUALIZATION BASIN #2	FLOW CONTROL	CIRCULAR FLAP GATE	18"	SS	N/A	N/A	N/A	N/A	GOLDEN HARVEST MODEL GH-39P OR EQUAL

METER SCHEDULE					
M#	LOCATION	SERVICE	TYPE	SIZE	REMARKS
M-11210	EQUALIZATION BASIN PUMP STATION	EQUALIZED FLOW METERING	MAGMETER	18"	SEE INSTRUMENTATION SCHEDULE

VALVE SCHEDULE								
V#	LOCATION	SERVICE	TYPE	SIZE	MATERIAL	CONNECTION	ACTUATOR	REMARKS
HV-11010	YARD	NON-POTABLE WATER ISOLATION	GATE	4"	CI	MJXMJ	NUT	MUELLER A-3261 RESILIENT WEDGE OR EQUAL (BURIED SERVICE)
HV-11101	EQUALIZATION BASIN	TIPPING BUCKET NPW ISOLATION	BALL	3"	SS	THD	LV	APOLLO SERIES 76-100 OR EQUAL
FV-11101	EQUALIZATION BASIN	TIPPING BUCKET FLOW CONTROL	SOLENOID	3"	SS	THD	ELEC	SUPPLIED WITH TIPPING BUCKETS
HV-11102	EQUALIZATION BASIN	TIPPING BUCKET NPW ISOLATION	BALL	3"	SS	THD	LV	APOLLO SERIES 76-100 OR EQUAL
FV-11102	EQUALIZATION BASIN	TIPPING BUCKET FLOW CONTROL	SOLENOID	3"	SS	THD	ELEC	SUPPLIED WITH TIPPING BUCKETS
HV-11111	EQUALIZATION BASIN	TIPPING BUCKET NPW ISOLATION	BALL	3"	SS	THD	LV	APOLLO SERIES 76-100 OR EQUAL
FV-11111	EQUALIZATION BASIN	TIPPING BUCKET FLOW CONTROL	SOLENOID	3"	SS	THD	ELEC	SUPPLIED WITH TIPPING BUCKETS
HV-11112	EQUALIZATION BASIN	TIPPING BUCKET NPW ISOLATION	BALL	3"	SS	THD	LV	APOLLO SERIES 76-100 OR EQUAL
FV-11112	EQUALIZATION BASIN	TIPPING BUCKET FLOW CONTROL	SOLENOID	3"	SS	THD	ELEC	SUPPLIED WITH TIPPING BUCKETS
HV-11011	EQUALIZATION BASIN	NON-POTABLE WATER ISOLATION	GATE	4"	DIP	HDPE X HDPE	NUT	MUELLER RESILIENT SEATED WEDGE GATE VALVE OR EQUAL FOR BURIED SERVICE
HV-11012	EQUALIZATION BASIN	NON-POTABLE WATER ISOLATION	GATE	6"	DIP	HDPE X HDPE	NUT	MUELLER RESILIENT SEATED WEDGE GATE VALVE OR EQUAL FOR BURIED SERVICE
CV-11201	EQUALIZATION BASIN PUMP STATION	EQUALIZATION BASIN PUMP #1 FLOW CONTROL	CHECK	10"	CI	FL X FL	N/A	VALMATIC SWING FLEX SERIES 500A OR EQUAL
HV-11201	EQUALIZATION BASIN PUMP STATION	EQUALIZATION BASIN PUMP #1 DISCHARGE ISOLATION	PLUG	10"	CI	FL X FL	WHL	VALMATIC 100% PORT ECCENTRIC PLUG VALVE OR EQUAL
CV-11202	EQUALIZATION BASIN PUMP STATION	EQUALIZATION BASIN PUMP #2 FLOW CONTROL	CHECK	10"	CI	FL X FL	WHL	VALMATIC SWING FLEX SERIES 500A OR EQUAL
HV-11202	EQUALIZATION BASIN PUMP STATION	EQUALIZATION BASIN PUMP #1 DISCHARGE ISOLATION	PLUG	10"	CI	FL X FL	WHL	VALMATIC 100% PORT ECCENTRIC PLUG VALVE OR EQUAL
CV-11203	EQUALIZATION BASIN PUMP STATION	EQUALIZATION BASIN PUMP #3 FLOW CONTROL	CHECK	10"	CI	FL X FL	WHL	VALMATIC SWING FLEX SERIES 500A OR EQUAL
HV-11203	EQUALIZATION BASIN PUMP STATION	EQUALIZATION BASIN PUMP #1 DISCHARGE ISOLATION	PLUG	10"	CI	FL X FL	WHL	VALMATIC 100% PORT ECCENTRIC PLUG VALVE OR EQUAL
MFV-11211	EQUALIZATION BASIN PUMP STATION	EQUALIZATION BASIN PUMP HEADER AIR RELEIF VALVE	COMBINATION	4"	DI	THD	-	VALMATIC SERIES 802A OR EQUAL
HV-11212	EQUALIZATION BASIN PUMP STATION	EQUALIZATION BASIN PUMP HEADER DISCHARGE ISOLATION	PLUG	18"	CI	FL X FL	WHL	VALMATIC 100% PORT ECCENTRIC PLUG VALVE OR EQUAL

HVAC SCHEDULE						
H#	LOCATION	SERVICE	TYPE	V / HP (KW)	CAPACITY/SIZE	REMARKS
H-10111	ELECTRICAL BUILDING	VENTILATION AND HEATING SUPPLY	AIR CONDITIONING	230/209V	24,000 BTUH	BARD FUSION-TEC PLC AIR CONDITIONER WR35BP
H-10112	ELECTRICAL BUILDING	AIR SUPPLY CONTROL	REGISTER			BARD FUSION-TEC SUPPLY GRILLE SGR-5W

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1615

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE
0 1/2 1

ORIGINAL

NO.	DATE	REVISIONS	DESIGN	DRAWN	CHECKED
0	-		-	-	-

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT
EQUALIZATION BASIN
SCHEDULES
MECHANICAL, PUMP, GATE, METER, VALVE, HVAC

ALBERT A. WEBB ASSOCIATES
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533 W 2600 S, SUITE 275, BOUNTIFUL, UT 84010
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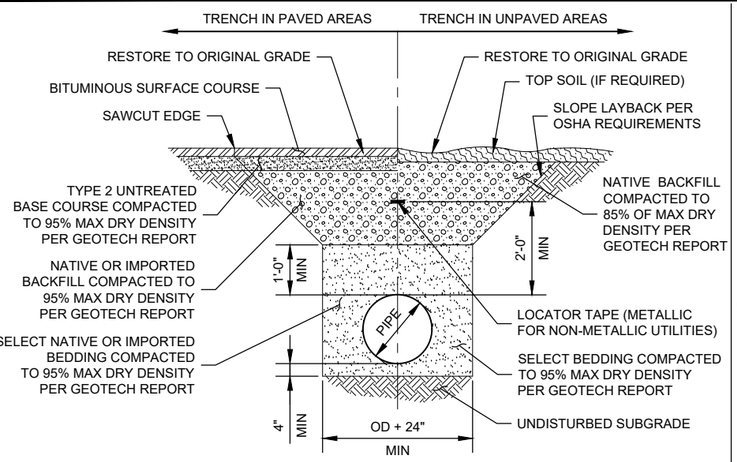
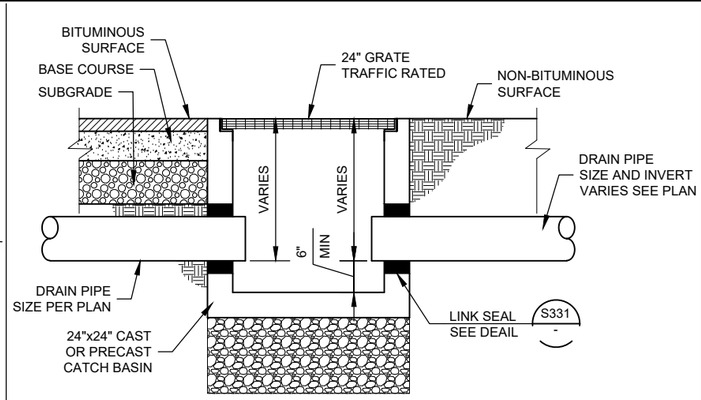
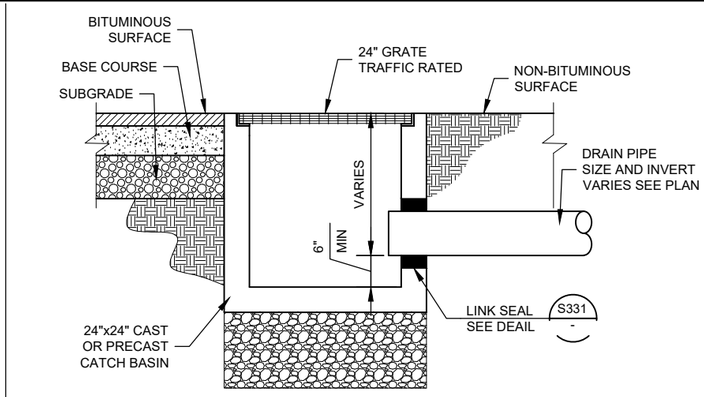
DRAWING NO.
81M801
SHEET



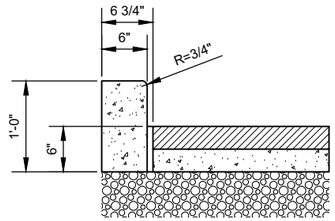
TYPICAL TRENCH C102
SCALE: NTS



CATCH BASIN C104
SCALE: NTS



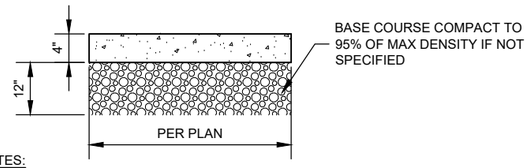
CATCH BASIN C105
SCALE: NTS



NOTE:

CONTRACTOR SHALL PROVIDE CONTROL JOINTS EVERY 10 FEET AND EXPANSION JOINTS EVERY 40 FEET.

TYPE 'A' CURB C106
SCALE: NTS



NOTES:

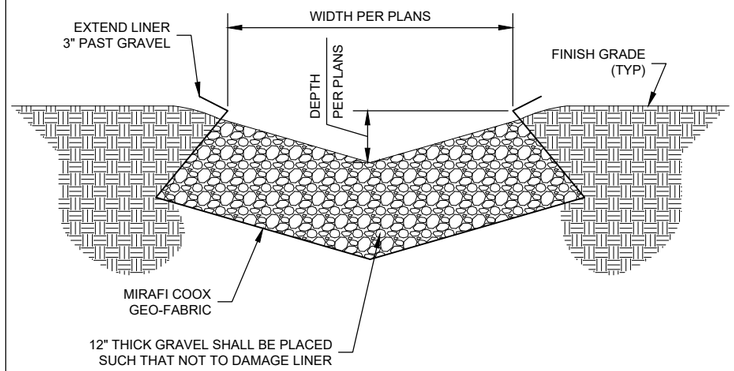
1- CONTRACTOR SHALL PROVIDE CONTROL JOINTS EVERY 5 FEET AND EXPANSION JOINTS EVERY 20 FEET.

2- SIDEWALK ADJACENT TO STRUCTURES SHALL HAVE 2% CROSS SLOPE AWAY FROM STRUCTURE UNLESS OTHERWISE NOTED.

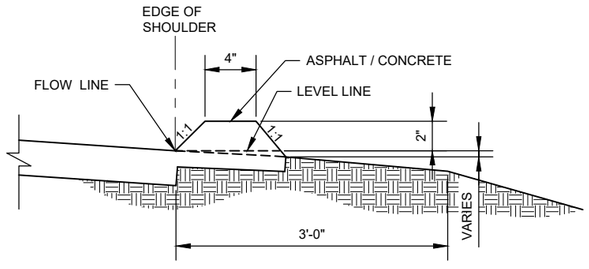
3- IF ADJACENT TO STRUCTURE, SIDEWALK SHALL BE DOWELED TO STRUCTURE WITH #4 BARS AT 18" OC. DOWELS SHALL BE 12" LONG WITH 4" OF EMBEDMENT.

4- IF ADJACENT TO BUILDING, EXPANSION JOINT MATERIAL SHALL BE PLACED BETWEEN SIDEWALK CONCRETE AND STRUCTURE WITH SEALANT BEING PLACED ALONG TOP EDGE OF JOINT.

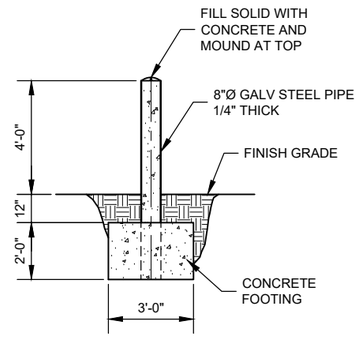
SIDEWALK C107
SCALE: NTS



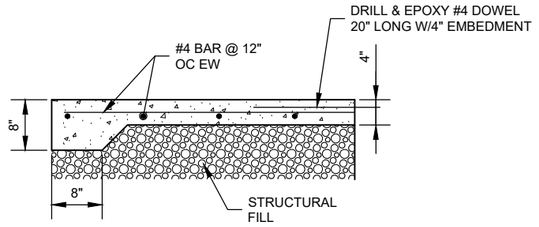
GRAVEL SWALE C115
SCALE: NTS



AC CURB C118
SCALE: NTS



PIPE BOLLARD C120
SCALE: NTS



CONCRETE LANDING C122
SCALE: NTS

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4/26/2021

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

NO.	DATE	DESIGN	DRAWN	CHECKED
0	-	-	-	-

ORIGINAL

REVISIONS

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

CIVIL

DETAILS

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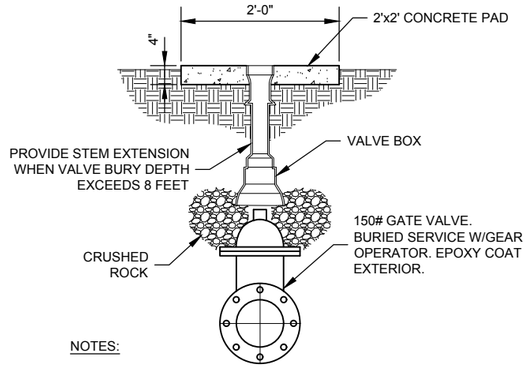
DRAWING NO.

91C901

SHEET

1616



NOTES:

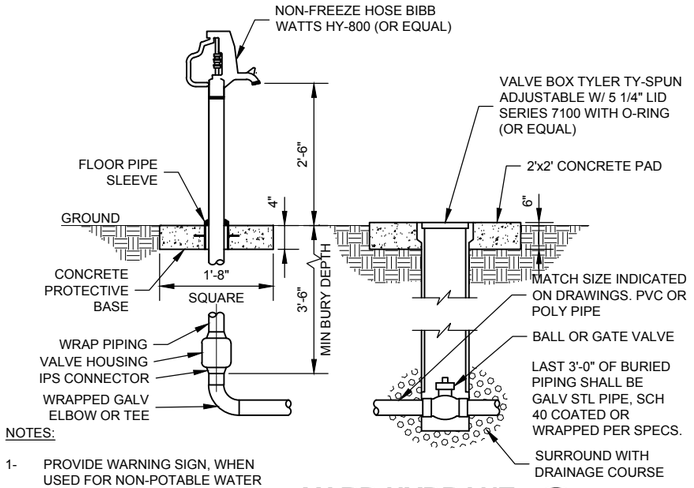
1- PROVIDE PROTECTIVE COATING TO EXTERIOR SURFACE OF VALVE BODY AND PROVIDE STAINLESS STEEL NUTS AND BOLTS.

2- VALVE BOX LID SHALL BE LABELED ACCORDING TO SERVICE.

BURIED GATE VALVE

C127

SCALE: NTS



NOTES:

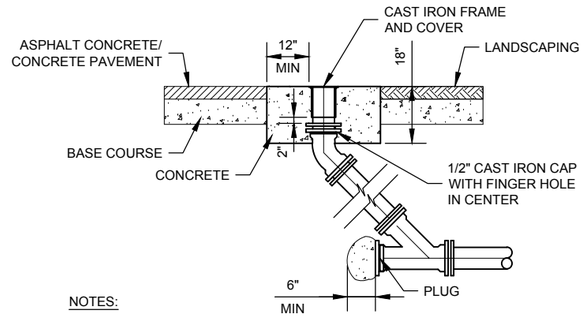
1- PROVIDE WARNING SIGN, WHEN USED FOR NON-POTABLE WATER SEE DETAIL A276.

2- VALVE BOX LID SHALL BE LABELED ACCORDING TO SERVICE.

YARD HYDRANT

C129

SCALE: NTS



NOTES:

1- IF IN UNIMPROVED AREA TOP SHALL BE 6" ABOVE GRADE.

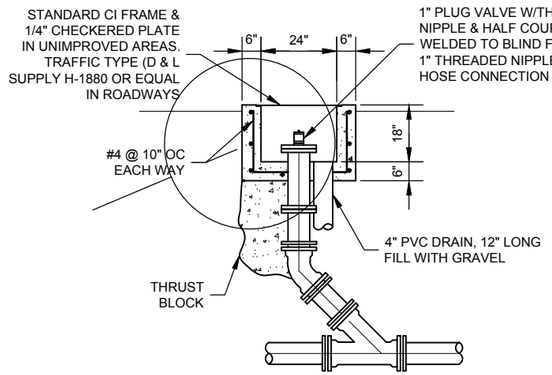
2- SEE PLAN FOR STATION AND INVERT ELEVATION. PIPE AND FITTINGS SHALL BE OF THE SAME MATERIAL AS THE MAIN LINE SEWER.

3- SET COVER AND CONCRETE COLLAR 1/4" TO 1/2" BELOW GRADE IN PAVED ASPHALT CONCRETE AREAS AND FLUSH WITH FINISH GRADE ELSEWHERE.

CLEANOUT TO GRADE

C131

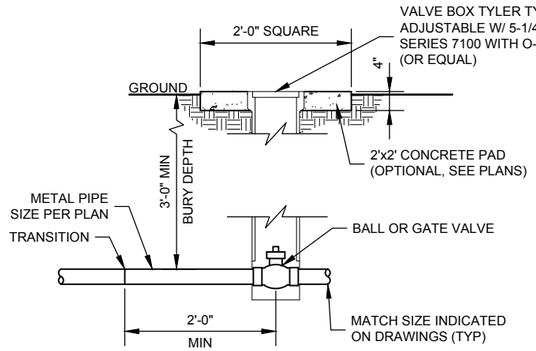
SCALE: NTS



PRESSURE CLEANOUT

C132

SCALE: NTS



NOTE:

1- LAST 3'-0" OF BURIED PIPING SHALL BE GALVANIZED STEEL PIPE, SCH 40 COATED OR WRAPPED PER SPECIFICATIONS.

BURIED BALL VALVE

C133

SCALE: NTS

1617

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	-	-	-	-

REVISIONS

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT EQUALIZATION BASIN

CIVIL DETAILS

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DRAWING NO.

91C902

SHEET

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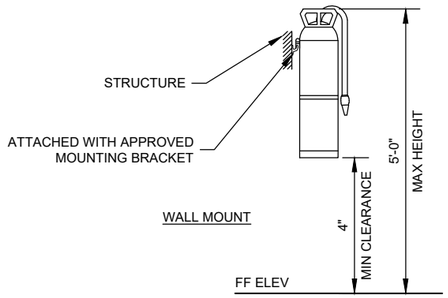
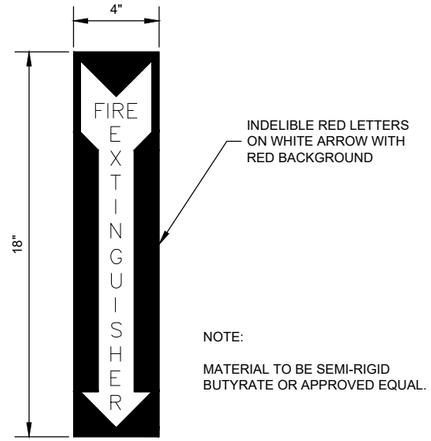


CLASS	SIZE	TYPE	UL CLASSIFICATION
ABC	PER PLAN	DRY CHEMICAL	4A:80B:C
CO_2	PER PLAN	CARBON DIOXIDE	10B:C

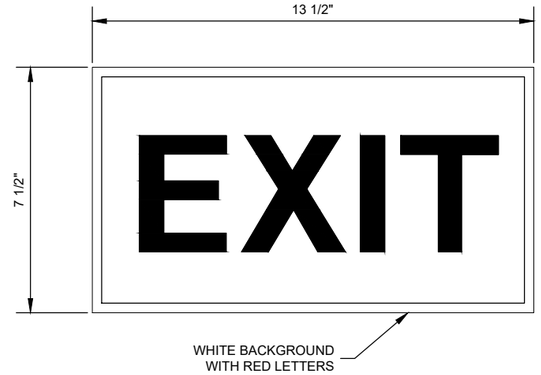
FIRE EXTINGUISHER A132
SCALE: NTS



NOTE:

MATERIAL TO BE SEMI-RIGID BUTYRATE OR APPROVED EQUAL.

FIRE EXTINGUISHER SIGN A147
SCALE: NTS



EXIT SIGN A150
SCALE: NTS

1618

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
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REVISIONS

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT EQUALIZATION BASIN ARCHITECTURAL DETAILS

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DRAWING NO.

92A901

SHEET

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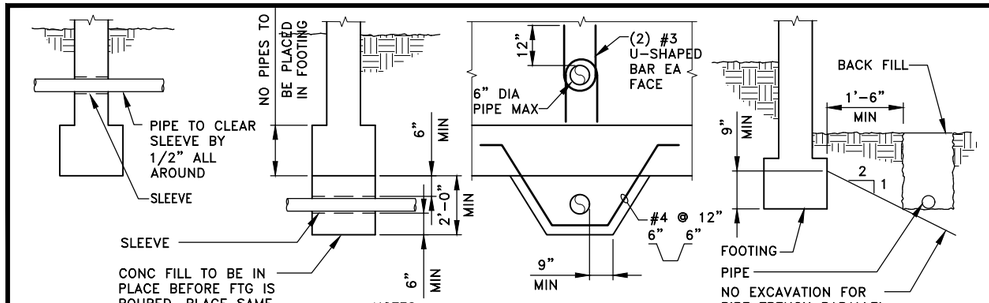


PIPE AT FOUNDATION WALL

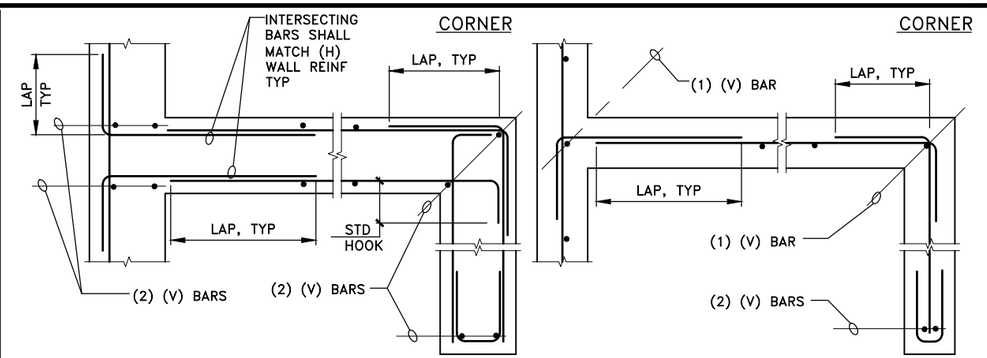
(PIPE IS MORE THAN 2'-6" BELOW FINISH GRADE AND PASSES THRU FOUNDATION WALL.)

NOTES:

1. INSIDE DIAMETER OF SLEEVE TO BE 1" LARGER THAN OUTSIDE DIAMETER OF PIPE.
2. SLEEVES SHALL BE NON-CORROSIVE, FILL VOID W/ OAKUM AT EA END.
3. IF PIPE IS IN PLACE PRIOR TO POURING CONC, WRAP PIPE WITH 1" GLASS WOOL INSULATION BEFORE POURING CONC IN LIEU OF SLEEVE.

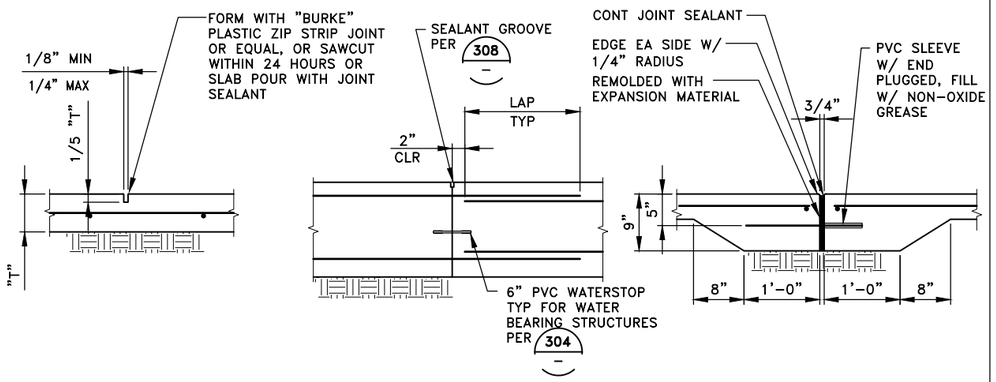
TYPICAL PIPE THRU FOOTING (301)

SCALE: NONE



TYPICAL CONCRETE FOOTING REINF - PLAN VIEW (302)

SCALE: NONE



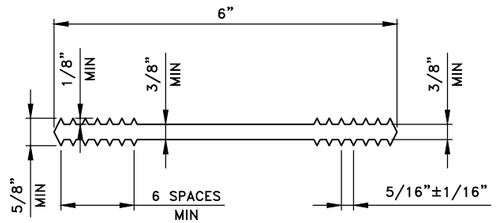
WEAKENED PLANE JOINT (WPJ)

CONSTRUCTION JOINT (CJ)

EXPANSION JOINT (EJ)

TYPICAL SLAB/WALL JOINTS (303)

SCALE: NONE

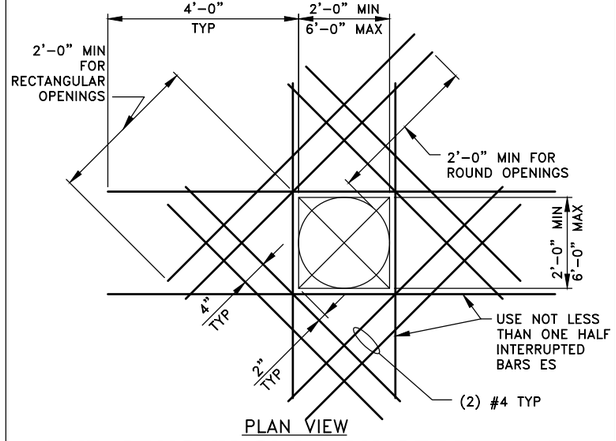


NOTE:

WATERSTOP SHALL BE PVC UNLESS NOTED OTHERWISE ON DRAWINGS. CHEMICAL RESISTANT WATERSTOP SHALL BE USED IN CHEMICAL CONTAINMENT AREAS.

WATERSTOP DETAIL (304)

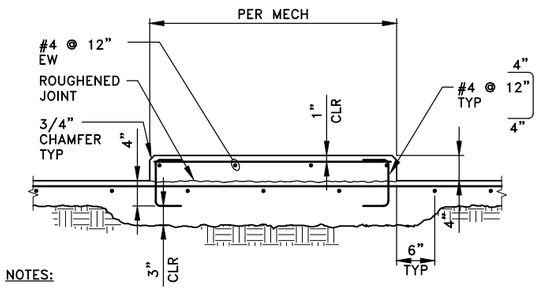
SCALE: NONE



PLAN VIEW

TYP OPNG IN SLAB-ON-GRADE (305)

SCALE: NONE

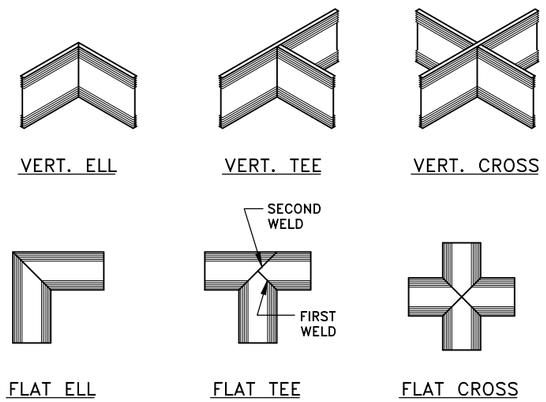


NOTES:

1. CONTRACTOR SHALL POUR PADS SEPARATELY FROM FLOOR SLAB AT PADS ON STRUCTURAL FLOOR.
2. EQUIPMENT ANCHORAGE EMBEDMENTS ARE UNIQUE TO EACH PIECE OF EQUIPMENT, AND ARE NOT SHOWN. IF EMBEDMENT IS LESS THAN THE HEIGHT OF THE PAD, THE EMBEDMENT LENGTH CAN BE MEASURED FROM TOP OF PAD. OTHERWISE, EMBEDMENT LENGTH SHALL BE MEASURED FROM TOP OF FLOOR SLAB.
3. EQUIPMENT ANCHORAGE DESIGN SHALL BE PERFORMED BY MANUFACTURER PER SEISMIC AND WIND DESIGN PROVISION OF THE LATEST VERSION OF THE CBC.

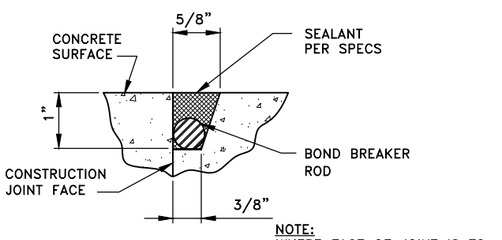
TYPICAL PAD ON SLAB (306)

SCALE: NONE



FLATSTRIP WATERSTOPS PREFABRICATED JOINTS (307)

SCALE: NONE



NOTE:
WHERE FACE OF JOINT IS TO BE COATED w/ BOND BREAKER, AVOID COATING SEALANT GROOVE

ALL FLOOR AND WALL JOINTS OF HYDRAULIC STRUCTURES (MEMBERS COVERED WITH WATER) SHALL HAVE A SEALANT GROOVE.

TYP SEALANT GROOVE (308)

SCALE: NONE

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4/16/2021

1619

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

NO.	DATE	ORIGINAL / REVISIONS	DESIGN	DRAWN	CHECKED
0	-		-	-	-

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

GENERAL

STRUCTURAL DETAILS 1

KLEINFELDER
Bright people. Right Solutions.
550 West C Street Suite : 1200 San Diego, CA 92101
Tel. (619) 831-4600 Kleinfelder.com

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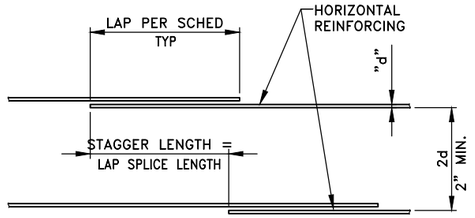
AQUA ENGINEERING
533 W 2600 S, SUITE 275, BOUNTIFUL, UT 84010
PHONE (801) 299-1327 FAX (801) 299-0153

DRAWING NO.

S901

SHEET



NOTES:

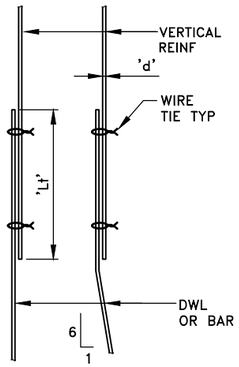
1. SPLICE LENGTH SHALL BE DETERMINED FROM THE SIZE OF THE SMALLER BAR SPLICED.
2. MINIMUM COVER 2", MINIMUM BAR CLEAR SPACING 2 BAR DIAMETERS.
3. TOP BARS ARE DEFINED AS BARS WITH 12" OR MORE OF FRESH CONCRETE PLACED BELOW THEM.
4. CONCRETE MASONRY UNITS LAP 48d MIN HORIZ & VERT REINF.
5. Lt VALUES IN SCHEDULE SHALL BE MULTIPLIED BY 1.3 FOR LIGHT WEIGHT CONCRETE.

BAR SIZE	TENSION LAP "Lt" (IN.)					
	F'c=3,000 P.S.I.		F'c=4,000 P.S.I.		F'c=5,000 P.S.I.	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	29	23	25	20	22	17
#4	38	30	33	26	29	23
#5	47	37	41	32	36	28
#6	56	44	49	38	44	34
#7	82	64	71	55	63	49
#8	94	73	81	63	72	56
#9	106	82	91	70	81	63
#10	119	92	103	80	91	70
#11	131	101	113	87	101	78

HARDROCK CONCRETE
F'y = 60,000 P.S.I. (CLASS "B")

TYP HORIZONTAL REINF LAP SPLICE 309

SCALE: NONE

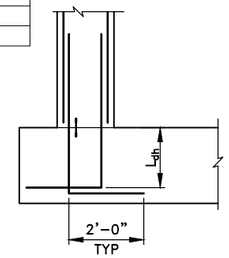


BAR SIZE	TENSION LAP 'Lt' (IN.)			L_{dh} HOOK EMBED (IN)
	F'c=3,000 PS	F'c=4,000 PS	F'c=5,000 PSI	
#3	23	20	17	6
#4	30	26	23	7
#5	37	32	28	9
#6	44	38	34	11
#7	64	55	49	12
#8	73	63	56	14
#9	82	70	63	16
#10	92	80	70	17
#11	101	87	78	19

F'y = 60 KSI

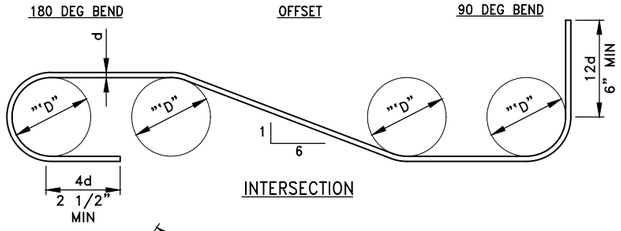
NOTES:

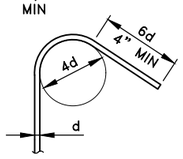
1. ALL VERTICAL REINFORCING FOR COLUMN, PIERS AND WALLS SHALL BE DOWELED AS SHOWN UON.
2. MINIMUM CLEAR SPACING 2d, MINIMUM COVER 2".
3. DOWELS SHALL BE THE SAME GRADE, SIZE, QUANTITY AND/OR SPACING AS VERTICAL REINFORCING.



TYPICAL VERTICAL REINF LAP SPLICE 310

SCALE: NONE



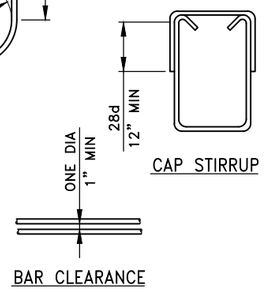


135 DEG BEND

REINFORCING BAR BEND	
REINFORCING SIZE	BAR BEND DIAMETER ("D")
#3 TO #8	6d
#9 TO #11	8d
#14 TO #18	10d

NOTE: ALL BENDS SHALL BE MADE COLD

NOTE:
CAP STIRRUPS MAY BE USED WHENEVER 135° CLOSED STIRRUPS ARE SHOWN IN GRADE BEAM ONLY

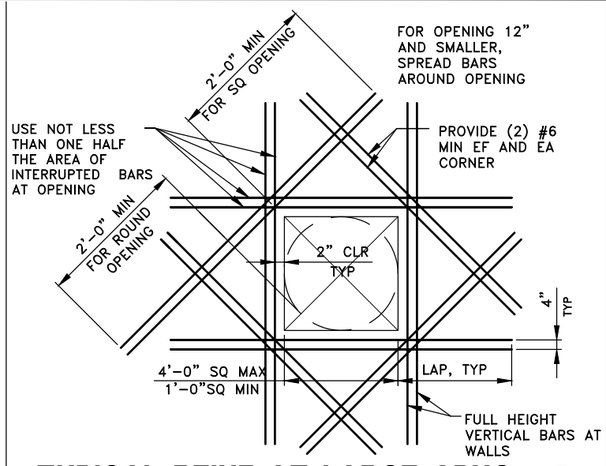


CAP STIRRUP

BAR CLEARANCE

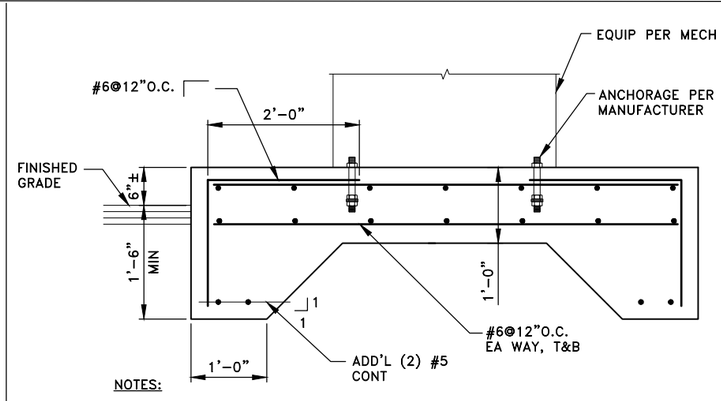
TYPICAL REINF BAR BENDS 311

SCALE: NONE



TYPICAL REINF AT LARGE OPNG 312

SCALE: NONE

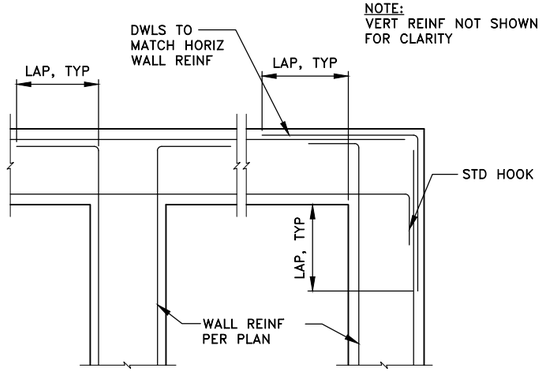


NOTES:

1. EQUIPMENT ANCHORAGE DESIGN SHALL BE PERFORMED BY MANUFACTURER PER SEISMIC AND WIND DESIGN PROVISION OF THE LATEST VERSION OF THE CBC.

TYPICAL OUTDOOR EQUIP PAD 313

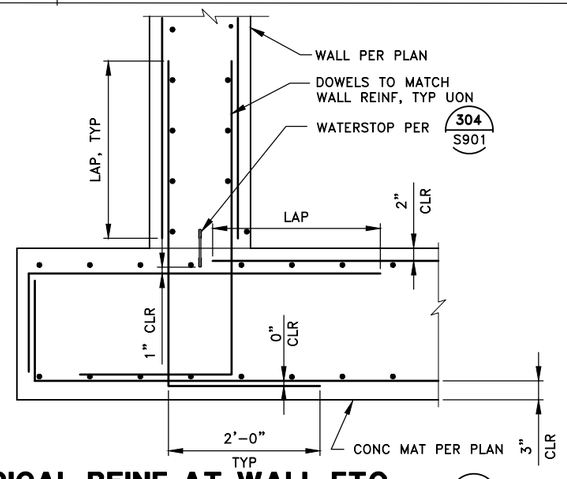
SCALE: NONE



PLAN

TYP. CORNER WALL REINFORCING 314

SCALE: NONE



TYPICAL REINF AT WALL FTG 315

SCALE: NONE

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

NO.	DATE
0	-

ORIGINAL

REVISIONS

DESIGN	DRAWN	CHECKED
-	-	-

1620

CITY OF BANNING, CA
WASTEWATER TREATMENT PLANT
EQUALIZATION BASIN
GENERAL
STRUCTURAL DETAILS 2

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DRAWING NO.
S902

SHEET

4/16/2021 C:\CADD\2021\1860.001A - BANNING EQ BASINS\902.DWG

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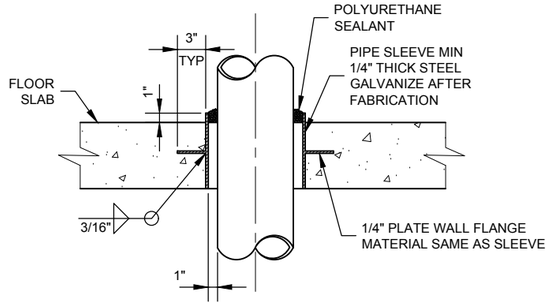


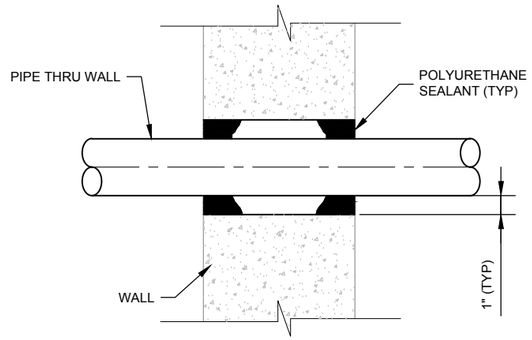
NOTE:

1- ALL FLOOR PENETRATIONS FOR HARD PIPING OF EQUIPMENT SHALL HAVE A FLOOR SLEEVE.

FLOOR PIPE SLEEVE

SCALE: NTS

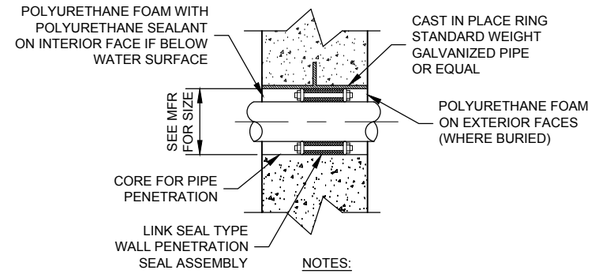
S127 -



WALL CORE

SCALE: NTS

S128 -



NOTES:

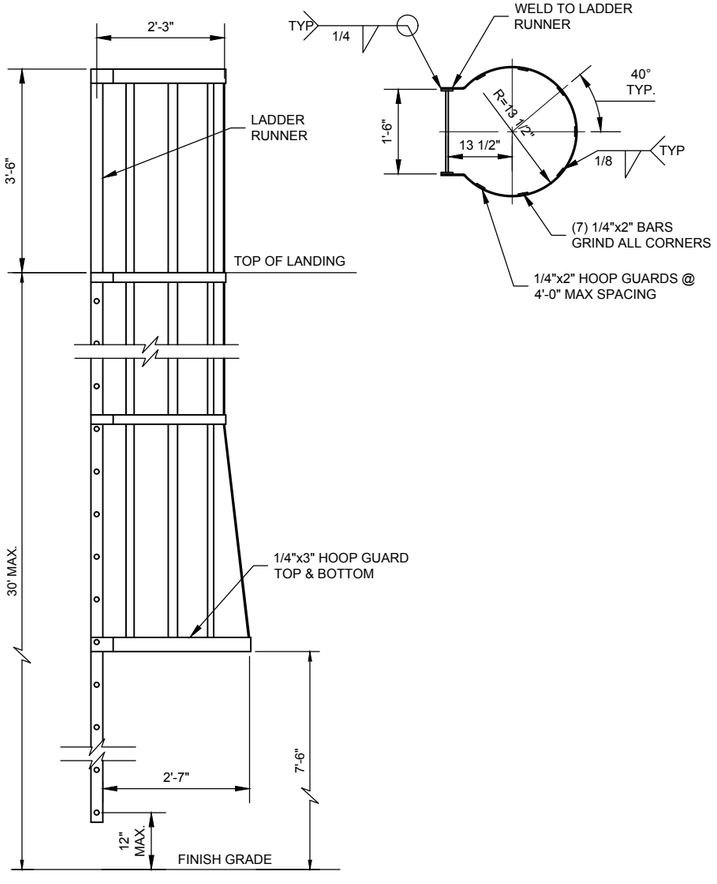
1- PIPE SLEEVE FOR WALL PENETRATION SEAL ASSEMBLY SIZED BY MANUFACTURER.

2- BOLTS SHALL BE STAINLESS STEEL.

LINK SEAL

SCALE: NTS

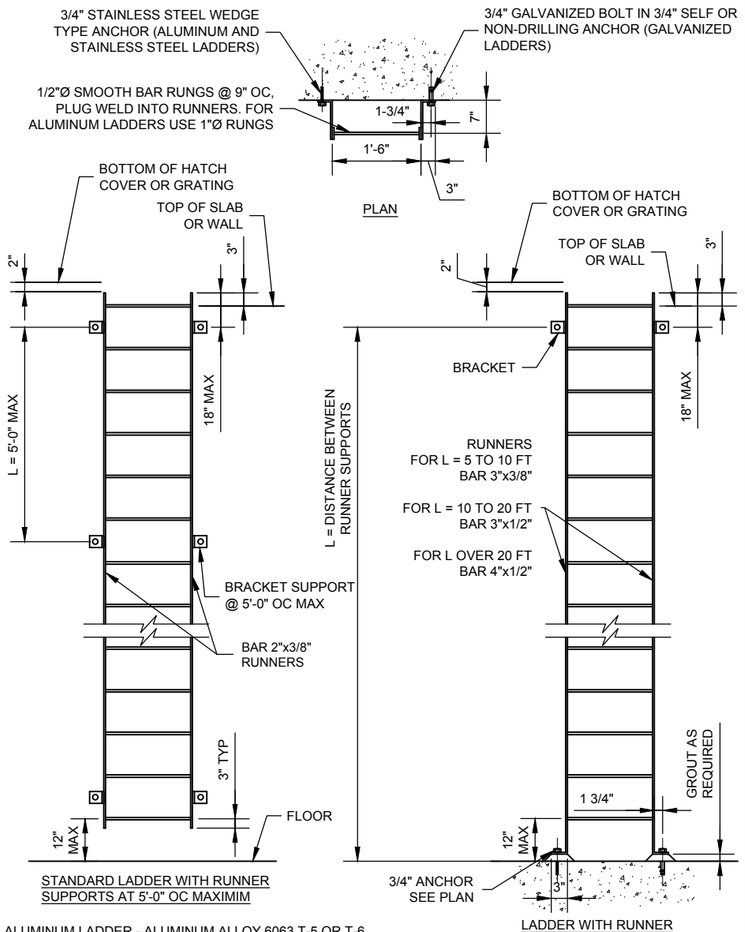
S131 -



LADDER SAFETY CAGE

SCALE: NTS

S171 -



ALUMINUM LADDER - ALUMINUM ALLOY 6063 T-5 OR T-6
STAINLESS STEEL LADDER - STAINLESS STEEL TYPE 18-8
GALVANIZED STEEL LADDER - CARBON STEEL GALVANIZED AFTER FABRICATION

LADDER

SCALE: NTS

S172 -

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	-	-	-	-

REVISIONS

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT EQUALIZATION BASIN STRUCTURAL DETAILS

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533 W 2600 S, SUITE 275, BOUNTIFUL, UT 84010
PHONE (801) 299-1327 FAX (801) 299-0153

DRAWING NO.

93S903

SHEET

C:\USERS\DANIEL.SANDOVAL\ACCDOCS\AQUA ENGINEERING\001815.C EQUALIZATION BASIN\PROJECT FILES\990 DETAILS\93S903 - STRUCTURAL DETAILS.DWG

5/4/2021

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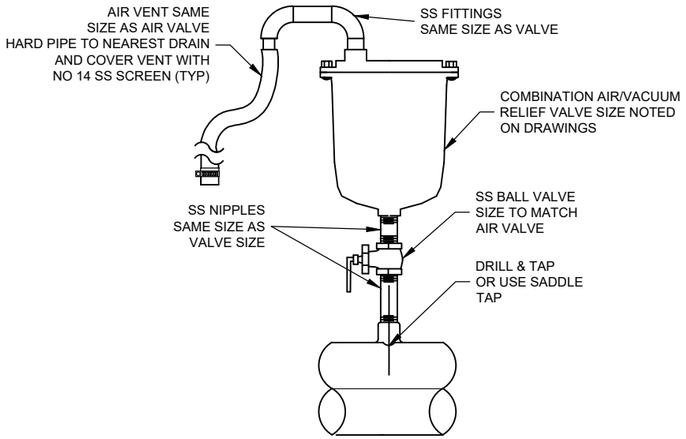
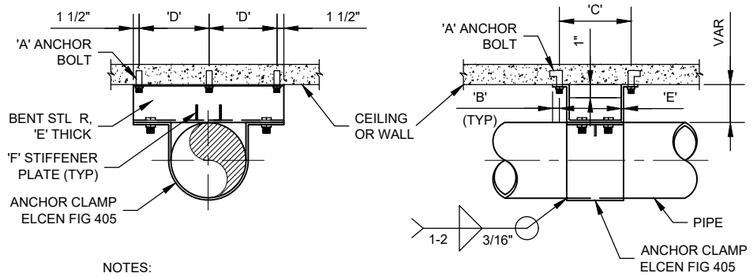


COMBINATION AIR/VACUUM VALVE

M106

SCALE: NTS

DIMENSIONS IN INCHES						
PIPE DIA	'A'	'B'	'C'	'D' (APPROX)	'E'	'F'
2 TO 4	(4) 5/8x6	1 1/4	5 3/4	8 1/2 (OMIT ONE)	3/8	1/4
6 TO 10	(4) 3/4x7	1 1/2	11	7 5/8 (OMIT ONE)	1/2	3/8
12 TO 16	(6) 7/8x8 1/2	1 1/2	13	10 1/4	1/2	3/8
18 TO 30	(6) 1x9	1 1/2	15	17 1/4	5/8	1/2



NOTES:

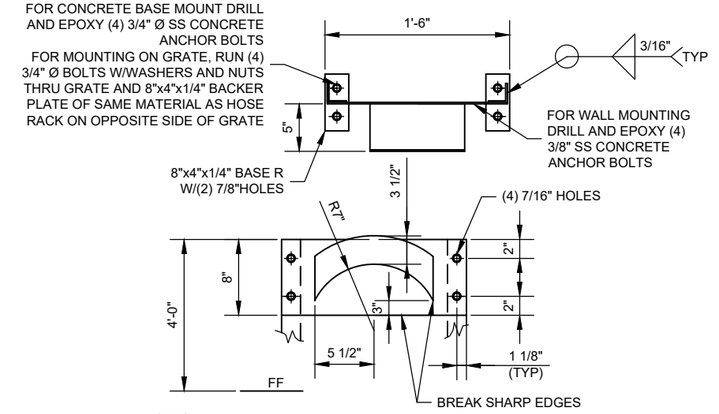
1- WHEN THICKNESS OF CONCRETE LIMITS THE USE OF ANCHOR BOLT LENGTHS AS TABULATED, SHORTER BOLTS WELDED TO REINFORCING BARS MAYBE USED.

2- GALVANIZE AFTER FABRICATION.

PIPE ANCHOR

M133

SCALE: NTS



NOTES:

1- WHERE HOSE RACK IS FREE-STANDING, PROVIDE (2) STEEL L'S 2x2x1/4 W/BASE PLATES OVER 2" NON-SHRINK GROUT.

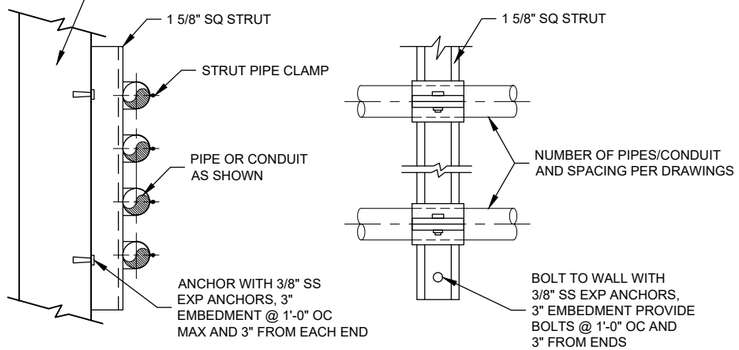
2- HOSE RACK MATERIAL: 1/4" STEEL SHEET.

3- HOT-DIPPED GALVANIZE AFTER FABRICATION OR USE STAINLESS STEEL.

HOSE RACK

M113

SCALE: NTS



NOTES:

1- UNLESS NOTED OTHERWISE, FOR INDOOR AND OUTDOOR LOCATIONS ALL MATERIAL SHALL BE STAINLESS STEEL. STRUTS SHALL BE 12 GAUGE CHANNEL (1 5/8"x1 5/8") 304 STAINLESS STEEL. PROVIDE NECESSARY STRUT ACCESSORIES TO ACCOMMODATE SUPPORT CONFIGURATION, INCLUDING CONNECTION FITTINGS AND POST BASES. UNLESS OTHERWISE NOTED. ALL NUTS, BOLTS,THREADED RODS, AND PIPE/CONDUIT STRAPS SHALL BE 304 STAINLESS STEEL. ALL ANCHOR BOLTS SHALL BE 304 STAINLESS STEEL.

2- STRUT SYSTEM, INCLUDING ALL COMPONENTS, SHALL BE AS MANUFACTURED BY UNISTRUT, B-LINE, OR EQUAL.

3- PROVIDE DOUBLE STRUT WHERE REQUIRED FOR LOAD OR CONFIGURATION.

4- ALL CUT ENDS OF STRUT SHALL BE GROUND SMOOTH.

5- PROVIDE PLASTIC CLOSURE CAPS WHERE INDICATED.

6- FOR WET WELLS AND CORROSIVE LOCATIONS AND WHERE NOTED AS PS3-CORROSION RESISTANT OR PS3-CR, STRUTS SHALL BE HEAVY DUTY CHANNEL NONMETALIC (VINYLESTER) AS MANUFACTURED BY AIKINSTRUT, B-LINE, OR EQUAL. PROVIDE NECESSARY STRUT ACCESSORIES TO ACCOMMODATE SUPPORT CONFIGURATION, INCLUDING CONNECTION FITTINGS AND POST BASES. UNLESS OTHERWISE NOTED. ALL NUTS, BOLTS, THREADED RODS, AND PIPE/CONDUIT STRAPS SHALL BE POLYURETHANE. ALL CONCRETE ANCHOR BOLTS SHALL BE 316 STAINLESS STEEL EPOXY ANCHORS.

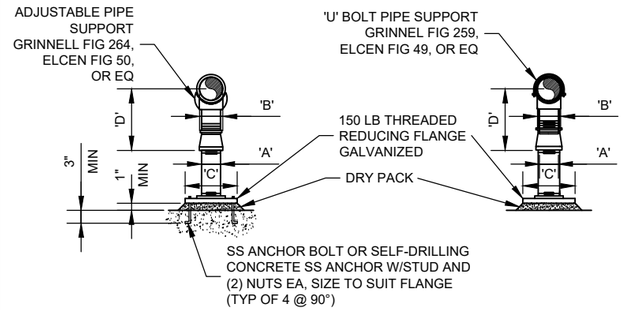
WALL MOUNT PIPING/CONDUIT STRUT SUPPORT

M142

SCALE: NTS

ADJUSTABLE PIPE SUPPORT APPROXIMATE DIMENSIONS IN INCHES					
PIPE DIA	'A'	'B'	'C'	'D' MINIMUM	'D' MAXIMUM
2 1/2	2 1/2	1 1/2	9	8	11 1/2
3	2 1/2	1 1/2	9	8 1/4	11 3/4
3 1/2	2 1/2	1 1/2	9	8 1/2	12
4	3	*2 1/2	9	10 1/4	14
6	3	*2 1/2	9	11 5/8	15 1/4
8	3	*2 1/2	9	13 5/8	16 1/2
10	3	*2 1/2	9	14 5/8	18 1/4
12	3	*2 1/2	9	15 5/8	19 3/4
14	4	3	11	18 7/8	20 3/4
16	4	3	11	19 7/8	22 1/4
18	6	3 1/2	13 1/2	21 1/4	24
20	6	3 1/2	13 1/2	23 1/4	25 1/2
24	6	4	13 1/2	26 1/2	28 1/1
30	6	4	13 1/2	29 5/8	31 1/2
32	6	4	13 1/2	30 5/8	32 3/4
36	6	4	13 1/2	32 5/8	34 3/4

*SEE MFR.



ADJUSTABLE PIPE SUPPORT

M132

SCALE: NTS

1622

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

NO.	DATE	DESIGN	DRAWN	CHECKED
ORIGINAL				
0	-	-	-	-
REVISIONS				

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT EQUALIZATION BASIN MECHANICAL DETAILS

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
ENGINEERING CONSULTANTS
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AQUA ENGINEERING
533 W 2600 S, SUITE 275, BOUNTIFUL, UT 84010
PHONE (801) 299-1327 FAX (801) 299-0153

DRAWING NO.

94M901

SHEET

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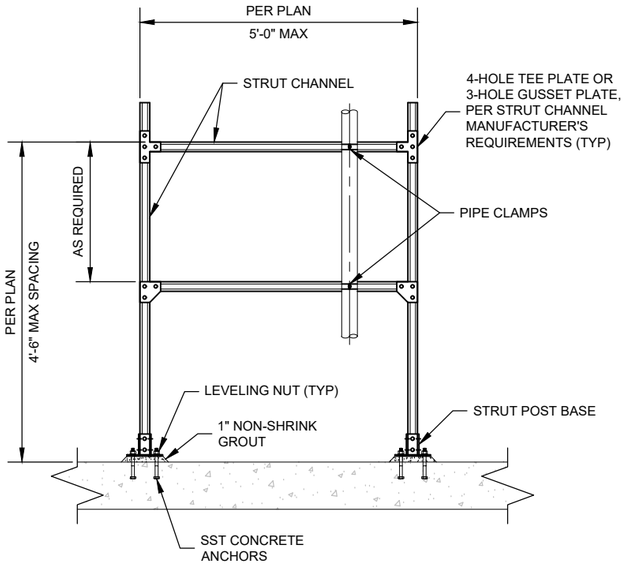
4/26/2021 C:\USERS\DANIEL.SANDOVAL\ACCDOCS\AQUA ENGINEERING\001815 C EQUALIZATION BASIN\PROJECT FILES\090 DETAILS\94M901 & 94M902 - MECHANICAL DETAILS.DWG



NOTES:

1- FOR PIPING INSTALLED HORIZONTALLY, ADD ADDITIONAL VERTICAL PREFORMED CHANNEL SUPPORT CENTERED BETWEEN HORIZONTAL SUPPORTS.

2- FOR UTILITY WATER, FOUL AIR, AND OTHER PIPING LESS THAN 4" DIAMETER (4" MAX) IS REQUIRED.

3- MATERIAL SHALL BE AS NOTED ON DRAWINGS.

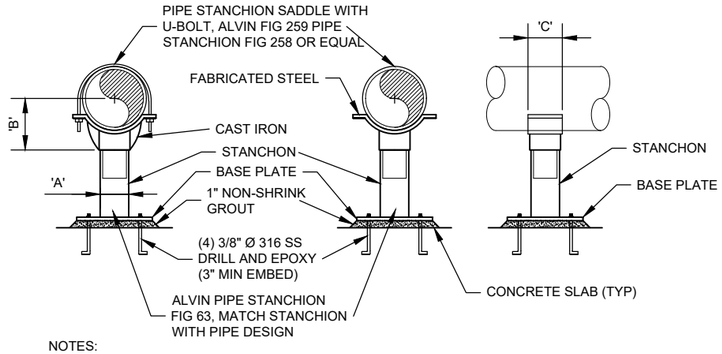
4- CONTRACTOR SHALL DESIGN, AND FURNISH.

5- CONTRACTOR SHALL PROVIDE DESIGN AND LAYOUT SUBMITTALS FOR ENGINEERS REVIEW AND APPROVAL PER SECTION 013300.

FREE STANDING PIPING/ CONDUIT STRUT SUPPORT

M143 -

SCALE: NTS



NOTES:

1- UNLESS NOTED OTHERWISE, PIPE STANCHIONS AND ACCESSORIES SHALL BE HOT GALVANIZED (HDG).

2- PROVIDE INDIVIDUAL CONCRETE SUPPORT PAD WITH #4 AT 12" OC TOP AND BOTTOM FOR PIPE STANCHIONS NOT LOCATED ON CONCRETE SLABS OF 6" MIN THICKNESS.

STATIONARY PIPE SUPPORT

M144 -

SCALE: NTS

PIPE SUPPORT DIMENSIONS IN INCHES				
PIPE DIA	'A'	'B'	'C' fig 258	'C' fig 259
4	3"	4 3/16	3 5/8	3 5/8
5		4 13/16		
6		5 7/16		
8		6 15/16		
10		8 7/16		
12		9 15/16		
14		10 1/2	4	6
16		11 1/2		
18	4"	13 1/2	5	
20		14 1/2		
22		15 1/2		
24		17 1/2		
26		18 1/2		
30		20 1/2		
32		21 5/8		
36		23 5/8	8 3/4	

1623

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	-	-	-	-

REVISIONS

CITY OF BANNING, CA

WASTEWATER TREATMENT PLANT EQUALIZATION BASIN MECHANICAL DETAILS

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DRAWING NO.

94M902

SHEET

4/26/2021 C:\USERS\DANIEL.SANDOVAL\ACCDOCS\AQUA ENGINEERING\001815.C EQUALIZATION BASIN\PROJECT FILES\990 DETAILS\94M901 & 94M902 - MECHANICAL DETAILS.DWG

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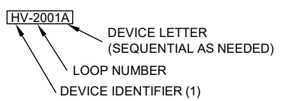
ISA INSTRUMENT IDENTIFICATION TABLE

PRECEDING LETTERS			SUCCEEDING LETTERS		
MEASURED OR INITIATING VARIABLE		MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION		EMERGENCY	USER'S CHOICE	USER'S CHOICE
C	CONDUCTIVITY			CONTROL	
D	DENSITY OR SPECIFIC GRAVITY	DIFFERENTIAL			
E	VOLTAGE		PRIMARY ELEMENT		
F	FLOW RATE	RATIO			
G	GAUGE		GLASS, VIEWING DEVICE		
H	HAND				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
M	MOTOR	MOMENTARY	MOISTURE		MIDDLE
N	VIDEO		USER'S CHOICE	USER'S CHOICE	NORMAL
O	USER'S CHOICE		ORIFICE, RESTRICTION		OPEN
P	PRESSURE, VACUUM		POINT CONNECTION		STOP
Q	QUANTITY	INTEGRATE, TOTALIZE			
R	RADIATION		RECORD, OR PRINT		
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, LOUVER	
W	WEIGHT, FORCE		WELL		
X	UNCLASSIFIED	X-AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE, OR PRESENCE	Y-AXIS		RELAY, COMPUTE, CONVERT	
Z	POSITION, DIMENSION	Z-AXIS		DRIVER, ACTUATOR, FINAL CONTROL ELEMENT	

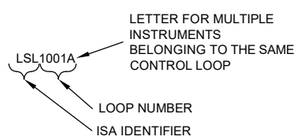
EQUIPMENT TAG



(1) DEVICE IDENTIFIERS

CNV	CONVEYANCE EQUIPMENT
CV	CHECK VALVE
FV	AUTOMATIC VALVE (ACTUATED VALVE)
G	GATE
H	HVAC/ODOR
HV	HAND VALVE
M	METERING
ME	CHEMICAL/MECHANICAL EQUIPMENT
MFV	MULTIFUNCTION VALVE
P	PUMP
SPV	SAMPLE VALVE
SV	SOLENOID VALVE

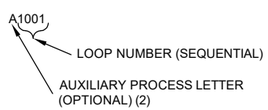
INSTRUMENT/SCADA TAG



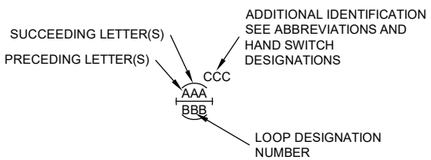
(2) AUXILIARY PROCESS LETTERS

A	ACCESS CONTROL SYSTEMS
C	COLLECTIONS SYSTEM
F	FIRE SYSTEMS
H	HVAC SYSTEMS
P	POWER SYSTEMS

LOOP NUMBER CRITERIA



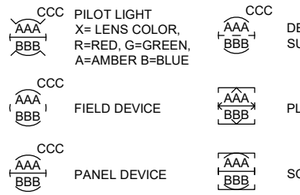
TAG NUMBERS AND ADDITIONAL DESIGNATIONS



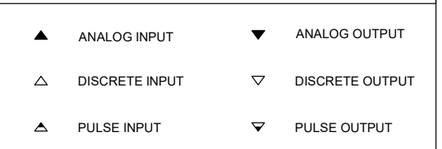
P&ID INTERFACE SYMBOLS

NOTE:

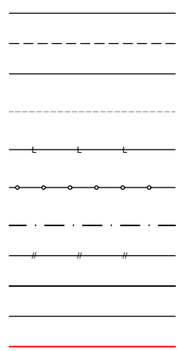
REFER TO ISA INSTRUMENT IDENTIFICATION TABLE FOR DEFINITION OF LETTERS AAA INSIDE THE BUBBLES. BBB REPRESENTS LOOP ID (IF USED). SEE ABBREVIATIONS LIST FOR SUPERSCRIPT CCC.



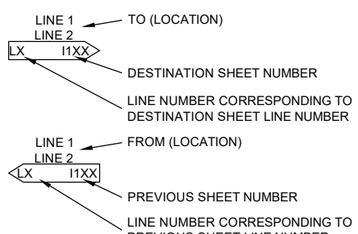
INPUT/OUTPUT SYMBOLS



P&ID LINETYPES



PROCESS/SIGNAL LINE TO/FROM A PRECEDING SHEET



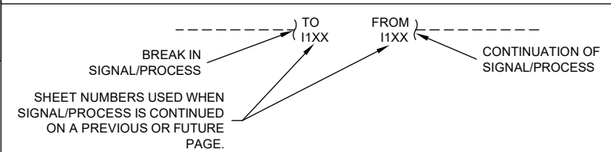
P&ID ABBREVIATIONS

AI	ANALOG INPUT
AO	ANALOG OUTPUT
ARV	AIR RELIEF VALVE
AS	AIR SUPPLY
BWL	BOTTOM WATER LEVEL
CL2	CHLORINE
CV	CONTROL VALVE/CONTROL VARIABLE
DCS	DISTRIBUTED CONTROL SYSTEM
DI	DISCRETE INPUT
DO	DISSOLVED OXYGEN
DP	DIFFERENTIAL PRESSURE
DWG	DRAWING
ETM	ELAPSED TIME METER
ETMf	ELAPSED TIME METER (FAST SPEED)
ETMs	ELAPSED TIME METER (SLOW SPEED)
ES	EMERGENCY STOP
FA	FOUL AIR
FC	FAIL CLOSED
FE	FLOW ELEMENT
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
GA	GALLONS
GCP	GENERATOR CONTROL PANEL
GND	GROUND
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
H2S	HYDROGEN SULFIDE
HMI	HUMAN MACHINE INTERFACE
IO	INPUT/OUTPUT
ISB	INTRINSICALLY SAFE BARRIER
LAN	LOCAL AREA NETWORK
LCP	LOCAL CONTROL PANEL
M	MOTOR
MA	MILLIAMP
MCC	MOTOR CONTROL CENTER
MFR(S)	MANUFACTURER(S)
MGD	MILLION GALLONS PER DAY
MGL	MILLIGRAMS PER LITER
MLR	MIXED LIQUOR RETURN
MO	MOISTURE
MOD	MODULATING
MTU	MASTER TELEMETRY UNIT
NTU	TURBIDITY
OIT	OPERATOR INTERFACE TERMINAL
OL	OVERLOAD
PER	PERMISSIVE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
POS	POSITION
POT	POTENTIOMETER
PPM	PARTS PER MILLION
PR	PAIR
PSI	POUNDS PER SQUARE INCH
PV	PROCESS VARIABLE
RF	RADIO FREQUENCY
RIO	REMOTE INPUT OUTPUT
RST	RESET
RTU	REMOTE TELEMETRY UNIT
RVSS	REVERSE VOLTAGE SOFT START
SB	SLUDGE BLANKET
SD	SMOKE DETECTOR
SLC	SINGLE LOOP CONTROLLER
SO2	SULFUR DIOXIDE
SP	SET POINT/SPARE
SPD	SPEED
SV	SOLENOID OPERATED VALVE
T/M	TEMPERATURE AND/OR MOISTURE
TSS	TOTAL SUSPENDED SOLIDS
TWL	TOP WATER LEVEL
UG	UNDERGROUND
VFD	VARIABLE FREQUENCY DRIVE
VTP	VERTICAL TURBINE PUMP

PROCESS IDENTIFIERS

A	AERATION
AIR	COMPRESSED AIR
AS	AIR SUPPLY
BD	BOTTOM DRAIN
BS	BENDED SLUDGE
C	CONDENSATE
CD	CHEMICAL DRAIN AND VENT
CL	CHLORINE (GAS OR LIQUID STATE)
CLS	CHLORINE SOLUTION
CLV	CHLORINE GAS UNDER VACUUM
CSL	CIRCULATED SLUDGE
CV	CHLORINATOR VENT AND DETECTION LINE
DN	DECANT
DSL	DIGESTED SLUDGE
DW	DEMINERALIZED WATER
EE	ENGINE EXHAUST
EV	EVAPORATIVE COOLING
EWR	ENGINE COOLING WATER RETURN
EWS	ENGINE COOLING WATER SUPPLY
EX	AIR EXHAUST
FA	FOUL AIR
FE	FINAL EFFLUENT
FM	FORCE MAIN
FOR	FUEL RETURN
FOS	FUEL SUPPLY
FS	FROTH SPRAY
FSP	FIRE PROTECTION SPRINKLER SYSTEM
FW	FINISHED WATER
G	GRIT
H	HYPOCHLORITE
HR	HEATING WATER RETURN
HS	HEATING WATER SUPPLY
HW	HOT WATER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HY	HYDRAULIC
IA	INSTRUMENT AIR
LO	LUBE OIL
LSP	LANDSCAPING SPRINKLER SYSTEM
ML	MIXED LIQUOR
NG	NOT USED NATURAL GAS
NPW	NON-POTABLE WATER
OF	OVERFLOW
PA	PLANT AIR
PD	PLANT DRAIN
PEA	POLYMER-ANIONIC
PEC	POLYMER-CATIONIC
PEF	PRIMARY EFFLUENT
PEN	POLYMER-NONIONIC
PI	PLANT INFLUENT
PW	POTABLE WATER
RAS	RETURN ACTIVATED SLUDGE
RSL	RAW SLUDGE
RW	RAW WATER
RWL	RAINWATER LEADER
S	SCUM
SA	SAMPLE LINE (SEE LIST AT RIGHT)
SB	SODIUM BISULFITE
SD	SANITARY DRAIN AND VENT
SDR	STORM DRAIN
SE	SECONDARY EFFLUENT
SF	SLUDGE FILTRATE
SG	SLUDGE GAS
SN	SUBNATANT
SPD	SUMP PUMP DISCHARGE
SS	SANITARY SEWER
ST	STEAM
SU	STRUCTURE UNDERDRAIN
SUC	STRUCTURE UNDERDRAIN COLLECTOR
TSL	THICKENED SLUDGE
UW	UTILITY WATER
WAS	WASTE ACTIVATED SLUDGE
WLO	WASTE LUBE OIL
WW	WASTEWATER

CONTINUATION



GENERAL NOTES

1. ADDITIONAL INSTRUMENTATION AND CONTROL SYMBOLS MAY BE USED AS REQUIRED. SYMBOLS AND NOMENCLATURE ARE BASED ON ISA STANDARD S-5.1.
2. SEE ASSOCIATED ELECTRICAL SYMBOL SHEETS FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS.

P&ID CONTINUATION ARROW LINE NUMBER SEQUENCE

LINE#	PROCESS
1-10	INFLUENT TO EFFLUENT LINE
11-20	PRIMARY TREATMENT (SLUDGE, SCUM, SCREENINGS)
21-30	SECONDARY TREATMENT (RAS/WAS)
31-40	SOLIDS HANDLING (DIGESTERS, DEWATERING, THICKENING, CONVEYORS/TRUCKS)
41-50	TERTIARY/MISC. PROCESS (DRAINS, CLOTH FILTERS, REUSE PUMP STATIONS)
	SUBPROCESS
51-60	POTABLE/NON-POTABLE
61-80	AIR/PNEUMATIC/HYDRAULIC
81-90	CHEMICAL
91-100	MISC. SUBPROCESS

HAND SWITCH DESIGNATIONS

ES	EMERGENCY STOP
FOR	FORWARD-OFF-REVERSE
FR	FORWARD-REVERSE
HOA	HAND-OFF-AUTO
HOR	HAND-OFF-REMOTE
HORA	HAND-OFF-REMOTE-AUTO
IOE	INTERNAL-OFF-EXTERNAL
JOA	JOG-OFF-AUTO
LOAR	LOWER-OFF-AUTO-RAISE
LOR	LOCAL-OFF-REMOTE
LR	LOCAL-REMOTE
MA	MANUAL-AUTO
MOA	MANUAL-OFF-AUTO
MOR	MOMENTARY-OFF-RUN
OC	OPEN-CLOSE
OCA	OPEN-CLOSE-AUTO
OCR	OPEN-CLOSE-REMOTE
OO	ON-OFF
OOA	ON-OFF-AUTO
OOC	ON-OFF-CLOSE
OOR	ON-OFF-REMOTE
OSC	OPEN-STOP-CLOSE
POT	POTENTIOMETER
ROO	RESET-OFF-ON
RST	RESET PUSHBUTTON
SS	START-STOP

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	00/00/0000	MPJ	DCL	MPJ

REVISIONS

CITY OF BANNING

WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

INSTRUMENTATION - GENERAL LEGEND

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DRAWING NO.

I001

SHEET 1624

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VALVES

- 3 WAY VALVE
- 4 WAY VALVE
- ANGLE VALVE
- BACK PRESSURE RELIEF VALVE
- BALANCING VALVE
- BALL VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- DIAPHRAGM VALVE
- ECCENTRIC PLUG VALVE
- GATE VALVE
- GLOBE VALVE
- KNIFE VALVE
- LUBRICATED PLUG VALVE
- MIX VALVE
- MUD VALVE
- NEEDLE VALVE
- PINCH VALVE
- PRESSURE REDUCING VALVE
- PRESSURE RELIEF VALVE
- SLEEVE VALVE
- TELESCOPING VALVE
- VACUUM VALVE

HVAC

- AIR COMPRESSOR
- AIR FILTER
- DAMPER
- FILTER
- GUIDE VANES
- HEAT EXCHANGER
- LOUVER WITH HOOD
- SILENCER
- UNIT HEATER

GATES

- FLAPPER GATE
- SLIDE GATE
- SLUICE GATE
- STOP GATE

ACTUATORS

- ACTUATOR: H=HYDRAULIC, M=MOTOR, P=PNEUMATIC, S=SOLENOID
- MANUAL
- PNEUMATIC DIAPHRAGM
- PNEUMATIC DIAPHRAGM WITH POSITIONER

PIPING

- BLIND FLANGE
- CAPPED OR PLUGGED END
- DRAIN
- QUICK CONNECT/ DISCONNECT
- REDUCER
- Y-STRAINER
- FLEXIBLE CONNECTOR

PUMPS

- CENTRIFUGAL PUMP
- MECHANICAL DIAPHRAGM PUMP
- METERING PUMP
- MIXED FLOW PUMP
- PERISTALTIC PUMP
- PROGRESSIVE CAVITY PUMP
- ROTARY LOBE PUMP
- SUBMERSIBLE PUMP
- VERTICAL TURBINE PUMP

FLOW ELEMENTS

- MAGNETIC FLOW ELEMENT
- MASS FLOW ELEMENT ANNUBAR (INSERTION)
- MASS FLOW ELEMENT ANNUBAR (SPOOL)
- PITOT TUBE
- PROPELLER FLOW ELEMENT (INSERTION)
- PROPELLER FLOW ELEMENT (SPOOL)
- ROTAMETER
- THERMAL MASS FLOW ELEMENT (INSERTION)
- THERMAL MASS FLOW ELEMENT (SPOOL)
- ULTRASONIC FLOW ELEMENT (INSERTION)
- ULTRASONIC FLOW ELEMENT (SPOOL)

MISCELLANEOUS

PRIMARY ELEMENT SYMBOLS

- ANALYZER ELEMENT
- DO ANALYZER
- DO SENSOR
- FLOAT SWITCH
- ORP ANALYZER
- ORP SENSOR
- pH ANALYZER
- pH SENSOR
- ULTRASONIC LEVEL TRANSDUCER
- RADAR LEVEL TRANSDUCER

DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE

0 1/2 1

ORIGINAL

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REVISIONS

CITY OF BANNING

WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

INSTRUMENTATION - GENERAL

SYMBOLS

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DRAWING NO.

I002

SHEET 1625

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SCADA

PLC

ELECTRICAL EQUIPMENT

FIELD

EQUALIZATION BASIN 1 LEVEL
LIT 11090

EQUALIZATION BASIN 1 LEVEL ALARM HIGH
LAH 11091

TIPPING BUCKET 1 TIPPED
ZI 11101

TYPICAL OF 2 TIPPING BUCKETS

TIPPING BUCKET 1 FILL VALVE REMOTE
ZI 11101

TIPPING BUCKET 1 FILL VALVE OPEN
ZLO 11101

TIPPING BUCKET 1 FILL VALVE CLOSED
ZLC 11101

TIPPING BUCKET 1 FILL VALVE OPEN COMMAND
ZCO 11101

TIPPING BUCKET 1 FILL VALVE CLOSE COMMAND
ZCC 11101

TYPICAL OF 2 TIPPING BUCKETS

EQ BASIN SUMP LEVEL ALARM LOW
LAL 11050

TIPPING BUCKET 3 TIPPED
ZI 11111

TYPICAL OF 2 TIPPING BUCKETS

TIPPING BUCKET 3 FILL VALVE REMOTE
ZI 11102

TIPPING BUCKET 3 FILL VALVE OPEN
ZLO 11102

TIPPING BUCKET 3 FILL VALVE CLOSED
ZLC 11102

TIPPING BUCKET 3 FILL VALVE OPEN COMMAND
ZCO 11102

TIPPING BUCKET 3 FILL VALVE CLOSE COMMAND
ZCC 11102

TYPICAL OF 2 TIPPING BUCKETS

EQ BASIN 2 SUMP LEVEL ALARM LOW
LAL 11150

EQUALIZATION BASIN 2 LEVEL
LIT 11190

EQUALIZATION BASIN 2 LEVEL ALARM HIGH
LAH 11191

120VAC

LIT 11090

LCP-11101

120VAC

LCP-11111

120VAC

LIT 11190

120VAC FROM EXISTING WPW SYSTEM

4" HV-XXXX

3" LOR 11101 OSC 11101 ZSO 11101 ZSC 11101 M FV-11101

3" LOR 11132 OSC 11132 ZSO 11132 ZSC 11132 M FV-11132

3" LOR 11102 OSC 11102 ZSO 11102 ZSC 11102 M FV-11142

3" LOR 11142 OSC 11142 ZSO 11142 ZSC 11142 M FV-11102

20" OVERFLOW

WET WEATHER STORAGE

20" OVERFLOW

18"

LE 11090

LSH 11091

ZS 11101

TIPPING BUCKET ME-11101

ZS 11102

TIPPING BUCKET ME-11102

ZS 11111

TIPPING BUCKET ME-11111

ZS 11112

TIPPING BUCKET ME-11112

LE 11190

LSH 11191

G-11102

DIURNAL FLOW EQUALIZATION BASIN 1

SUMP

LSL 11050

G-11101

24"

SUMP

LSL 11050

EQUALIZATION BASIN 1

EQUALIZATION BASIN 2

FROM PRIMARY CLARIFIERS 20"

10" TO EQ BASIN PUMP 3 L1 I102

10" TO EQ BASIN PUMP 2 L1 I102

10" TO EQ BASIN PUMP 1 L1 I102

EQUALIZATION BASIN LOOPS:

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DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	00/00/0000	MPJ	DCL	MPJ

REVISIONS

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WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

INSTRUMENTATION - P&ID

EQUALIZATION BASIN

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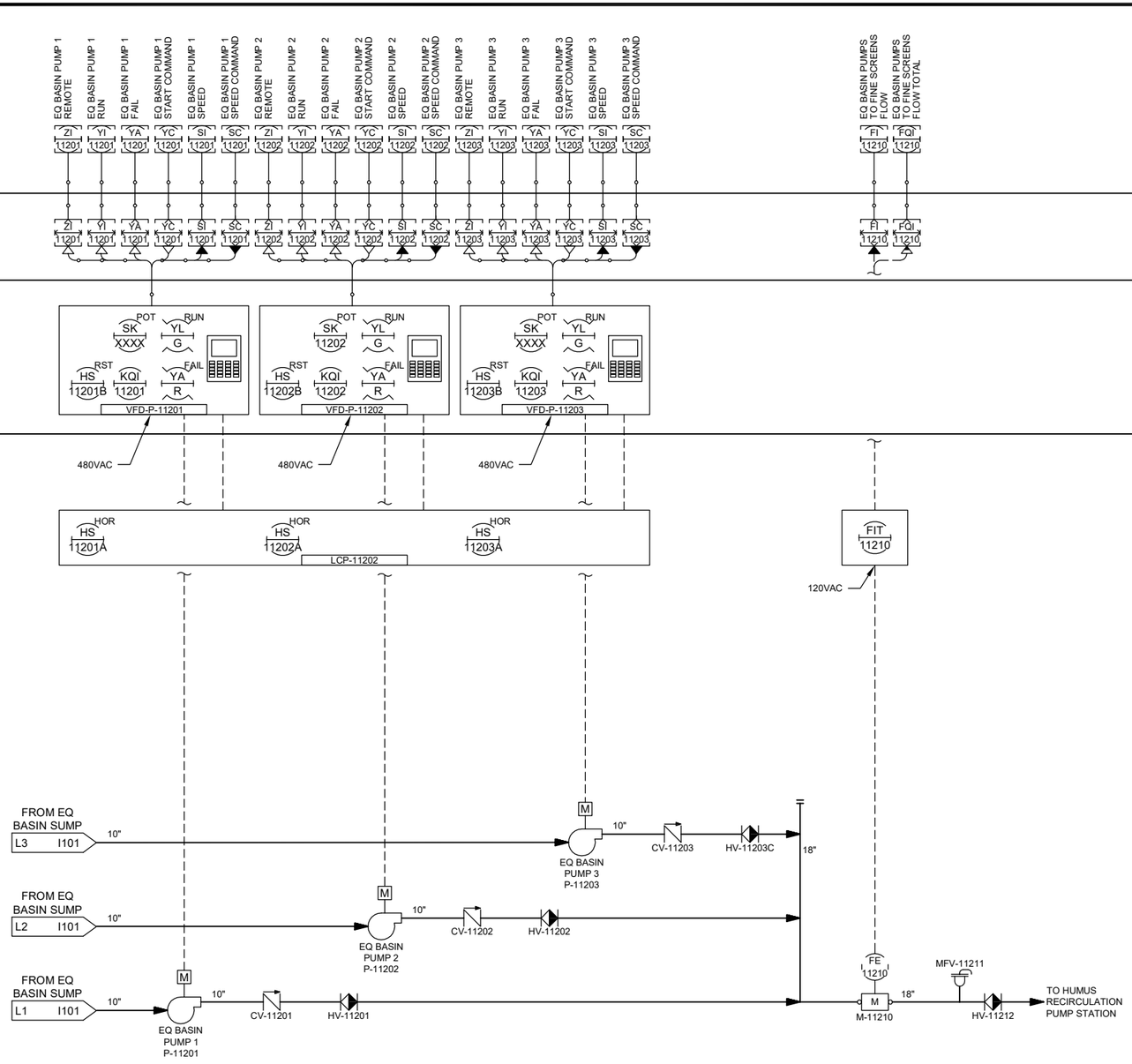
DRAWING NO.

I101

SHEET 1626



EQUALIZATION BASIN PUMP 1-3:
P-XXXX, P-XXXX, P-XXXX
LOOPS:

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5/3/2021

DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE
0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	00/00/0000	MPJ	DCL	MPJ

REVISIONS

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WASTEWATER TREATMENT PLANT
EQUALIZATION BASIN
INSTRUMENTATION - P&ID
EQUALIZATION BASIN PUMP STATION

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DRAWING NO.

I102

SHEET 1627

BILL OF MATERIALS

SCHEMATIC LINETYPES

MANUFACTURER/SHOP WIRE TYPICALLY INSTALLED OFF-SITE

FIELD/CONTRACTOR INSTALLED WIRE

EXISTING OR FUTURE FIELD/CONTRACTOR INSTALLED WIRE

EXISTING OR FUTURE MANUFACTURER/SHOP WIRE

TB'S & PLC SYMBOLS

LOCAL PANEL OR DEVICE TERMINAL BLOCK

X ← TERMINAL LABEL
□

PLC PANEL TERMINAL BLOCK

X ← TERMINAL LABEL
⊠

MCC TERMINAL BLOCK

X ← TERMINAL LABEL
⊠

DEVICE TERMINAL BLOCK

X ← TERMINAL LABEL
○

SCHEMATIC SYMBOLS

DEVICE CONNECTION LUG OR TERMINAL

SCHEMATIC POINT OF CONNECTION

CIRCUIT BREAKER

100AF ← FRAME SIZE
50AT ← TRIP RATING
MCP ← BREAKER TYPE

FUSE

30A ← AMPERE RATING
R ← FUSE TYPE

GROUND CONNECTION

M — MOTOR STARTER, CONTACTOR, RELAY OR TIMER COIL

NORMALLY OPEN CONTACT

NORMALLY CLOSED CONTACT

SOLENOID VALVE

EQUIPMENT PROGRAMMING CONSOLE

OFF ON
OX
2 POSITION SELECTOR SWITCH
POSITION LEGEND: X=CLOSED O=OPEN

H O A
XOO
3 POSITION SELECTOR SWITCH HAND - OFF - AUTO
POSITION LEGEND: X=CLOSED O=OPEN

O C A
XOO
3 POSITION SELECTOR SWITCH OPEN - CLOSE - AUTO POSITION
LEGEND: X=CLOSED O=OPEN

F O R
XOO
3 POSITION SELECTOR SWITCH FORWARD - OFF - REVERSE
POSITION LEGEND: X=CLOSED O=OPEN

STOP — NORMALLY CLOSED PUSH BUTTON

START — NORMALLY OPEN PUSH BUTTON

TYPICAL SWITCH CONFIGURATION

FLOAT SWITCH - MAKE ON FALL

FLOAT SWITCH -BREAK ON RISE

FLOAT SWITCH - BREAK ON FALL

FLOAT SWITCH - MAKE ON RISE

SWITCH TYPE SYMBOL (SEE BELOW)
- LEVEL SWITCH
- PRESSURE SWITCH
- FLOW OR TORQUE SWITCH
- TEMPERATURE SWITCH
- LIMIT SWITCH

NOTC — TIMER RELAY CONTACT NORMALLY OPEN TIME DELAY CLOSE

ABBREVIATIONS

A	AMPERE
AFF	ABOVE FINISHED FLOOR
AI	ANALOG INPUT
AIC	AMPS INTERRUPTING CAPACITY
AO	ANALOG OUTPUT
AS	AIR SUPPLY
ATS	AUTOMATIC TRANSFER SWITCH
C	CONDUIT
CB	CIRCUIT BREAKER
CL2	CHLORINE
CPT	CONTROL POWER TRANSFORMER
CTC	COMMUNICATIONS TERMINATION CABINET
CU	COPPER, BARE
CV	CONTROL VALVE
DCS	DISTRIBUTED CONTROL SYSTEM
DI	DISCRETE INPUT
DO	DISCRETE OUTPUT
DP	DISTRIBUTION PANEL
DS	DISCONNECT SWITCH
DV/DT	DIFFERENTIAL VOLTAGE/TIME
DWG	DRAWING
ETM	ELAPSED TIME METER
EOL	ELECTRONIC OVERLOAD
FE	FLOW ELEMENT
FLA	FULL LOAD AMPS
FOC	FIBER OPTIC CABLE
FOR	FORWARD-OFF-REVERSE
FS	FLOW SWITCH
FVNR	FULL VOLTAGE NON-REVERSING
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GND	GROUND
GPM	GALLONS PER MINUTE
GRS	GALVANIZED RIGID STEEL
H2S	HYDROGEN SULFIDE
HMI	HUMAN MACHINE INTERFACE
HOA	HAND-OFF-AUTO
HOR	HAND-OFF-REMOTE
I	CURRENT
IC	INSTRUMENTATION CABLE
IO	INPUT/OUTPUT
ISC	SHORT CIRCUIT CURRENT
J	JUNCTION BOX
LAN	LOCAL AREA NETWORK
LCP	LOCAL CONTROL PANEL
LOS	LOCK-OUT-STOP
LP	LIGHTING PANEL
LR	LOCAL/REMOTE
LS	LEVEL SWITCH
LTC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
M	MOTOR
MA	MANUAL/AUTO, MILLIAMP
MC	MANUFACTURER'S CABLE
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MFR(S)	MANUFACTURER(S)
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MOV	MOTOR OPERATED VALVE
MTU	MASTER TELEMETRY UNIT
NEC	NATIONAL ELECTRICAL CODE
NOTC	NORMALLY OPEN TIMED CLOSED
NPW	NON-POTABLE WATER
NTS	NOT TO SCALE
NTU	TURBIDITY
OIT	OPERATOR INTERFACE TERMINAL
OL	OVERLOAD
OO	ON/OFF (MAINTAINED)
OR	OFF-REMOTE
PB	PULL BOX
PC	PERSONAL COMPUTER
PFR	PHASE/POWER FAILURE RELAY
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
PPM	PARTS PER MILLION
PR	PAIR
P	PRESSURE
PS	PRESSURE SWITCH
PSI	POUNDS PER SQUARE INCH
PV	PROCESS VARIABLE
RCP	REMOTE CONTROL PANEL
RF	RADIO FREQUENCY
RIO	REMOTE INPUT OUTPUT
RST	RESET
RTD	RESISTANCE TEMPERATURE DETECTOR
RTU	REMOTE TELEMETRY UNIT
RVSS	REDUCED VOLTAGE SOFT STARTER
SEQ	SERVICE ENTRANCE EQUIPMENT
SES	SERVICE ENTRANCE SECTION
SLOS	START-LOCK-OFF-STOP
SMC	SUBMERSIBLE MANUFACTURER CABLE
SO2	SULFUR DIOXIDE
SP	SET POINT/SPARE
SPD	SURGE PROTECTION DEVICE
SS	START/STOP
ST	SHUNT TRIP
TC	TELEPHONE CABLE
TS	TEMPERATURE SWITCH
TYP	TYPICAL
UG	UNDERGROUND
V	VOLT
VA	VOLTAMP
VFD	VARIABLE FREQUENCY DRIVE
W	WATT, WIRE
WP	WEATHERPROOF
XFMR	TRANSFORMER
ZS	POSITION SWITCH

NOTES

1. THE COMPLETED INSTALLATION SHALL COMPLY WITH APPLICABLE FEDERAL, STATE, AND LOCAL CODES, ORDINANCES, AND REGULATIONS. ALL WORK SHALL BE COMPLETED IN A NEAT, WORKMANLIKE MANNER IN ACCORDANCE WITH THE LATEST NEC STANDARDS OF INSTALLATION UNDER COMPETENT SUPERVISION. INSTALL GROUNDING PER NEC.
2. ALL MATERIALS SHALL BE NEW AND OF THE BEST QUALITY, MANUFACTURED IN ACCORDANCE WITH NEMA, ANSI, UL, OR OTHER APPLICABLE STANDARDS. THE USE OF MANUFACTURERS' NAMES, MODELS, AND NUMBERS IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, USEFULNESS, AND BID PRICE.
3. PROTECT ALL ELECTRICAL MATERIAL AND EQUIPMENT INSTALLED AGAINST DAMAGE BY OTHER TRADES, WEATHER CONDITIONS, OR ANY OTHER PREVENTABLE CAUSES. EQUIPMENT DAMAGED DURING SHIPPING OR CONSTRUCTION, PRIOR TO ACCEPTANCE BY THE ENGINEER OR OWNER, WILL BE REJECTED AS DEFECTIVE.
4. ALL COMPONENTS SHALL BE FREE OF DUST, GRIT, AND FOREIGN MATERIALS, AND LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK. DAMAGED PAINT AND FINISHES SHALL BE TOUCHED UP OR PAINTED WITH MATCHING COLOR PAINT AND FINISH.
5. CIRCUIT CONDUCTORS #6 AWG OR SMALLER SHALL BE THWN STRANDED COPPER. #4 TO #2 AWG SHALL BE XHHW STRANDED COPPER. #1 AWG OR LARGER SHALL BE XHHW-2 STRANDED COPPER. MINIMUM POWER CONDUCTOR SIZE SHALL BE #12 AWG WITH #12 GROUND. ALL WIRE TO BE SIZED PER NEC TABLE 316-10, 75ºC BASED ON 30ºC AMBIENT.
6. SAFETY SWITCHES, ELECTRICAL DISTRIBUTION EQUIPMENT, CONTROL PANELS AND OTHER ELECTRICAL DEVICES SHALL BE UL LISTED, AND RATED FOR HEAVY DUTY SERVICE.
7. DEVICE WIRING SHALL BE SPECIFICATION GRADE.
8. TYPICAL DETAILS SHALL APPLY IN ALL CASES, WHETHER SPECIFICALLY REFERRED TO OR NOT.

LEGEND, NOTES & BILL OF MATERIAL

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DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

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WASTEWATER TREATMENT PLANT
EQUALIZATION BASIN
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TYPICAL TERMINAL BLOCK LAYOUTS

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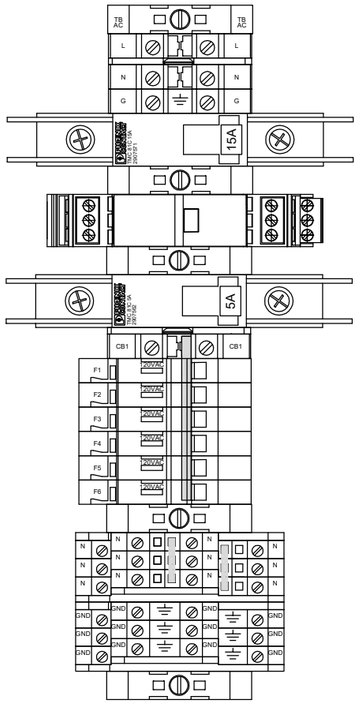
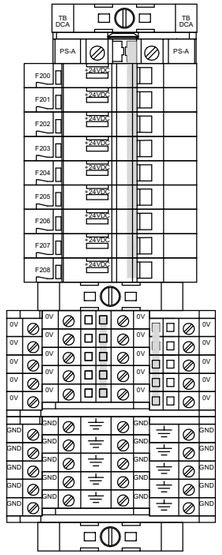
DRAWING NO.
I402

SHEET 1628



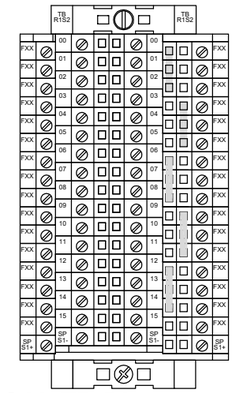
TYPICAL TB-AC TERMINAL BLOCK LAYOUT

101 TYP



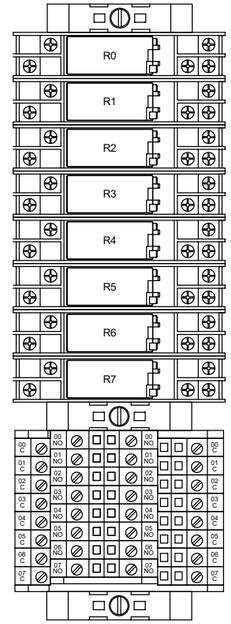
TYPICAL TB-DC TERMINAL BLOCK LAYOUT

102 TYP



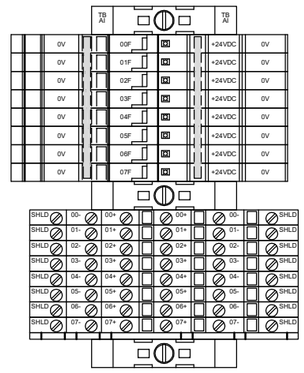
TYPICAL TB-DI TERMINAL BLOCK LAYOUT

103 TYP



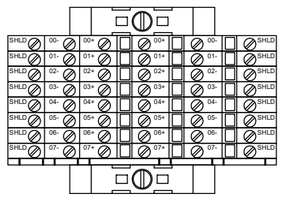
TYPICAL TB-DO TERMINAL BLOCK LAYOUT

104 TYP



TYPICAL TB-AI TERMINAL BLOCK LAYOUT

105 TYP



TYPICAL TB-AI TERMINAL BLOCK LAYOUT

106 TYP

NOTES:

1. THESE DETAILS REFLECT THE GENERAL STRATEGY IN LAYING OUT THE TERMINAL BLOCKS. THE ACTUAL LAYOUTS WILL VARY BASED ON THE NUMBER OF COMPONENTS REQUIRED FOR EACH GROUP. PROVIDE A MINIMUM OF 100% SPARE NEUTRAL AND GROUND TERMINALS.
2. USE JUMPER BARS TO BUS TOGETHER THE FUSE TERMINALS, NEUTRAL TERMINALS, AND 0V TERMINALS.
3. REFER TO SHEET I-01 FOR BILL OF MATERIALS

DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE

0 1/2 1

ORIGINAL

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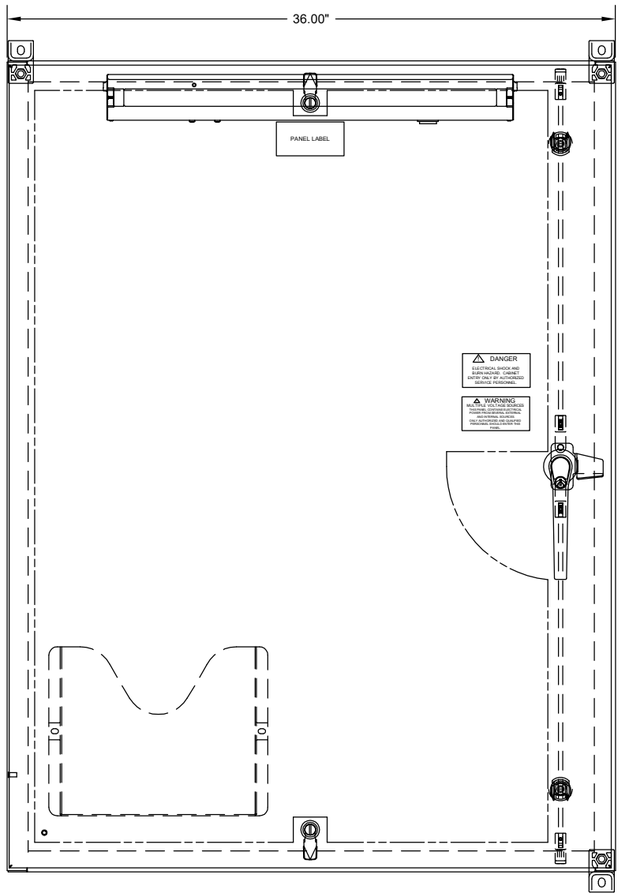
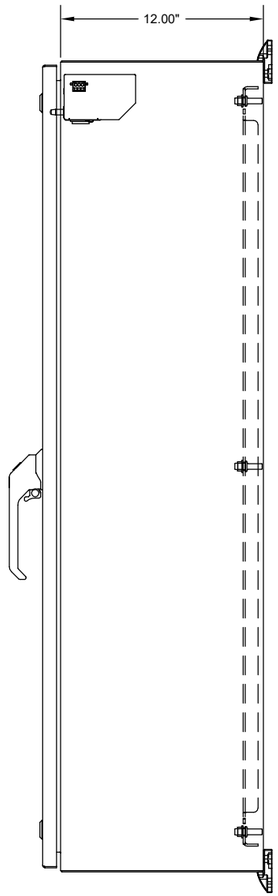
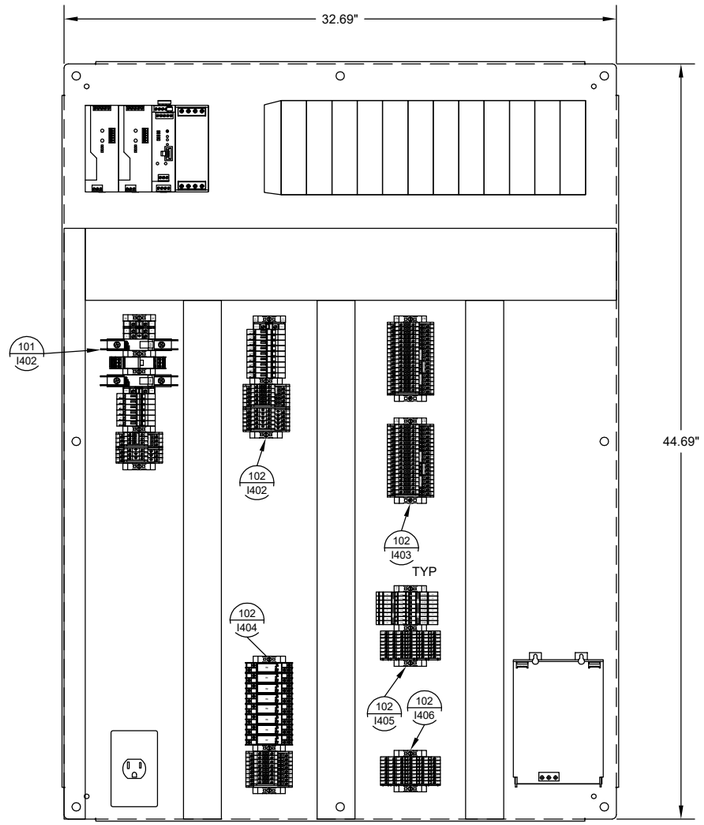


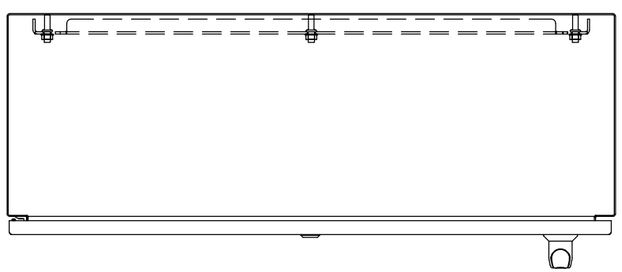
PANEL FRONT VIEW



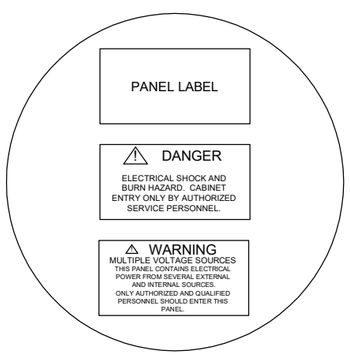
PANEL SIDE VIEW



BACKPANEL LAYOUT VIEW



PANEL TOP VIEW



PANEL LABELS

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0 1/2 1

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TYPICAL PANEL LAYOUT

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DRAWING NO.

I403

SHEET 1630

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TYPE	AB PLC (NEW) SLOT:POINT	INPUT/OUTPUT DESCRIPTION	NOTES
DI	1:00	EQ BASIN HIGH FLOAT ALARM 1	
DI	1:01	EQ BASIN LOW FLOAT ALARM 1	
DI	1:02	EQ BASIN HIGH FLOAT ALARM 2	
DI	1:03	EQ BASIN LOW FLOAT ALARM 2	
DI	1:04	SPARE	
DI	1:05	PUMP 1 HIGH TEMP	
DI	1:06	PUMP 2 HIGH TEMP	
DI	1:07	PUMP 3 HIGH TEMP	
DI	1:08	SPARE	
DI	1:09	PUMP 1 BACKUP COMMAND	
DI	1:10	PUMP 2 BACKUP COMMAND	
DI	1:11	PUMP 3 BACKUP COMMAND	
DI	1:12	SPARE	
DI	1:13	EQ ELECTRICAL ROOM HIGH TEMP SWITCH	
DI	1:14	SPARE	
DI	1:15	SPARE	
DI	2:00	PUMP 1 AUTO	
DI	2:01	PUMP 1 RUNNING	
DI	2:02	PUMP 1 FAULT	
DI	2:03	PUMP 1 SEAL FAIL	
DI	2:04	PUMP 2 AUTO	
DI	2:05	PUMP 2 RUNNING	
DI	2:06	PUMP 2 FAULT	
DI	2:07	PUMP 2 SEAL FAIL	
DI	2:08	PUMP 3 AUTO	
DI	2:09	PUMP 3 RUNNING	
DI	2:10	PUMP 3 FAULT	
DI	2:11	PUMP 3 SEAL FAIL	
DI	2:12	PUMP 1 ESTOP	
DI	2:13	PUMP 2 ESTOP	
DI	2:14	PUMP 3 ESTOP	
DI	2:15	SPARE	
DO	3:00	PUMP 1 START CMD	
DO	3:01	PUMP 2 START CMD	
DO	3:02	PUMP 3 START CMD	
DO	3:03	PUMP 1 RESET	
DO	3:04	PUMP 2 RESET	
DO	3:05	PUMP 3 RESET	
DO	3:06	SPARE	
DO	3:07	SPARE	
AI	1:00	PUMP 1 SPEED	
AI	1:01	PUMP 2 SPEED	
AI	1:02	PUMP 3 SPEED	
AI	1:03	EQ BASIN ULTRASONIC LEVEL 1	
AI	1:04	EQ BASIN ULTRASONIC LEVEL 2	
AI	1:05	EQ EFFLUENT FLOW	
AI	1:06	SPARE	
AI	1:07	SPARE	
AO	1:00	PUMP 1 SPEED CMD	
AO	1:01	PUMP 2 SPEED CMD	
AO	1:02	PUMP 3 SPEED CMD	
AO	1:03	SPARE	

IO SCHEDULE

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DRAWING NO.

I404

SHEET 1631

SCHEMATIC LINETYPES

- ELECTRICAL BUS
- EXISTING OR FUTURE ELECTRICAL BUS
- MANUFACTURER/SHOP WIRE TYPICALLY INSTALLED OFF-SITE
- EXISTING OR FUTURE MANUFACTURER/SHOP WIRE
- FIELD/CONTRACTOR INSTALLED WIRE
- EXISTING OR FUTURE FIELD/CONTRACTOR INSTALLED WIRE

SCHEMATIC SYMBOLS

- DEVICE CONNECTION LUG OR TERMINAL
- SCHEMATIC POINT OF CONNECTION
- POWER STABS BUS CONNECTION
- POWER STABS LOAD CONNECTION

CIRCUIT BREAKER
- 100AF ← FRAME SIZE
- 50AT ← TRIP RATING
- MCP ← BREAKER TYPE

DISCONNECT
- 30A ← AMPERE RATING
- 4X ← NEMA RATING

FUSE
- 30A ← AMPERE RATING
- R ← FUSE TYPE

FUSED DISCONNECT
- 30A ← AMPERE RATING
- 4X ← NEMA RATING
- 30A ← AMPERE RATING
- R ← FUSE TYPE

TRANSFORMER

CURRENT TRANSFORMER
- 100:5 ← CT TURNS RATIO
- 3 ← NUMBER OF CT'S

POTENTIAL TRANSFORMER
- 480:120 ← PT VOLTAGE RATIO
- 3 ← NUMBER OF PT'S

METERING EQUIPMENT
- UM ← METER TYPE DESIGNATION
  - AM = AMMETER
  - SSM = SOLID STATE METER
  - UM = UTILITY METER
  - VM = VOLTMETER
  - WHM = WATT HOUR METER
  - WM = WATT METER

GENERATOR

MANUAL OR AUTOMATIC TRANSFER SWITCH
- 600A ← AMPERE RATING
- 3R ← NEMA RATING

TRANSIENT VOLTAGE SURGE SUPRESSOR
- TVSS CLASS C ← TVSS CLASSIFICATION

MOTOR OVERLOAD RELAY

FULL VOLTAGE NON-REVERSING STARTER (FVNR)
- NEMA SIZE 1 ← STARTER TYPE AND SIZE

FULL VOLTAGE REVERSING STARTER (FVR)
- NEMA SIZE 1 ← STARTER TYPE AND SIZE

TWO-SPEED STARTER
- NEMA SIZE 1 ← STARTER TYPE AND SIZE

- HF — HARMONIC FILTER
- LR — LOAD REACTOR
- VFD — VARIABLE FREQUENCY DRIVE
- RVSS — REDUCED VOLTAGE SOFT STARTER
- GROUND CONNECTION
- 5 — MOTOR, NUMBER DESIGNATES NEMA HORSEPOWER SIZE
- M — MOTOR STARTER, CONTACTOR, RELAY OR TIMER COIL
- NORMALLY OPEN CONTACT
- NORMALLY CLOSED CONTACT
- SOLENOID VALVE
- EQUIPMENT PROGRAMMING CONSOLE
- OFF ON / XO — 2 POSITION SELECTOR SWITCH POSITION LEGEND: X=CLOSED O=OPEN
- H O A / XOO — 3 POSITION SELECTOR SWITCH HAND - OFF - AUTO POSITION LEGEND: X=CLOSED O=OPEN
- C A O / XOO — 3 POSITION SELECTOR SWITCH OPEN - CLOSE - AUTO POSITION LEGEND: X=CLOSED O=OPEN
- F O R / XOO — 3 POSITION SELECTOR SWITCH FORWARD - OFF - REVERSE POSITION LEGEND: X=CLOSED O=OPEN
- STOP — NORMALLY CLOSED PUSH BUTTON
- START — NORMALLY OPEN PUSH BUTTON

TYPICAL SWITCH CONFIGURATION
- FLOAT SWITCH - MAKE ON FALL
- FLOAT SWITCH - MAKE ON RISE
- FLOAT SWITCH - BREAK ON FALL
- FLOAT SWITCH - BREAK ON RISE
- SWITCH TYPE SYMBOL (SEE BELOW)
  - LEVEL SWITCH
  - PRESSURE SWITCH
  - FLOW OR TORQUE SWITCH
  - TEMPERATURE SWITCH
  - LIMIT SWITCH
- NOTC / A — TIMER RELAY CONTACT NORMALLY OPEN TIME DELAY CLOSE
- ETM — ELAPSED TIME METER
- CR — CONTROL RELAY
- TD — TIME DELAY RELAY
- AR — ALARM RELAY
- R — PILOT LIGHT LETTER INDICATES COLOR R=RED, A=AMBER, B=BLUE, G=GREEN
- 50 — INSTANTANEOUS SHORT-CIRCUIT TRIP DEVICE
- 51 — TIME OVERCURRENT TRIP DEVICE
- 51G — GROUND FAULT TRIP DEVICE

ELECTRICAL PLAN LINETYPES

- EXPOSED CONDUIT
- EXISTING OR FUTURE EXPOSED CONDUIT
- UNDERGROUND CONDUIT
- EXISTING OR FUTURE UNDERGROUND CONDUIT
- E — E — CONDUIT DUCTBANK
- E — E — EXISTING OR FUTURE CONDUIT DUCTBANK
- BARE COPPER GROUND CONDUCTOR
- ELECTRICAL EQUIPMENT
- EXISTING OR FUTURE ELECTRICAL EQUIPMENT
- DEMOLITION
- E — CAPPED UNDERGROUND CONDUIT

ELECTRICAL PLAN HAZARDOUS LOCATION CLASSIFICATION LINETYPES

- C1D1 — CLASS I DIV 1
- C2D1 — CLASS II DIV 1
- C1D2 — CLASS I DIV 2
- C2D2 — CLASS II DIV 2

ELEC. PLAN SYMBOLS

SITE PLAN DEVICES
- X ← X= (SEE BELOW)
  - AE - ANALYZER ELEMENT
  - AIT - ALALYZING INDICATING TRANSMITTER
  - FE - FLOW ELEMENT
  - FIT - FLOW INDICATING TRANSMITTER
  - FS - FLOW SWITCH
  - J - JUNCTION BOX
  - JS - TORQUE SWITCH
  - LE - LEVEL ELEMENT
  - LIT - LEVEL INDICATING TRANSMITTER
  - LS - LEVEL SWITCH
  - M - MOTOR
  - MH - MANHOLE
  - MV - MOTOR OPERATED VALVE
  - PB - PULLBOX
  - PIT - PRESSURE INDICATING TRANSMITTER
  - PS - PRESSURE SWITCH
  - PT - PRESSURE TRANSMITTER
  - SV - SOLENOID VALVE
  - TS - TEMPERATURE SWITCH
  - WE - WEIGHT ELEMENT
  - WIT - WEIGHT INDICATING TRANSMITTER
  - ZS - LIMIT SWITCH
- GROUND ROD
- WP — DUPLEX RECEPTACLE: DENOTES RECEPTACLE TYPE (BLANK) = STANDARD INDOORS GFCI = GND FLT CURRENT INT. WP = WEATHER PROOF & GFCI
- QUADRAPLEX RECEPTACLE
- DATA JACK
- $ — SINGLE POLE SWITCH
- $3 — 3-WAY SWITCH
- $4 — 4-WAY SWITCH
- CONDUIT SEALOFF
- LTC CONNECTION
- MC CONNECTION
- DISCONNECT SWITCH
- T — THERMOSTAT
- 3 — CONDUIT HOME RUN NUMBER INDICATES QUANTITY OF CONDUCTORS INCLUDING GROUND

TB'S & PLC SYMBOLS

LOCAL PANEL OR DEVICE TERMINAL BLOCK
- TERMINAL LABEL
- X
- □

PLC PANEL TERMINAL BLOCK
- TERMINAL LABEL
- X
- Ø

MCC TERMINAL BLOCK
- TERMINAL LABEL
- X
- ⊠

DEVICE TERMINAL BLOCK
- TERMINAL LABEL
- X
- ○

PLC DISCRETE INPUT
- DISCRETE INPUT LABEL
- DIXX
- ◇

PLC DISCRETE OUTPUT (NORMALLY OPEN)
- DISCRETE OUTPUT LABEL
- DOXX
- ◈

PLC DISCRETE OUTPUT (NORMALLY CLOSED)
- DISCRETE OUTPUT LABEL
- DOXX
- ◈

PLC ANALOG INPUT
- ANALOG INPUT LABEL
- AIXX
- ◈

PLC ANALOG OUTPUT
- ANALOG OUTPUT LABEL
- AOXX
- ◈

PLC RTD
- RTD LABEL
- RTDXX
- ◈

EQUIPMENT CALLOUT

- EQUIP. TAG — EQUIPMENT CALLOUT
- DESCRIPTOR #1
- DESCRIPTOR #2
- DESCRIPTOR #3
- 100 / TYP — DETAIL CALLOUT
- FE / 101 — FIELD INSTRUMENT CALLOUT

CONDUIT CALLOUT

- CXXX
- PXXX
- FXXX
- SPXXX

GROUPED CONDUIT AND CIRCUIT IDENTIFICATION TAGS. REFER TO THE POWER ONE-LINE AND CONTROL ONE-LINE DIAGRAMS OR CONDUIT SCHEDULES FOR CONDUIT SIZES AND CONTENTS.
C-CONTROL/INSTRUMENTATION
P-POWER
F-FIBER OPTIC/NETWORK
SP-SPARE CONDUITS

ABBREVIATIONS

A	AMPERE
AFF	ABOVE FINISHED FLOOR
AI	ANALOG INPUT
AIC	AMPS INTERRUPTING CAPACITY
AO	ANALOG OUTPUT
AS	AIR SUPPLY
ATS	AUTOMATIC TRANSFER SWITCH
C	CONDUIT
CB	CIRCUIT BREAKER
CL2	CHLORINE
CPT	CONTROL POWER TRANSFORMER
CTC	COMMUNICATIONS TERMINATION CABINET
CU	COPPER, BARE
CV	CONTROL VALVE
DCS	DISTRIBUTED CONTROL SYSTEM
DI	DISCRETE INPUT
DO	DISCRETE OUTPUT
DP	DISTRIBUTION PANEL
DS	DISCONNECT SWITCH
DV/DT	DIFFERENTIAL VOLTAGE/TIME
DWG	DRAWING
ETM	ELAPSED TIME METER
EOL	ELECTRONIC OVERLOAD
FE	FLOW ELEMENT
FLA	FULL LOAD AMPS
FOC	FIBER OPTIC CABLE
FOR	FORWARD-OFF-REVERSE
FS	FLOW SWITCH
FVNR	FULL VOLTAGE NON-REVERSING
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GND	GROUND
GPM	GALLONS PER MINUTE
GRS	GALVANIZED RIGID STEEL
H2S	HYDROGEN SULFIDE
HH	HANDHOLE
HMI	HUMAN MACHINE INTERFACE
HOA	HAND-OFF-AUTO
HOR	HAND-OFF-REMOTE
I	CURRENT
IC	INSTRUMENTATION CABLE
IO	INPUT/OUTPUT
ISC	SHORT CIRCUIT CURRENT
J	JUNCTION BOX
LAN	LOCAL AREA NETWORK
LCP	LOCAL CONTROL PANEL
LOS	LOCK-OUT-STOP
LP	LIGHTING PANEL
LR	LOCAL/REMOTE
LS	LEVEL SWITCH
LTC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
M	MOTOR
MA	MANUAL/AUTO, MILLIAMP
MC	MANUFACTURER'S CABLE
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MFR(S)	MANUFACTURER(S)
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MOV	MOTOR OPERATED VALVE
MTU	MASTER TELEMETRY UNIT
NEC	NATIONAL ELECTRICAL CODE
NOTC	NORMALLY OPEN TIMED CLOSED
NPW	NON-POTABLE WATER
NTS	NOT TO SCALE
NTU	TURBIDITY
OIT	OPERATOR INTERFACE TERMINAL
OL	OVERLOAD
OO	ON/OFF (MAINTAINED)
OR	OFF-REMOTE
PB	PULL BOX
PC	PERSONAL COMPUTER
PFR	PHASE/POWER FAILURE RELAY
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
PPM	PARTS PER MILLION
PR	PAIR
P	PRESSURE
PS	PRESSURE SWITCH
PSI	POUNDS PER SQUARE INCH
PV	PROCESS VARIABLE
RCP	REMOTE CONTROL PANEL
RF	RADIO FREQUENCY
RIO	REMOTE INPUT OUTPUT
RST	RESET
RTD	RESISTANCE TEMPERATURE DETECTOR
RTU	REMOTE TELEMETRY UNIT
RVSS	REDUCED VOLTAGE SOFT STARTER
SEQ	SERVICE ENTRANCE EQUIPMENT
SES	SERVICE ENTRANCE SECTION
SLOS	START-LOCK-OFF-STOP
SMC	SUBMERSIBLE MANUFACTURER CABLE
SO2	SULFUR DIOXIDE
SP	SET POINT/SPARE
SPD	SURGE PROTECTION DEVICE
SS	START/STOP
ST	SHUNT TRIP
TC	TELEPHONE CABLE
TS	TEMPERATURE SWITCH
TYP	TYPICAL
UG	UNDERGROUND
V	VOLT
VA	VOLTAMP
VFD	VARIABLE FREQUENCY DRIVE
W	WATT, WIRE
WP	WEATHERPROOF
XFMR	TRANSFORMER
ZS	POSITION SWITCH

NOTES

1. THE COMPLETED INSTALLATION SHALL COMPLY WITH APPLICABLE FEDERAL, STATE, AND LOCAL CODES, ORDINANCES, AND REGULATIONS. THE CONTRACTOR SHALL OBTAIN NECESSARY PERMITS AND INSPECTIONS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION. ALL WORK SHALL BE COMPLETED IN A NEAT, WORKMANLIKE MANNER IN ACCORDANCE WITH THE LATEST NEC STANDARDS OF INSTALLATION UNDER COMPETENT SUPERVISION. INSTALL GROUNDING PER NEC.
2. VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND OTHER FACTORS, WHICH MAY AFFECT THE EXECUTION OF THE WORK. INCLUDE ALL RELATED COSTS IN THE INITIAL BID PROPOSAL.
3. THE CONTRACTOR SHALL COORDINATE WORK WITH THE UTILITIES PROVIDING SERVICES ON THIS PROJECT, AND SHALL COMPLY WITH ALL THEIR INSTALLATION REQUIREMENTS.
4. ALL MATERIALS SHALL BE NEW AND OF THE BEST QUALITY, MANUFACTURED IN ACCORDANCE WITH NEMA, ANSI, UL, OR OTHER APPLICABLE STANDARDS. THE USE OF MANUFACTURERS' NAMES, MODELS, AND NUMBERS IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, USEFULNESS, AND BID PRICE.
5. PROTECT ALL ELECTRICAL MATERIAL AND EQUIPMENT INSTALLED AGAINST DAMAGE BY OTHER TRADES, WEATHER CONDITIONS, OR ANY OTHER PREVENTABLE CAUSES. EQUIPMENT DAMAGED DURING SHIPPING OR CONSTRUCTION, PRIOR TO ACCEPTANCE BY THE ENGINEER OR THE OWNER, WILL BE REJECTED AS DEFECTIVE.
6. LEAVE THE SITE CLEAN. REMOVE ALL DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT, WIRE SCRAPS AND ALL MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THE WORK DURING CONSTRUCTION. ALL COMPONENTS SHALL BE FREE OF DUST, GRIT AND FOREIGN MATERIALS, LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK. DAMAGED PAINT AND FINISHES SHALL BE TOUCHED UP OR REPAINTED WITH MATCHING COLOR PAINT AND FINISH.
7. CIRCUIT CONDUCTORS #6 AWG OR SMALLER SHALL BE THWN STRANDED COPPER. #4 AWG THROUGH #2 AWG SHALL BE XHHW STRANDED COPPER. #1 AWG OR LARGER SHALL BE XHHW-2 STRANDED COPPER. MINIMUM POWER CONDUCTOR SIZE SHALL BE #12 AWG WITH #12 AWG GROUND. ALL WIRE TO BE SIZED PER NEC TABLE 316-10, 75° C BASED ON A 30° C AMBIENT.
8. UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC. MINIMUM CONDUIT DEPTH SHALL BE 24 INCHES. MINIMUM UNDERGROUND CONDUIT SIZE SHALL BE 1 INCH.
   MINIMUM CONDUIT DEPTH UNDER SLAB SHALL BE 1 INCH.
9. CONDUITS SHALL BE MARKED AT EACH END WITH MATCHING NUMBERED BRASS OR NYLON TAGS. SPARE CONDUITS SHALL HAVE A PULL STRING INSTALLED AND SECURED.
10. EXPOSED CONDUITS SHALL BE GALVANIZED RIGID STEEL (GRS). MINIMUM SIZE 3/4 INCH, UNLESS OTHERWISE NOTED ON THE PLANS.
11. SAFETY SWITCHES, ELECTRICAL DISTRIBUTION EQUIPMENT, CONTROL PANELS, AND OTHER ELECTRICAL DEVICES SHALL BE UL LISTED, AND RATED FOR HEAVY DUTY SERVICE.
12. WIRING DEVICES SHALL BE SPECIFICATION GRADE.
13. THE CONTRACTOR IS RESPONSIBLE FOR MANAGING, SCHEDULING, DOCUMENTING, AND PERFORMING THE WORK SO THAT A COMPLETE ELECTRICAL, INSTRUMENTATION AND CONTROL SYSTEM FOR THE FACILITY IS PROVIDED. ACCURATE SHOP AND RECORD DRAWINGS, AND OEM MANUALS SHALL BE SUBMITTED PRIOR TO FINAL ACCEPTANCE OF THE WORK.
14. TYPICAL DETAILS SHALL APPLY IN ALL CASES, WHETHER SPECIFICALLY REFERRED TO OR NOT.
15. REFER TO SPECIFICATION 260533 "RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS" FOR CONDUIT SPACING AND ROUTING REQUIREMENTS.

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE, 1/2" = HALF SCALE (0, 1/2, 1)

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WASTEWATER TREATMENT PLANT
EQUALIZATION BASIN
ELECTRICAL - GENERAL
NOTES & SYMBOLS

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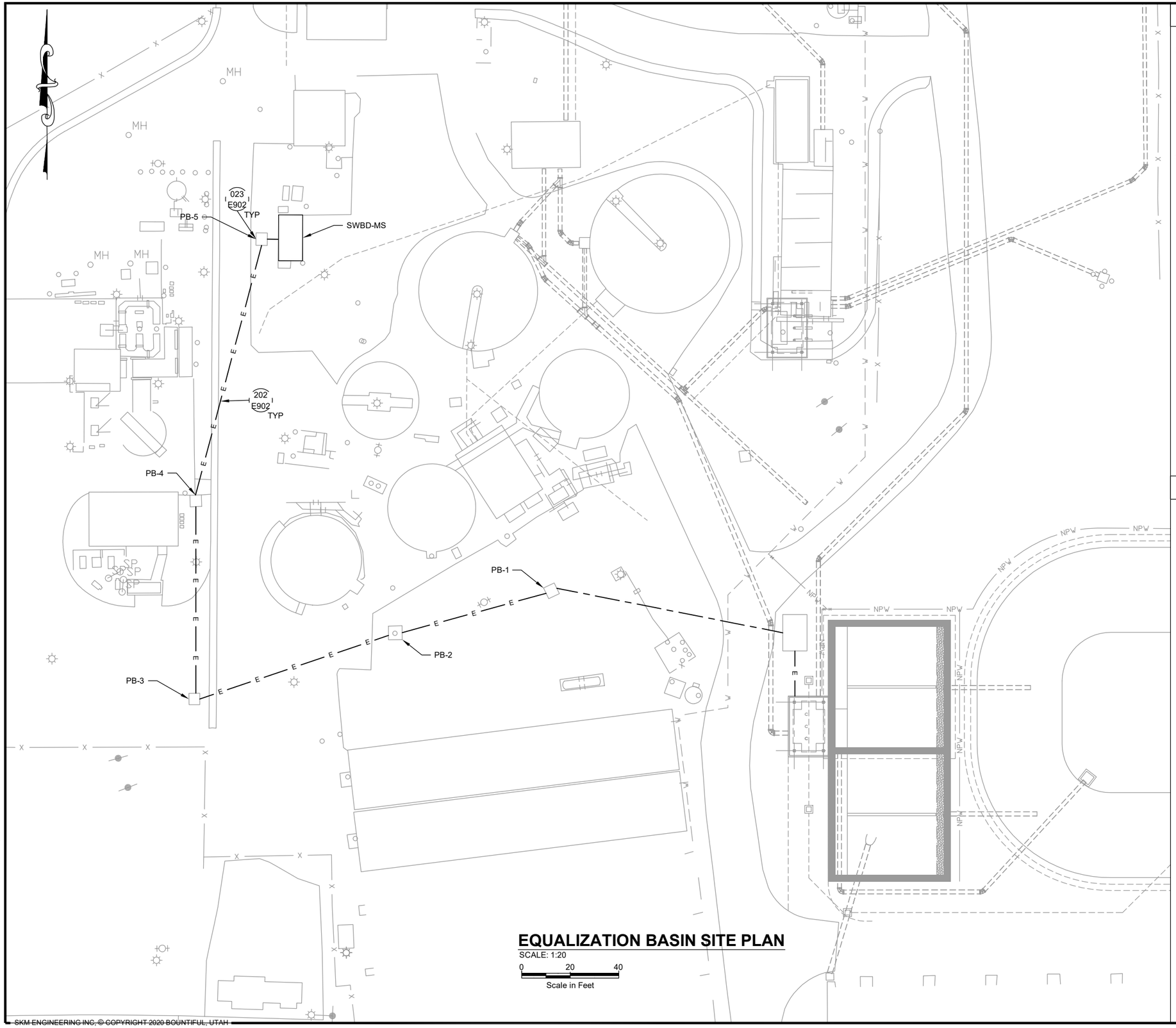
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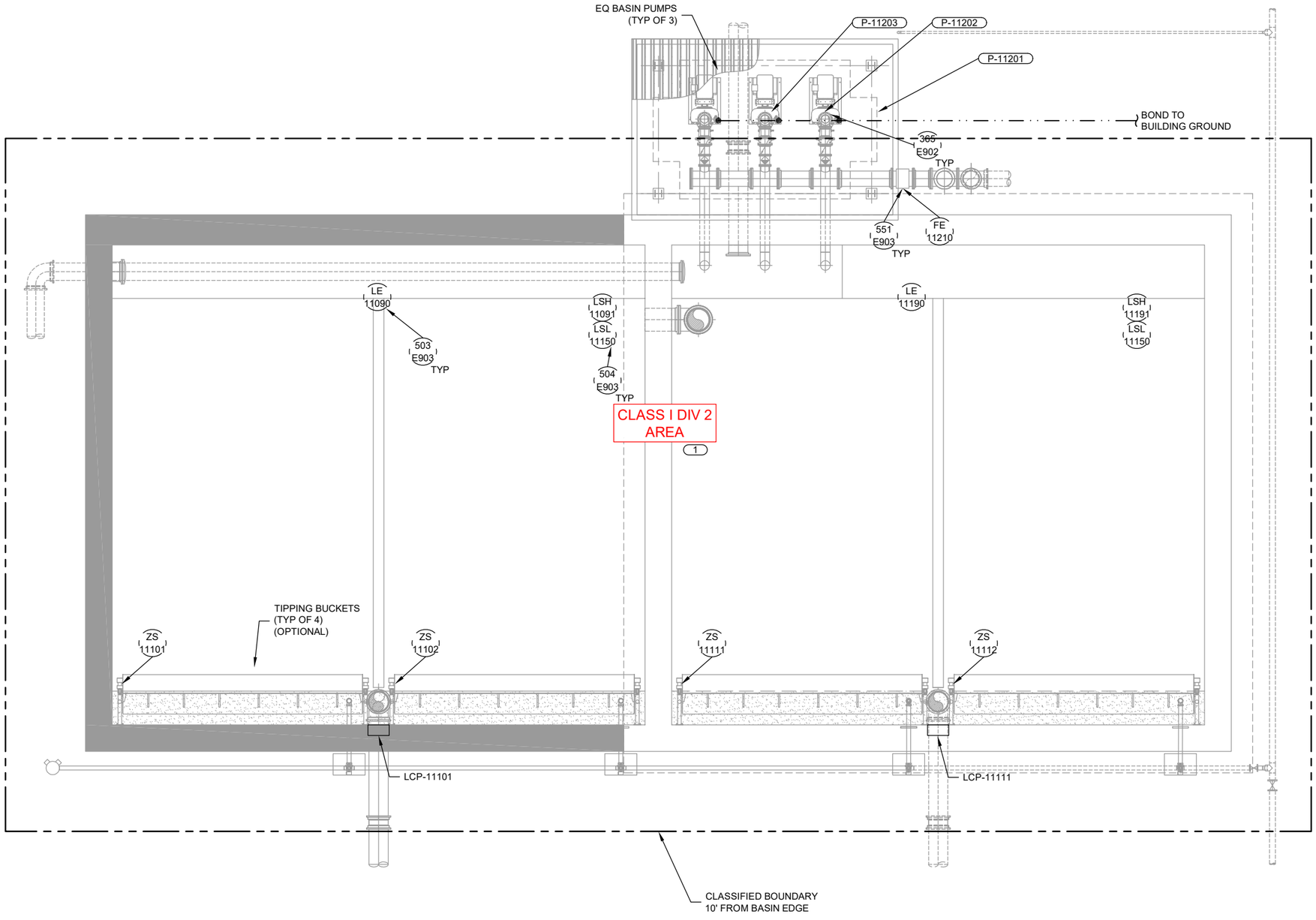

EQUALIZATION BASIN & PUMP STATION PLAN

SCALE: 3/16" = 1'-0"

0 4 8

Scale in Feet

NOTES

1. THE INTERIOR OF THE EQ BASIN AND EXTENDING OUT 10 FEET HORIZONTALLY AND 1.5 FEET VERTICALLY IS RATED CLASS I, DIV2 (SEE NFPA 820 FIGURE A.5.2). IN THIS CLASSIFIED AREA, ALL ELECTRICAL COMPONENTS SHALL BE RATED CLASS I, DIV 2. SEAL OFFS SHALL BE UTILIZED PER THE REQUIREMENTS OF NEC. FOR THE UNCLASSIFIED SPACE SURROUNDING THIS AREA, ALL COMPONENTS SHALL BE CORROSION RESISTANT AND PANELS SHALL BE 316SS NEMA 4X. ALL EXPOSED CONDUITS AND FITTINGS SHALL BE PVC COATED GRS. ALL CHANNEL, ANCHORS, FASTENERS AND ASSOCIATED HARDWARE SHALL BE 316SS. CONDUIT SHALL ONLY RUN EXPOSED WHERE NECESSARY.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING CONDUIT DETAILS AND A CONDUIT ROUTING PLAN TO THE ELECTRICAL ENGINEER FOR APPROVAL.
3. LIMIT EXPOSED CONDUITS, 90° BENDS, AND WALL PENETRATIONS. MAINTAIN SEPARATION BETWEEN SIGNAL AND POWER-CARRYING CONDUITS.

ELECTRICAL LEGEND

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

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CITY OF BANNING

WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

ELECTRICAL - LAYOUT

EQUALIZATION BASIN & PUMP STATION PLAN

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DRAWING NO.

E201

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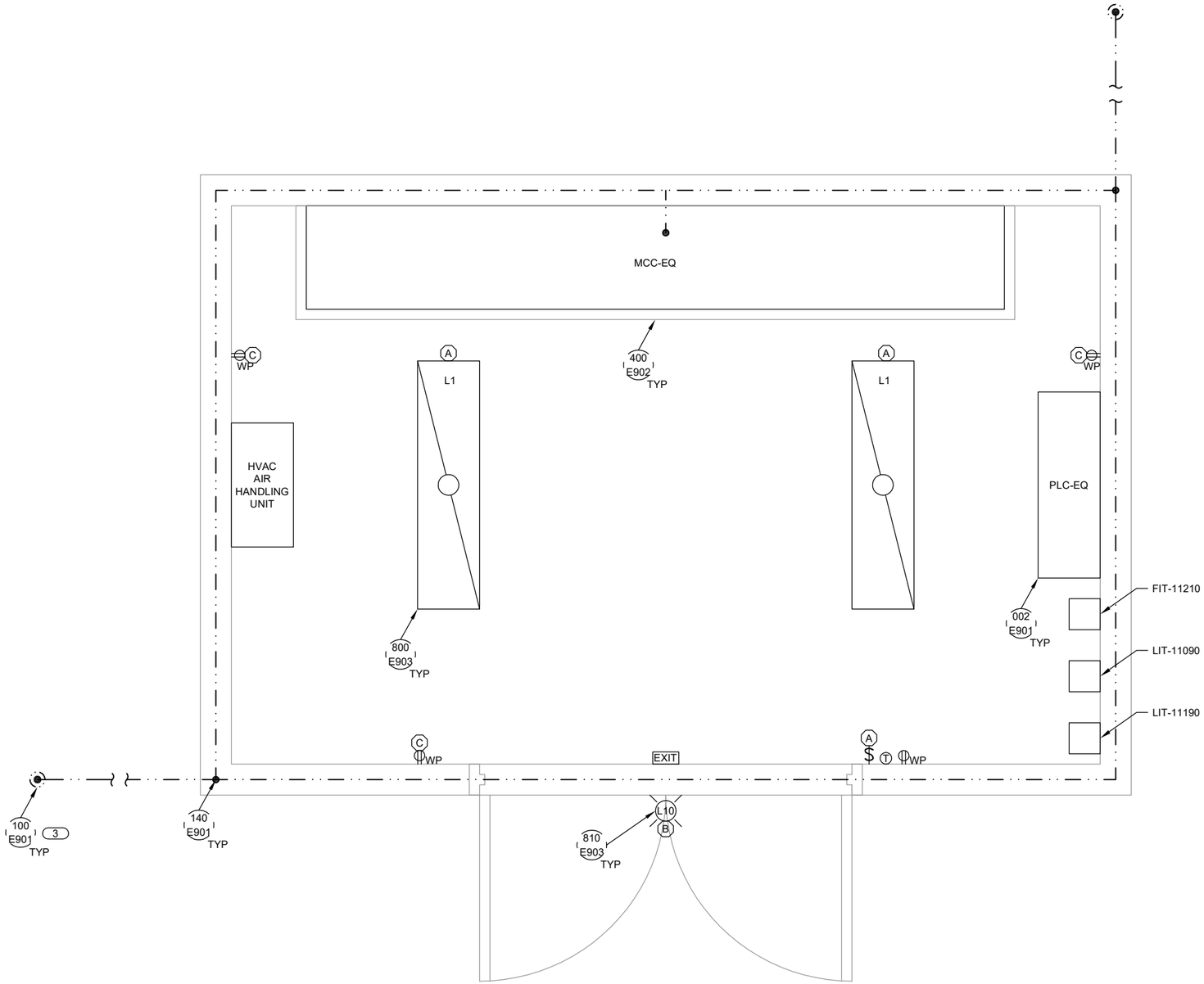

EQUALIZATION BASIN ELECTRICAL ROOM PLAN

SCALE: 1" = 1'-0"

0 2 4

Scale in Feet

NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING CONDUIT DETAILS AND A CONDUIT ROUTING PLAN TO THE ELECTRICAL ENGINEER FOR APPROVAL.
2. LIMIT EXPOSED CONDUITS, 90° BENDS, AND WALL PENETRATIONS. MAINTAIN SEPARATION BETWEEN SIGNAL AND POWER-CARRYING CONDUITS.
3. CONTRACTOR SHALL INSTALL (2) 10'X3/4"Ø COPPER GROUND RODS 10' MINIMUM SPACING AND 10' MINIMUM FROM BUILDING.

ELECTRICAL LEGEND

- L1 — H.E. WILLIAMS 39W 1'X4' LED FIXTURE WITH EMERGENCY AND DIMMING DRIVERS. MODEL ATS1-14-L40/840-D-EM/10WLP-DIM-UNV OR APPROVED EQUAL
- L10 — PHILIPS GARDCO 121-16L-1000-CW-G4-4-UNV-PCB-BZ 55W 5476 LUMENS LED WALL SCONCE, TYPE 4 DARK BRONZE, WITH BUILT IN PHOTO CELL OPERATION. OR APPROVED EQUAL
- DUPLEX OUTLET
  - G: GFCI PROTECTED OUTLET
  - WP: WEATHER-PROOF OUTLET GFCI PROTECTED.
- T — THERMOSTAT
- $ — SWITCH
- EXIT — CHLORIDE VE SERIES EXIT SIGN. MODEL VEGW OR APPROVED EQUAL.

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE, 1/2" = HALF SCALE (0, 1/2, 1)

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WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

ELECTRICAL - LAYOUT

EQUALIZATION BASIN ELECTRICAL ROOM PLAN

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DRAWING NO.

E202

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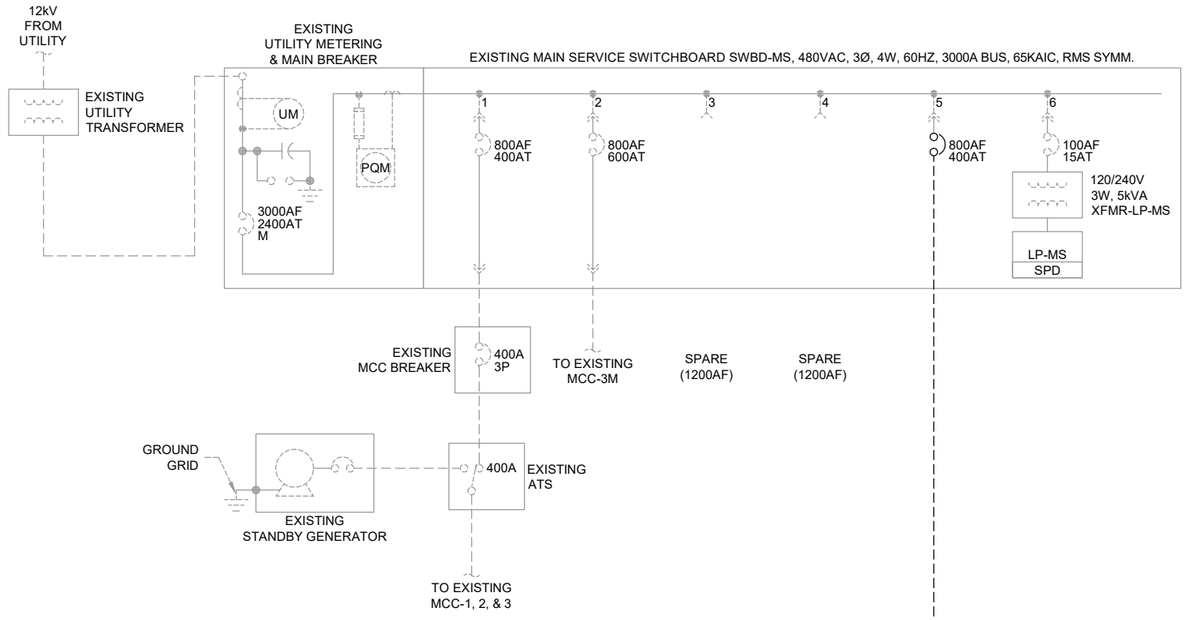
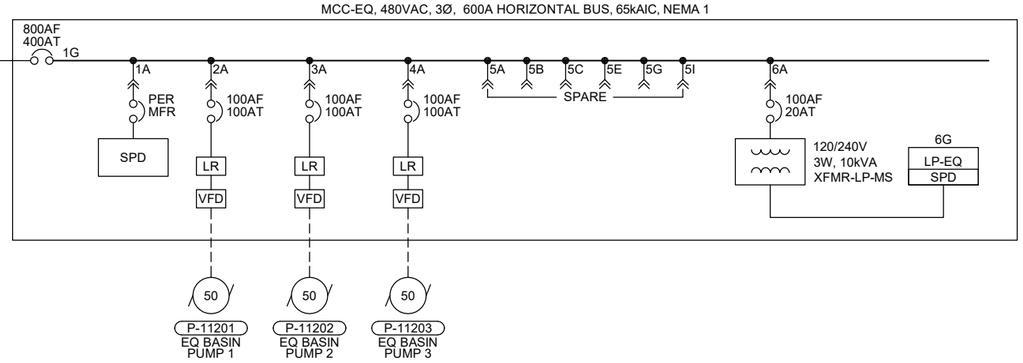
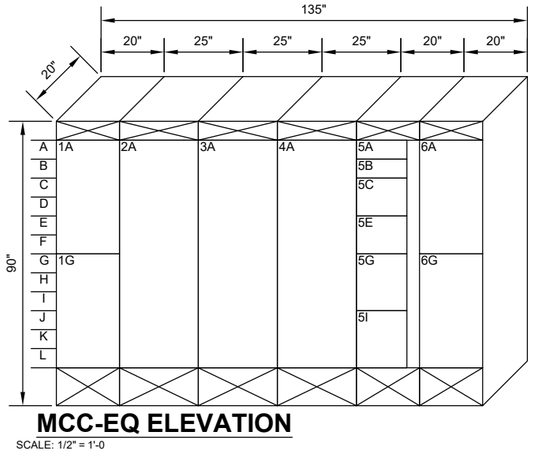


SWBD-MS (EXISTING) ONELINE DIAGRAM



MCC-EQ ONELINE DIAGRAM



MCC-EQ ELEVATION

SCALE: 1/2" = 1'-0

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

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EQUALIZATION BASIN

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SWBD-MS & MCC-EQ

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DRAWING NO.

E501

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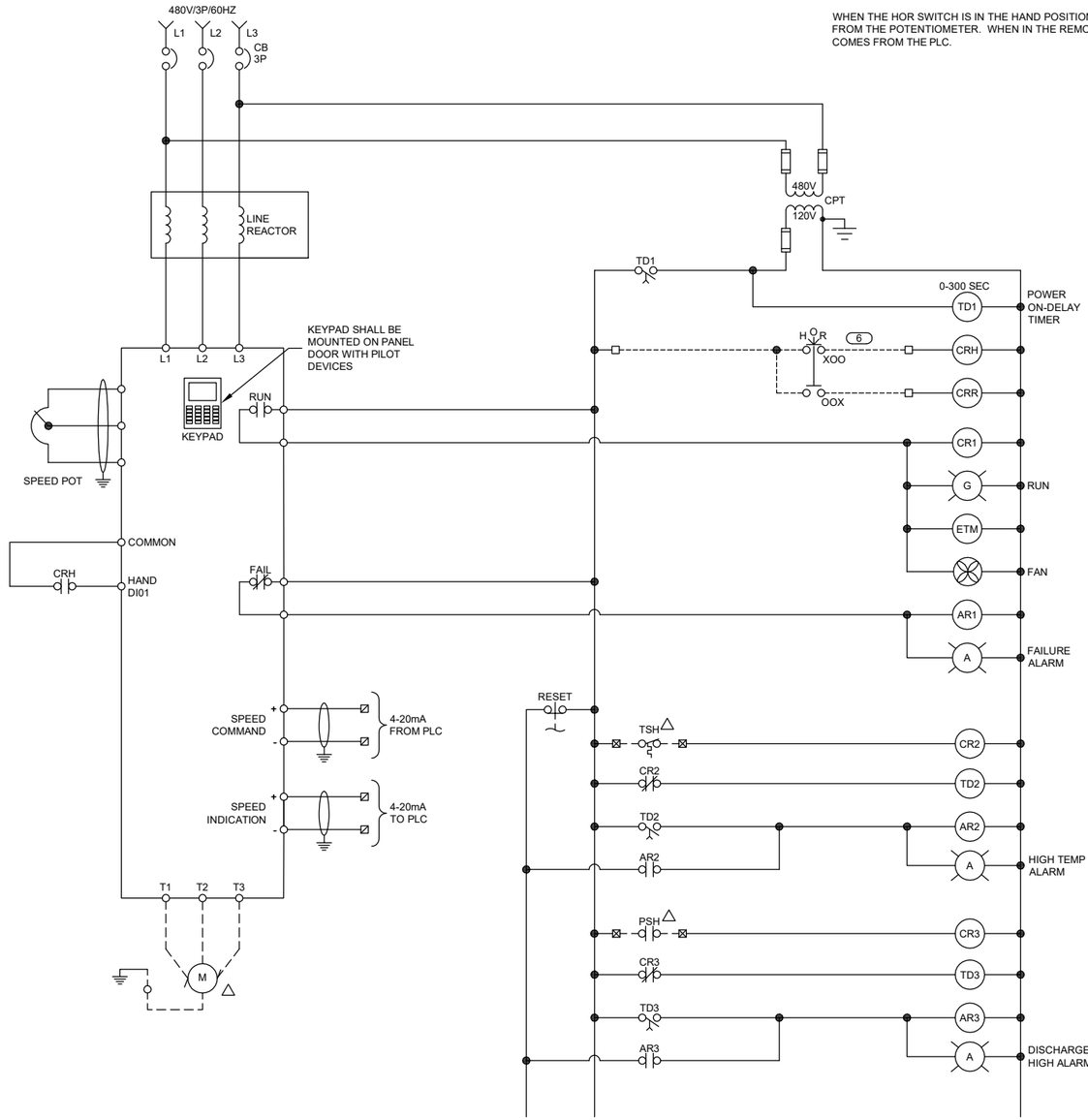
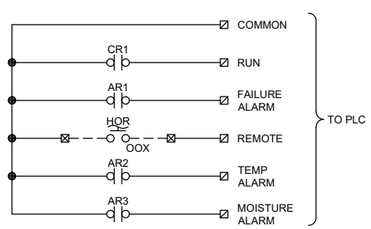
VFD CONTROL DESCRIPTION

WHEN THE HOR SWITCH IS IN THE HAND POSITION, THE MOTOR SHOULD RUN, WHEN THE HOR SWITCH IS IN THE OFF POSITION, THE MOTOR SHOULD STOP AND WHEN THE HOR SWITCH IS IN THE REMOTE POSITION, THE MOTOR IS CONTROLLED BY THE PLC. THE PLC WILL BE ABLE TO MONITOR WHETHER THE HOR IS IN THE HAND OR REMOTE POSITION.

WHEN THE HOR SWITCH IS IN THE HAND POSITION, THE SPEED COMMAND COMES FROM THE POTENTIOMETER. WHEN IN THE REMOTE POSITION, THE SPEED COMMAND COMES FROM THE PLC.





VFD CONTROL SCHEMATIC

TYPICAL FOR: P-11201, P-11202, P-11203

NOTES:

1. TYPICAL SCHEMATIC DIAGRAMS ARE INTENDED TO REFLECT THE GENERAL CONTROL STRATEGY. ACTUAL CIRCUITRY MAY VARY FOR SPECIFIC EQUIPMENT SUPPLIED. THE NUMBER AND TYPE OF DEVICES SHALL BE FURNISHED AS REQUIRED FOR PROPER OPERATION OF THE EQUIPMENT.
2. CONTROL POWER TRANSFORMERS (CPT) SHALL BE ADEQUATELY SIZED AND SHALL BE PROVIDED WITH PROPERLY SIZED FUSES FOR BOTH THE PRIMARY AND SECONDARY WINDINGS.
3. FUSES SHALL BE ADEQUATELY SIZED PER THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
4. ADJUST TIME DELAY RELAYS PRIOR TO STARTUP. STAGGER TIMER SETTINGS FOR POWER ON-DELAY RELAYS.
5. CONTROL SWITCHES SHALL BE DOOR MOUNTED ON THEIR RESPECTIVE PANELS. DEVICES SHALL BE RATED FOR LINE VOLTAGE AND 125% OF LOAD CURRENT.
6. LOCAL CONTROLS SHALL BE INSTALLED ACCORDING TO P&ID'S AND NOT NECESSARILY AS SHOWN ON SCHEMATICS. SEE LCP SCHEMATICS AND CONDUIT SCHEDULE FOR EXACT WIRING.

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

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VFD SCHEMATIC

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DRAWING NO.

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CIRCUIT/DESCRIPTION	KW	KVA	HP	FLA
EXISTING LOAD				
NEW MOTOR LOADS				
EQ BASIN PUMP 1			50.0	65.0
EQ BASIN PUMP 2			50.0	65.0
EQ BASIN PUMP 3			50.0	65.0
NEW NON-MOTOR LOADS				
EQ BASIN LIGHTING TRANSFORMER		10.0		12.0
SUBTOTAL				207.0
+ 25% OF LARGEST MOTOR				16.3
TOTAL AMPS @ 480V/3PHASE				223.3
EXISTING SERVICE SIZE (AMPS)				

MCC-EQ CALCULATIONS

PANEL:LP-EQ		VOLTAGE: 120/240		MAIN CB: 30 AMP		BUS AMPS: 60 AMP		
		BUS A.I.C: 10KA		BKR AIC: 10KA		MOUNTING: SURFACE		
CIRCUIT DESCRIPTION	**BKR**	**CIRCUIT**	**LOAD**	**PHASE**	**LOAD**	**CIRCUIT**	**BKR**	**CIRCUIT DESCRIPTION**
FIT-11210 EQ PUMPS EFFLUENT FLOW METER	20/1	1	100	A	100	2	20/1	LIT-11190 EQ BASIN 2 LEVEL TRANSMITTER
LIT-11090 EQ BASIN 1 LEVEL TRANSMITTER	20/1	3	100	B	160	4	20/1	EQ PUMP STATION WALL PACK
EQ BASIN LIGHTS	20/1	5	288	A	180	6	20/1	EQ BASIN PLC-EQ
EQ BASIN RECEPTACLES	20/1	7	288	B	200	8	20/1	AC UNIT
	20/1	9		A		10	20/1	
	20/1	11		B		12	20/1	
	20/1	13		A		14	20/1	
	20/1	15		B		16	20/1	
	20/1	17		A		18	20/1	
	20/1	19		B		20	20/1	
	20/1	21		A		22	20/1	
	20/1	23		B		24	20/1	
			PHASE A		**PHASE B**	NOTES:		
CONNECTED VA PER PHASE			668.0		748.0			
CONNECTED AMPS PER PHASE			5.6		6.2			
25% OF CONTINUOUS & LIGHTING LOAD (VA)			167.0		187.0			
CODE VA PER PHASE			835.0		935.0			
CODE AMPS PER PHASE			7.0		7.8			

LP-EQ PANEL SCHEDULE

CIRCUIT/DESCRIPTION	KVA	HP	FLA
MOTOR LOADS			
			0.0
			0.0
BAR SCREEN		1.5	3.0
SCREEN COMPACTOR		2.0	3.4
SCREEN WASHER		2.0	3.4
GRIT CHAMBER		5.0	7.6
GRIT CLASSIFIER		3.0	4.8
GRIT PUMP 1		25.0	34.0
GRIT PUMP 2		25.0	34.0
AIR BLOWER		10.0	14.0
SUMP PUMP 1		2.0	3.4
SUMP PUMP 2		2.0	3.4
DIGESTER 3 MIXER 1		15.0	21.0
DIGESTER 3 MIXER 2		15.0	21.0
HOT WATER PUMP 1		7.5	11.0
HOT WATER PUMP 2		7.5	11.0
HOT WATER BLOWER		3.0	4.8
THICKENED SLUDGE VALVE 1		0.5	1.1
THICKENED SLUDGE VALVE 2		0.5	1.1
PRIMARY SLUDGE VALVE 1		0.5	1.1
PRIMARY SLUDGE VALVE 2		0.5	1.1
UNDERDRAIN PUMP 1		5.0	7.6
UNDERDRAIN PUMP 2		5.0	7.6
MCC-4M CL2 CONTACT BLOWER		20.0	27.0
MCC-4M UTILITY WATER PUMP 1		25.0	34.0
MCC-4M UTILITY WATER PUMP 2		25.0	34.0
SUMP PUMP 3		2.0	3.4
SUMP PUMP 4		2.0	3.4
MOV 6-V-31		0.5	1.1
MOV 6-V-32		0.5	1.1
MOV 6-V-33		0.5	1.1
NON-MOTOR LOADS			
LP-3	45.0		54.2
7P-3			24.0
MCC-4M LP-4 AND XFMR	15.0		18.1
SUBTOTAL			400.8
+ 25% OF LARGEST MOTOR			8.5
TOTAL AMPS @ 480V/3PHASE			409.3
SERVICE SIZE (AMPS)			600.0

SWBD-MS CALCULATIONS

SHEET	TAG	DESCRIPTION	MAKE	MODEL	SUPPLY	RANGE	COMMENTS
I101	LSL-11050	EQ BASIN 1 LEVEL SWITCH LOW	ASHCROFT	FLYGT	ENM-10	NO CONTACT	AVOCADO STYLE FLOAT SWITCH NORMALLY OPEN WITH APPROPRIATE LENGTH CABLE, NO MERCURY; OR APPROVED EQUAL
I101	LE/LIT-11090	EQ BASIN 1 LEVEL ELEMENT/TRANSMITTER	VEGA	VEGAPULS C 21	120VAC		OR APPROVED EQUAL
I101	LSH-11091	EQ BASIN 1 LEVEL SWITCH HIGH	ASHCROFT	FLYGT	ENM-10	NC CONTACT	AVOCADO STYLE FLOAT SWITCH NORMALLY OPEN WITH APPROPRIATE LENGTH CABLE, NO MERCURY; OR APPROVED EQUAL
I101	LSL-11150	EQ BASIN 2 LEVEL SWITCH LOW	ASHCROFT	FLYGT	ENM-10		AVOCADO STYLE FLOAT SWITCH NORMALLY OPEN WITH APPROPRIATE LENGTH CABLE, NO MERCURY; OR APPROVED EQUAL
I101	LE/LIT-11190	EQ BASIN 2 LEVEL ELEMENT/TRANSMITTER	VEGA	VEGAPULS C 21	120VAC		OR APPROVED EQUAL
I101	LSH -11191	EQ BASIN 2 LEVEL SWITCH HIGH	ASHCROFT	FLYGT	ENM-10		AVOCADO STYLE FLOAT SWITCH NORMALLY OPEN WITH APPROPRIATE LENGTH CABLE, NO MERCURY; OR APPROVED EQUAL
I102	FE/FIT-11210	EQ EFFLUENT FLOW ELEMENT/TRANSMITTER	ABB	WATERMASTER	120VAC		OR APPROVED EQUAL

INSTRUMENT SCHEDULE

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	00/00/0000	MPJ	DCL	MPJ

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CALCULATIONS & SCHEDULES

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DRAWING NO.

E701

SHEET 1638

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5/5/2021

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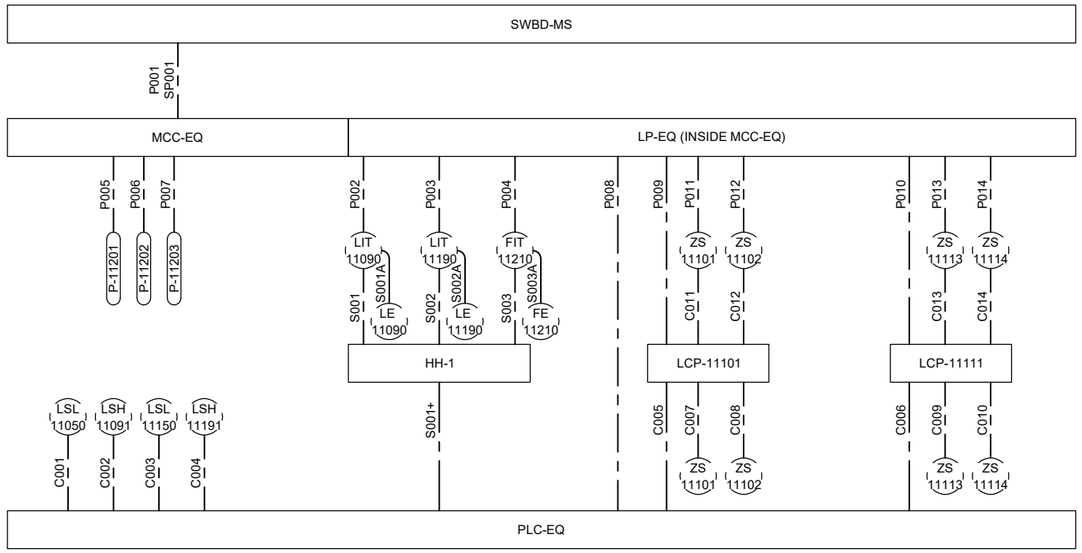

CONDUIT DEVELOPMENT

POWER CONDUIT								
CONDUIT	SIZE	CONDUCTORS	SERVICE	FROM	TO	COMBINED IN	DUCTBANKS	NOTES
P001	3"	2 PARALLEL 250 W/#3/0 GND	480VAC	SWBD-MS	MCC-EQ			UTILIZE PULLBOXES PB-1, PB-2, PB-3, PB-4, PB-5
P002	1"	2 #10 W/#10 GND	120VAC	LP-EQ	LIT-11090			
P003	1"	2 #10 W/#10 GND	120VAC	LP-EQ	LIT-11190			
P004	1"	2 #12 W/#12 GND	120VAC	LP-EQ	FIT-11210			
P005	1.5"	3 #4 W/#8 GND	480VAC	MCC-EQ	P-11201			
P006	1.5"	3 #4 W/#8 GND	480VAC	MCC-EQ	P-11202			
P007	1.5"	3 #4 W/#8 GND	480VAC	MCC-EQ	P-11203			
P008	1"	2 #12 W/#12 GND	120VAC	LP-EQ	PLC-EQ			
P009	1"	2#10 W/#10 GND	120VAC	LP-EQ	LCP-11101			
P010	1"	2#10 W/#10 GND	120VAC	LP-EQ	LCP-11111			
P011	1"	2 #12 W/#12 GND	120VAC	LP-EQ	FV-11101			
P012	1"	2 #12 W/#12 GND	120VAC	LP-EQ	FV-11102			
P013	1"	2 #12 W/#12 GND	120VAC	LP-EQ	FV-11113			
P014	1"	2 #12 W/#12 GND	120VAC	LP-EQ	FV-11114			
CONTROL CONDUIT								
CONDUIT	**SIZE**	**CONDUCTORS**	**SERVICE**	**FROM**	**TO**	**COMBINED**	**DUCTBANKS**	**NOTES**
C001	1"	2#12	24VDC	PLC-EQ	LSL-11050			
C002	1"	2#12	24VDC	PLC-EQ	LSH-11091			
C003	1"	2#12	24VDC	PLC-EQ	LSL-11150			
C004	1"	2#12	24VDC	PLC-EQ	LSH-11191			
C005	1"	10#12 W/#12 GND	120VAC	PLC-EQ	LCP-11101			
C006	1"	10#12 W/#12 GND	120VAC	PLC-EQ	LCP-11111			
C007	1"	2#12	24VDC	LP-EQ	ZS-11101			
C008	1"	2#12	24VDC	LP-EQ	ZS-11102			
C009	1"	2#12	24VDC	LP-EQ	ZS-11113			
C010	1"	2#12	24VDC	LP-EQ	ZS-11114			
C011	1"	8#12	24VDC	LP-EQ	FV-11101			
C012	1"	8#12	24VDC	LP-EQ	FV-11102			
C013	1"	8#12	24VDC	LP-EQ	FV-11113			
C014	1"	8#12	24VDC	LP-EQ	FV-11114			
SIGNAL CONDUIT								
CONDUIT	**SIZE**	**CONDUCTORS**	**SERVICE**	**FROM**	**TO**	**COMBINED**	**DUCTBANKS**	**NOTES**
S001	1"	1 TSP	SIGNAL	PLC-EQ	LIT-11090	S001+		THROUGH JB-1
S001A	1"	MFR CABLE	SIGNAL	LIT-11090	LE-11090			
S002	1"	1 TSP	SIGNAL	PLC-EQ	LIT-11190	S001+		THROUGH JB-1
S002A	1"	MFR CABLE	SIGNAL	LIT-11090A	LE-11190			
S003	1"	1 TSP	SIGNAL	PLC-EQ	FIT-11210	S001+		THROUGH JB-1
S003A	1"	MFR CABLE	SIGNAL	FIT-11210	FE-11210			
SPARE CONDUIT								
CONDUIT	**SIZE**	**CONDUCTORS**	**SERVICE**	**FROM**	**TO**	**COMBINED**	**DUCTBANKS**	**NOTES**
SP001	3"	PULL STRING	480VAC	SWBD-MS	MCC-EQ			
COMBINED CONDUITS								
CONDUIT	**SIZE**	**CONDUITS**	**SERVICE**	**FROM**	**TO**	**DUCTBANKS**	**NOTES**	
S001+	1"	S001, S002, S003	SIGNAL	HH-1	PLC-EQ			

CONDUIT SCHEDULE

DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE

NO.	DATE	DESIGN	DRAWN	CHECKED
ORIGINAL				
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DRAWING NO.
E801

SHEET 1639

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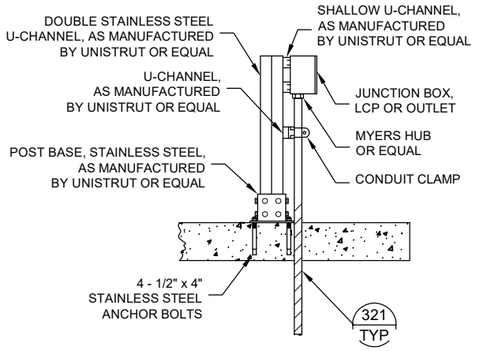
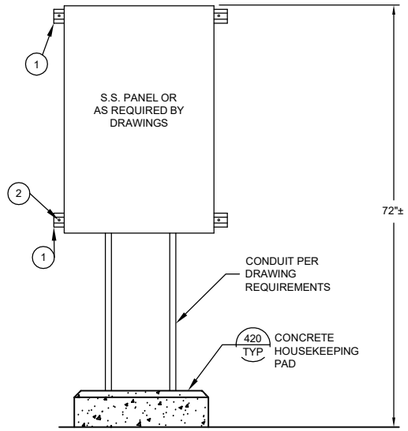


001 TYP **ELECTRICAL PANEL MOUNTING DETAIL**

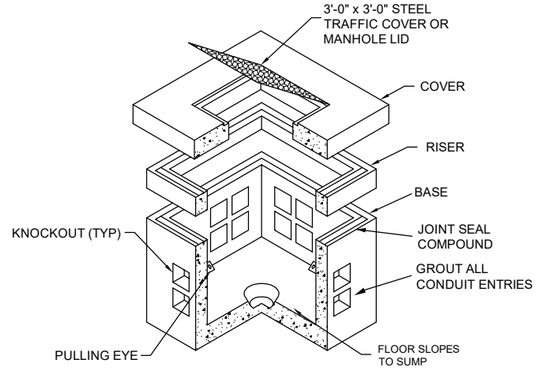
SCALE: NONE



1. STAINLESS STEEL 1-5/8" X 1-5/8" UNISTRUT CHANNEL.
2. ½" X 3" S.S. ANCHOR BOLT OR LAG BOLT WITH WASHER, ANCHORED TO WALL (EVERY 18", 2 MIN.)
3. MAXIMUM PANEL HEIGHT NOT TO EXCEED 72".
4. CENTER OF INSTRUMENT DISPLAYS SHALL BE 62".
5. CENTER OF LOCAL CONTROL STATIONS SHALL BE 48".

WALL MOUNTED JBOX/PANEL DETAIL

002 TYP SCALE: NONE

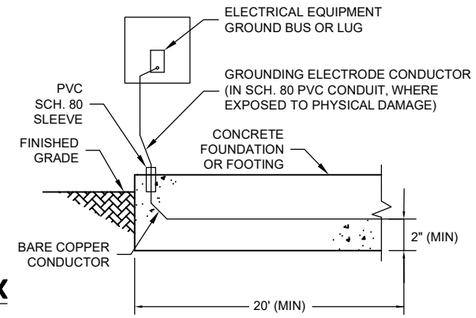


NOTE:

3'-11" x 3'-11" x 4'-1" MINIMUM INSIDE DIMENSIONS.
INSTALL A GROUND ROD AND CONNECT TO DUCT BANK GROUND.
TRAIN CABLES AROUND INTERIOR PERIMETER ON CABLE RACKS.

021 TYP **UNDERGROUND CONCRETE PULLBOX**

SCALE: NONE

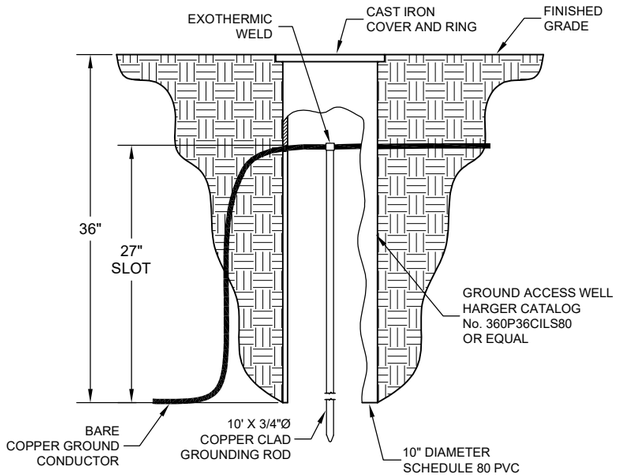


NOTE:

ALL WORK SHALL BE PER NATIONAL ELECTRICAL CODE AND LOCAL GOVERNING AUTHORITY.

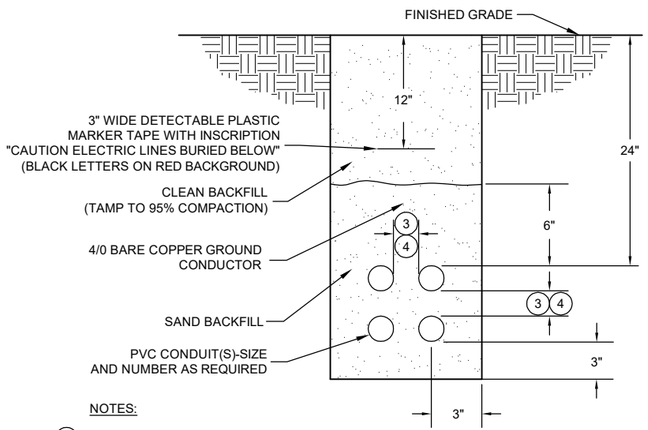
140 TYP **UFER GROUNDING DETAIL**

SCALE: NONE



100 TYP **GROUND ROD WITH ACCESS WELL**

SCALE: NONE

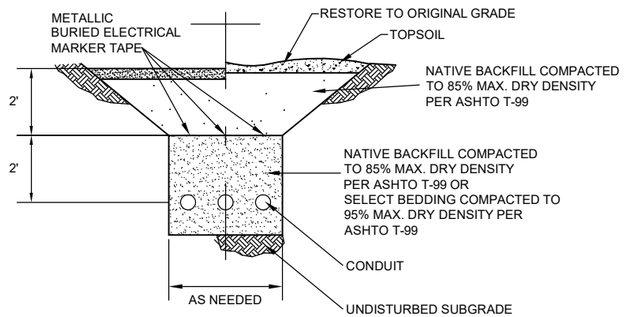


NOTES:

1. DIMENSIONS ARE MINIMUM.
2. THE GROUND CONDUCTOR SHALL RUN CONTINUOUSLY THROUGH MANHOLES AND PULL BOXES AND SHALL CONTINUE FROM THE DUCTBANK INTO THE ELECTRICAL EQUIPMENT OR BUILDING GROUNDING SYSTEM AND SHALL BE BONDED TO EACH RIDGID METAL CONDUIT. BOND CONDUCTORS TO BE SOLID COPPER #10 AWG OR LARGER AS REQUIRED BY THE NEC.
3. ALL DUCTS OF THE SAME DUTY (480V POWER, 120V POWER, 120V CONTROLS, AND SIGNAL/FIBER) SHALL BE SEPARATED BY A MINIMUM OF 2".
4. SIGNAL AND FIBER DUCTS SHALL BE SEPARATED FROM 480V POWER BY A MIN. OF 12", FROM 120V POWER BY A MIN. OF 6" AND FROM 120V CONTROL BY MIN. OF 4" UNLESS NOTED OTHERWISE ON THE DRAWINGS. 120V POWER AND 120V CONTROL DUCTS SHALL BE SEPARATED FROM 480V POWER BY A MIN. OF 4" UNLESS NOTED OTHERWISE ON THE DRAWINGS.

200 TYP **DIRECT BURIED CONDUIT**

SCALE: NONE



201 TYP **TYPICAL TRENCH DETAIL**

SCALE: NONE

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE, 1/2" = HALF SCALE

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
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DRAWING NO.

E901

SHEET 1640

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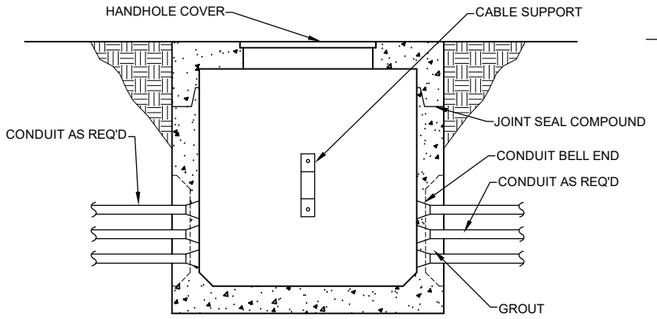
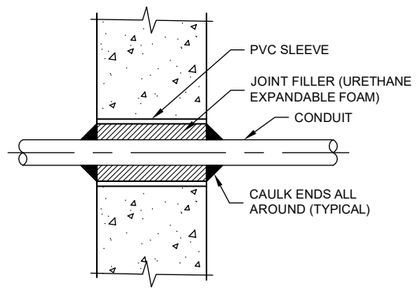


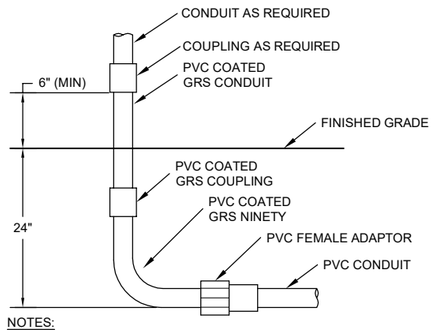
023 TYP PULL BOX DETAIL

SCALE: NONE



300 TYP CONDUIT PENETRATION AT NEW WALL OR SLAB

SCALE: NONE

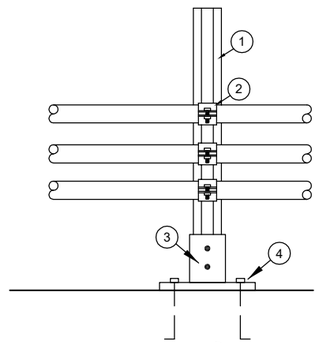


NOTES:

1. WHERE CONDUITS ARE INSTALLED IN OR UNDER A CONCRETE SLAB, THE 24" DIMENSION DOES NOT APPLY. CONDUITS SHALL BE INSTALLED BETWEEN REBAR MATS OR UNDER A SINGLE REBAR MAT.
2. IN CORROSIVE AREAS, PVC COATED GRS SHALL BE USED.

320 TYP GRS STUB UP DETAIL

SCALE: NONE

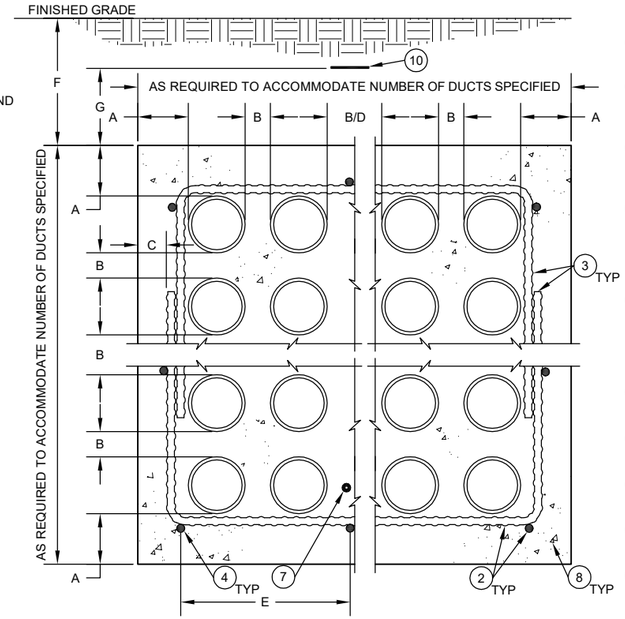


1. UNISTRUT CHANNEL
2. UNISTRUT CONDUIT STRAP
3. UNISTRUT POST BASE
4. 3/8"x3-1/2" ANCHOR BOLT GROUTED INTO CONCRETE (4 PER POST BASE)

STAINLESS STEEL

350 TYP EXPOSED SURFACE CONDUIT SUPPORT

SCALE: NONE



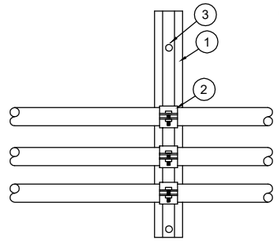
DIMENSION TABLE	
A	4" MIN. TYP.
B	2" MIN. SEE NOTE 12
C	2" MIN. SEE NOTE 2
D	12" MIN. SEE NOTE 13
E	18" MAX. SEE NOTE 4
F	18" MIN. 30" MAX.
G	12"

202 TYP MULTIPLE DUCT DUCTBANK DETAIL

SCALE: N.T.S.

NOTES:

1. ALL DIMENSIONS SHOWN ARE MINIMUM DIMENSIONS. UNLESS NOTED OTHERWISE ON THE DRAWINGS.
2. ALL REBAR SHALL BE #4 BAR AND HAVE A MINIMUM CONCRETE EMBEDMENT OF 2" (EDGE OF REBAR TO OUTSIDE SURFACE OF CONCRETE).
3. REBAR HOOPS SHALL OVERLAP 9" MINIMUM AND SHALL BE PROVIDED EVERY 4 FEET HORIZONTALLY. HOOPS SHALL NOT BE REQUIRED ON SINGLE ROW DUCTBANKS.
4. HORIZONTAL REBAR SHALL BE PLACED @ A MAXIMUM OF 18" ON CENTER ALL AROUND THE DUCTBANK ENVELOPE AND SHALL BE SUPPORTED EVERY 4 FEET LONGITUDINALLY. SINGLE ROW DUCTBANKS LESS THAN 24" WIDE SHALL HAVE A MIN. OF 2 HORIZONTAL BARS.
5. DUCT SPACERS (SADDLES) SHALL BE PROVIDED FOR PROPER SUPPORT OF CONDUIT DUCTS. SPACERS SHALL BE PROVIDED HORIZONTALLY AS RECOMMENDED BY THE MANUFACTURER AND TO PREVENT ANY SAGGING OF THE DUCTS (LOW SPOTS WILL NOT BE ALLOWED).
6. DUCTS SHALL BE SECURED TO PREVENT FLOATING DURING THE CONCRETE ENCASEMENT.
7. PROVIDE A 4/0 BARE CONTINUOUS COPPER GROUND. SEE GROUNDING SPECIFICATION SECTION 16170.
8. DUCTBANK CONCRETE SHALL BE COLOR DYED RED BY MIXING 3 LBS. IRON OXIDE PER CUBIC YARD OF CONCRETE.
9. ALL DUCTBANKS SHALL BE SLOPED @ 1/4" PER 10 FEET TO ALLOW DRAINAGE.
10. A 3" WIDE DETECTABLE PLASTIC MARKER TAPE WITH INSCRIPTION "CAUTION ELECTRICAL LINES BURIED BELOW" (BLACK LETTERS ON RED BACKGROUND) SHALL BE INSTALLED 12" ABOVE THE TOP OF ALL CONCRETE ENCASED DUCTBANKS.
11. REFER TO CONDUIT SCHEDULE FOR WIRE FILL OF ALL DUCTS.
12. ALL DUCTS OF THE SAME DUTY (480V POWER, 120V POWER, 120V CONTROLS, AND SIGNAL) SHALL BE SEPARATED BY A MINIMUM OF 2".
13. SIGNAL DUCTS SHALL BE SEPARATED FROM 480V POWER BY A MIN. OF 12". SIGNAL DUCTS SHALL BE SEPARATED FROM 120V POWER DUCTS BY 6" MIN. AND FROM 120V CONTROL BY MIN. OF 4" UNLESS NOTED OTHERWISE ON THE DRAWINGS.

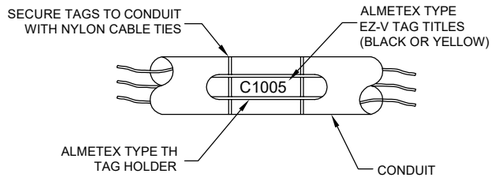


1. UNISTRUT P1000 CHANNEL
2. UNISTRUT CONDUIT STRAP
3. 3/8"x3-1/2" ANCHOR BOLT GROUTED INTO CONCRETE (1 PER FOOT 2 MINIMUM)

STAINLESS STEEL

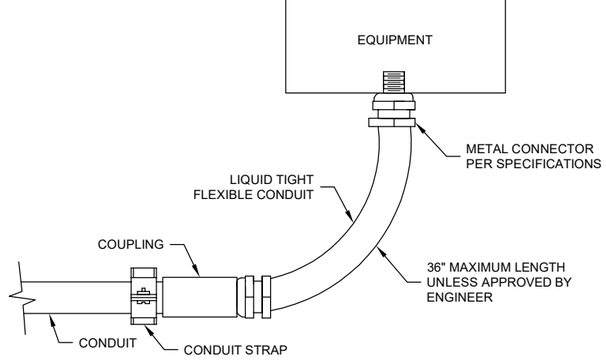
351 TYP EXPOSED SURFACE CONDUIT

SCALE: NONE



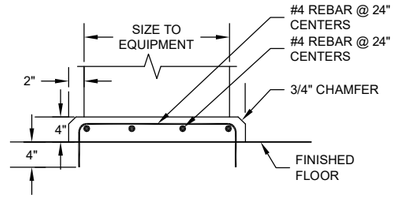
360 TYP CONDUIT MARKING SYSTEM

SCALE: NONE



365 TYP FLEXIBLE CONDUIT DETAIL

SCALE: NONE



400 TYP EQUIPMENT PAD DETAIL

SCALE: NONE

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE, 1/2" = HALF SCALE

NO.	DATE	DESIGN	DRAWN	CHECKED
ORIGINAL				
0	00/00/0000	MPJ	DCL	MPJ
REVISIONS				

CITY OF BANNING

WASTEWATER TREATMENT PLANT EQUALIZATION BASIN

ELECTRICAL - DETAILS

DETAILS 2

skm
533 W 2600 S, Suite 25
Bountiful, Utah 84010
Phone: (801) 677-0011
www.skmeng.com

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE, CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

AQUA ENGINEERING
533 W 2600 S, SUITE 275, BOUNTIFUL, UT 84010
PHONE (801) 299-1327 FAX (801) 299-0153

DRAWING NO.

E902

SHEET 1641

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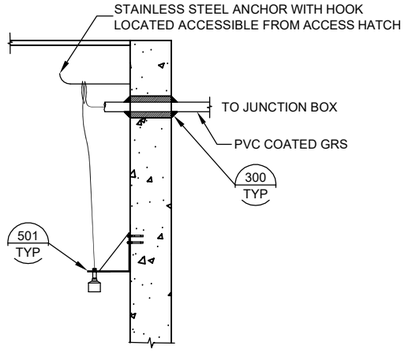
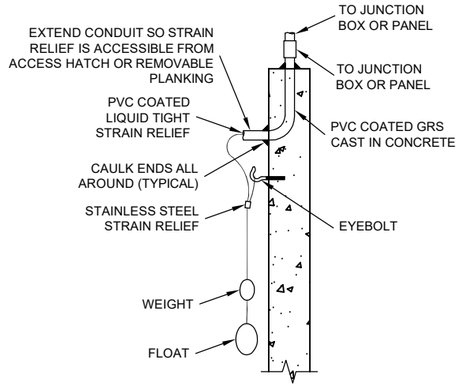
4/25/2021 C:\USERS\MICHAEL.JOHNSON\AQUA ENGINEERING\CITY OF BANNING - 001815.C EQUALIZATION BASIN\050 DRAFTING\999 ELECTRICAL\999-E902.DWG



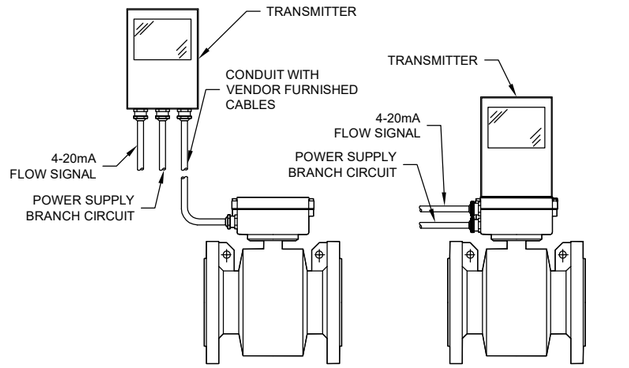
ULTRASONIC TRANSDUCER WETWELL MOUNTING

503 TYP SCALE: NONE



SUSPENDED FLOAT DETAIL

504 TYP SCALE: NONE

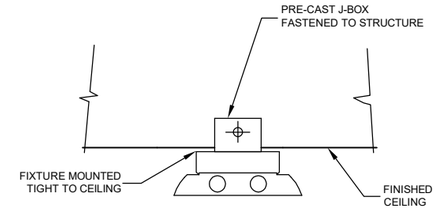


NOTES:

1. ALL VENDOR FURNISHED CABLES SHALL BE CUT TO LENGTH AND TERMINATED PER MANUFACTURER'S RECOMMENDATIONS.
2. GROUND PER MANUFACTURER'S RECOMMENDATIONS.

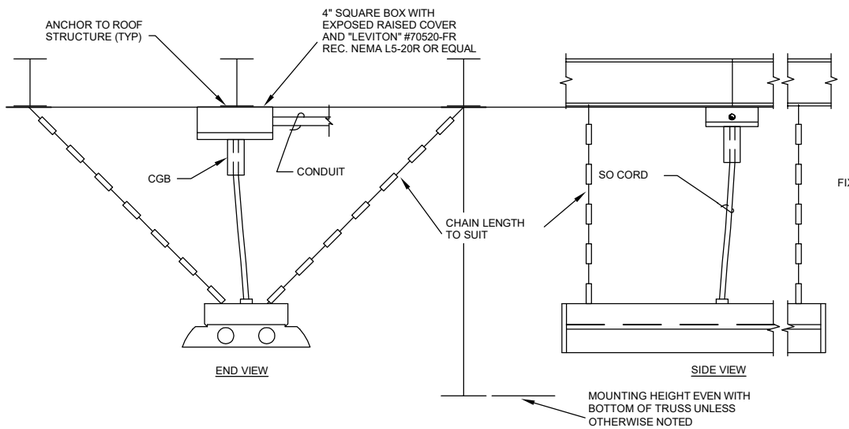
MAGNETIC FLOWMETER DETAIL

551 TYP SCALE: NONE



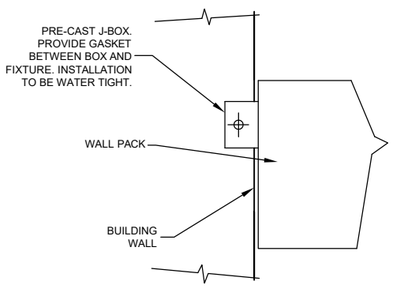
CEILING HUNG FIXTURE DETAIL

800 TYP SCALE: NONE



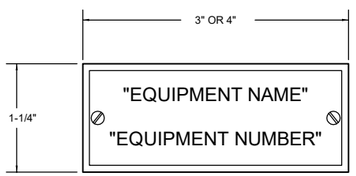
LIGHT FIXTURE INSTALLATION DETAIL

802 TYP SCALE: NONE



WALL HUNG FIXTURE MOUNTING DETAIL

810 TYP SCALE: NONE

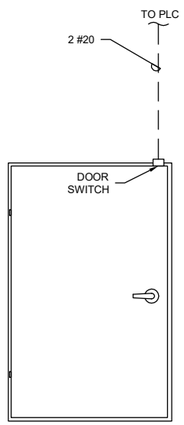


NOTES:

1. ALL LETTERS TO BE 1/4" UNLESS NOTED OTHERWISE.
2. ALL NAMEPLATES TO BE MOUNTED ON THE VERTICAL CENTERLINE OF THE CUBICAL OR DEVICE.
3. ATTACH ALL NAMEPLATES WITH STAINLESS STEEL SCREWS.
4. PROVIDE BLANK NAMEPLATES FOR ALL SPARE AND FUTURE DEVICES.

NAMEPLATE DETAIL

900 TYP SCALE: NONE



TYPICAL DOOR CONFIGURATION

914 TYP SINGLE DOOR WITH LOCKSET HARDWARE

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE, 1/2" = HALF SCALE

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
0	00/00/0000	MPJ	DCL	MPJ

REVISIONS

CITY OF BANNING

WASTEWATER TREATMENT PLANT

EQUALIZATION BASIN

ELECTRICAL - DETAILS

DETAILS 3

skm
533 W 2600 S, Suite 25
Bountiful, Utah 84010
Phone: (801) 677-0011
www.skmeng.com

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
3788 McCRAY STREET
RIVERSIDE CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256
ENGINEERING CONSULTANTS

AQUA ENGINEERING
533 W 2600 S, SUITE 275, BOUNTIFUL, UT 84010
PHONE (801) 299-1327 FAX (801) 299-0153

DRAWING NO.

E903

SHEET 1642

4/29/2021 C:\USERS\MICHAEL.JOHNSON\AQUA ENGINEERING\CITY OF BANNING - 001815.C EQUALIZATION BASIN\060 DRAFTING\999 ELECTRICAL\999-E903.DWG

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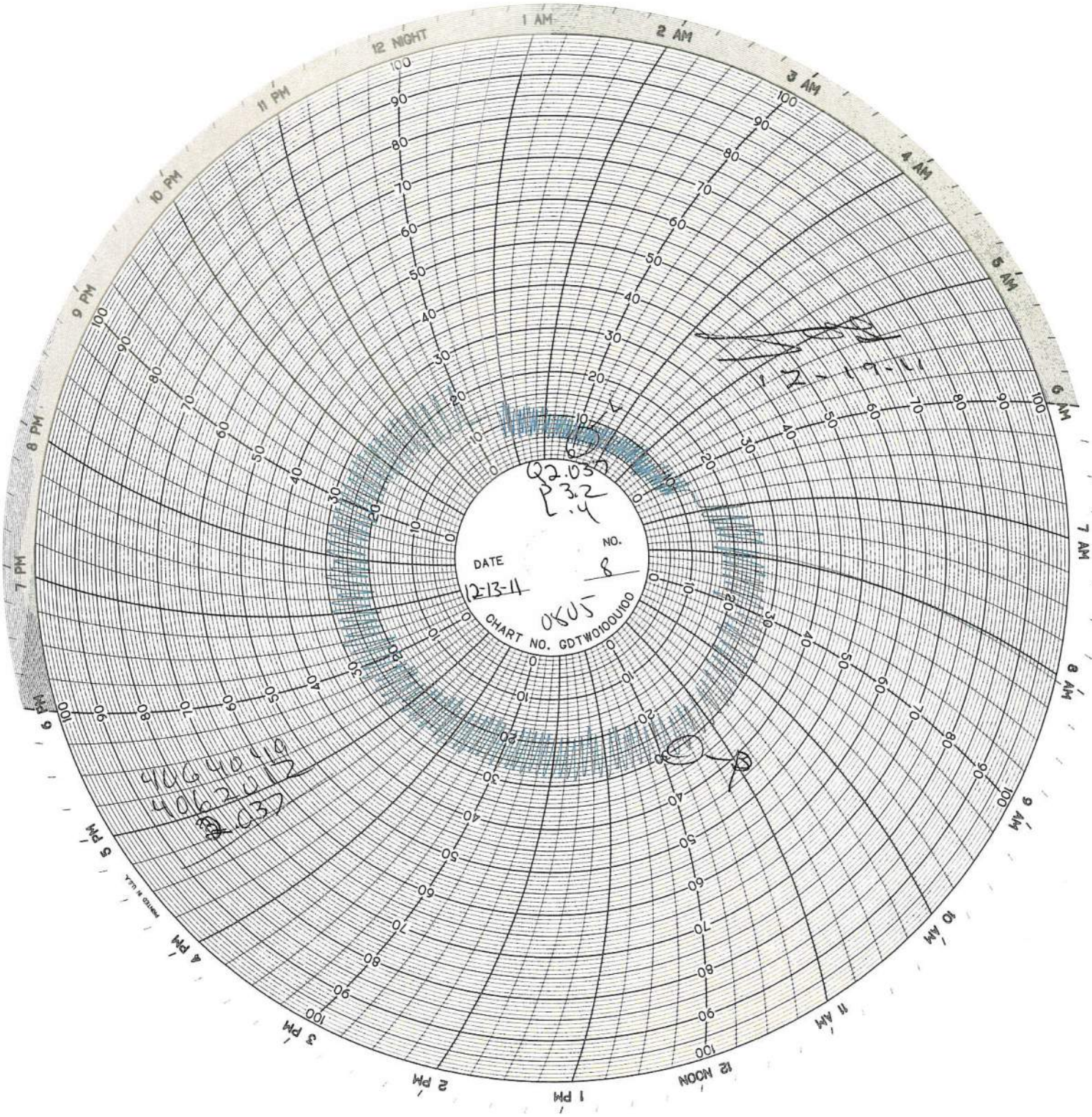
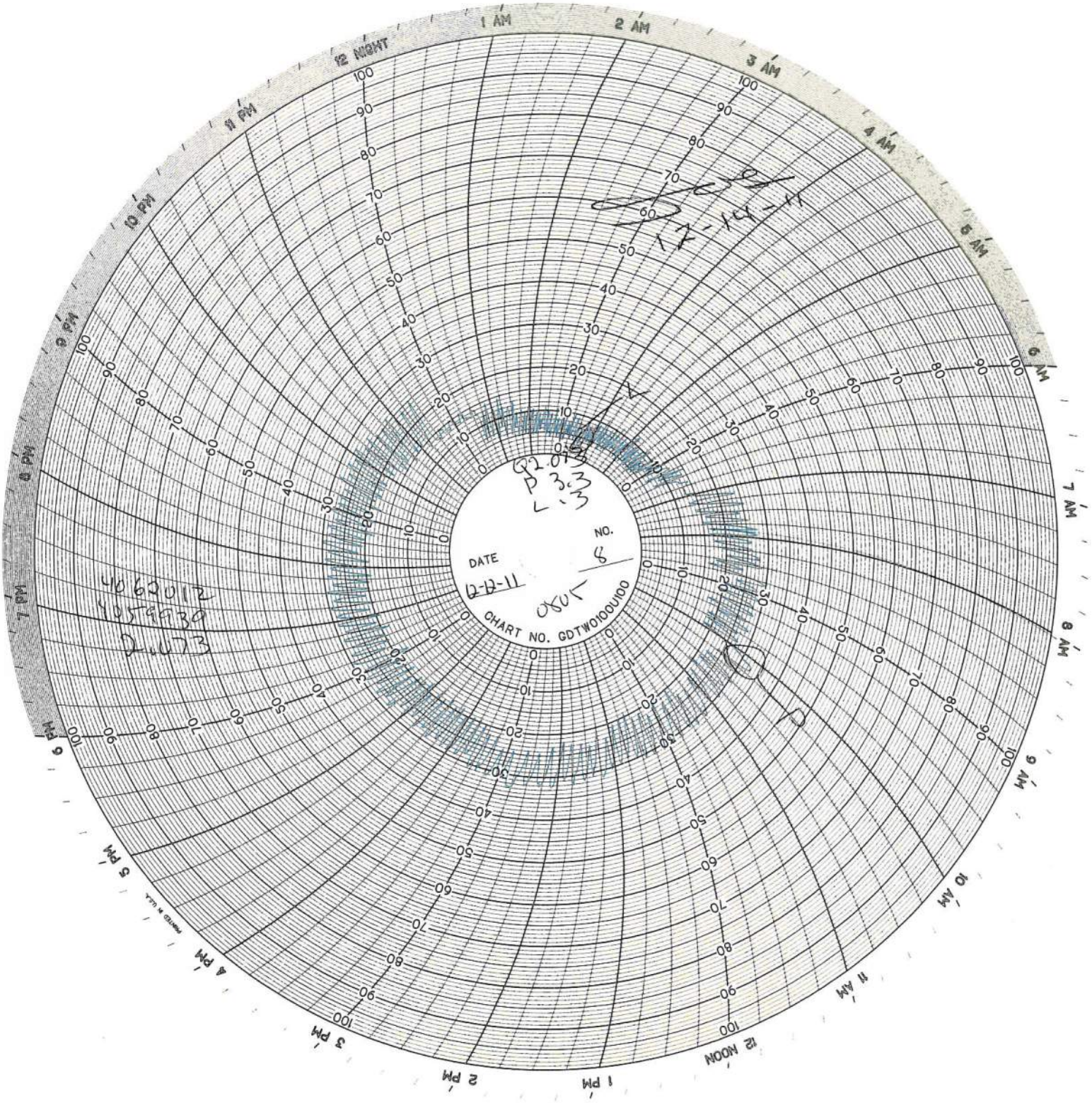
APPENDIX B

Sample Flow Charts


12 NIGHT
1 AM
2 AM
3 AM
4 AM
5 AM
6 AM
7 AM
8 AM
9 AM
10 AM
11 AM
12 NOON
1 PM
2 PM
3 PM
4 PM
5 PM
6 PM
7 PM
8 PM
9 PM
10 PM
11 PM
DATE
12-13-11
NO.
8
CHART NO. GDTW01D0U00
0KU5
Q2.037
P 3.2
L .4
12-19-11
406 40 19
406 20 12
406 20 037


12 MIDNIGHT
1 AM
2 AM
3 AM
4 AM
5 AM
6 AM
7 AM
8 AM
9 AM
10 AM
11 AM
12 NOON
1 PM
2 PM
3 PM
4 PM
5 PM
6 PM
7 PM
8 PM
9 PM
10 PM
11 PM
DATE
12-12-11
NO.
8
CHART NO. GDTW0100U100

CITY OF BANNING

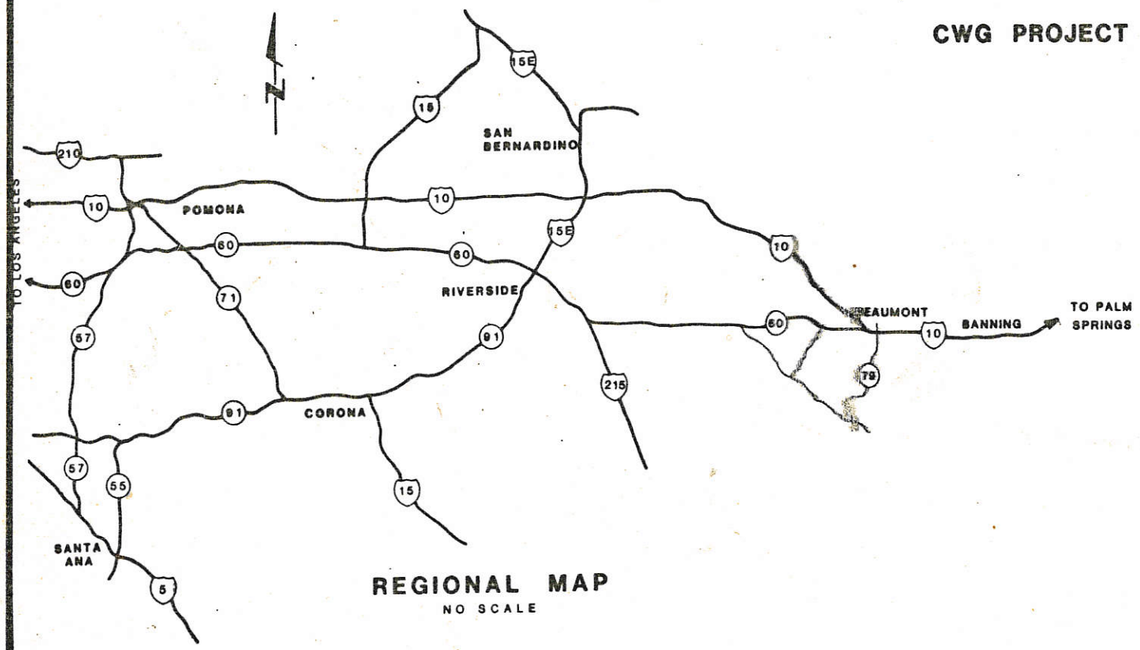
CALIFORNIA

CONSTRUCTION PLANS FOR

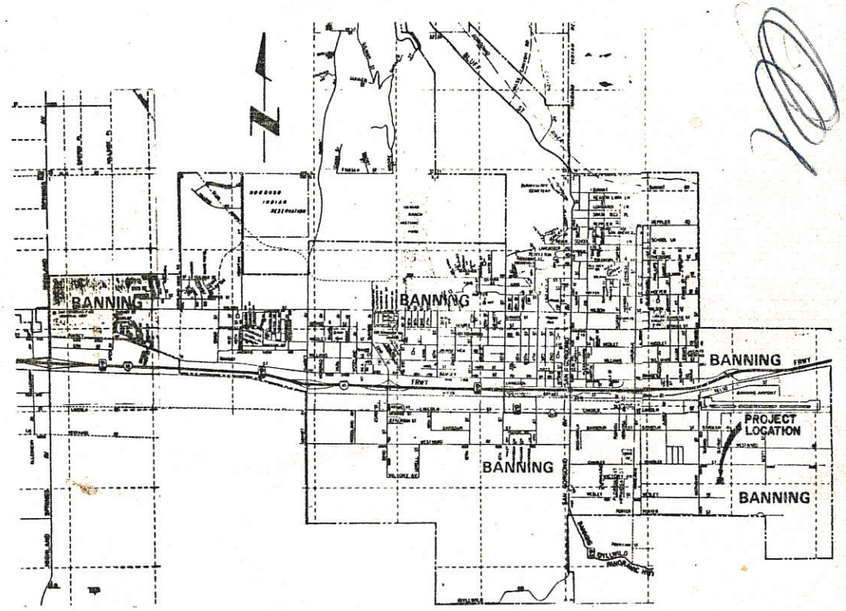
THE

WASTEWATER TREATMENT PLANT
1986 EXPANSION

CWG PROJECT No. C-06-2344-110



REGIONAL MAP
NO SCALE



LOCATION MAP
NO SCALE

CITY COUNCIL

ROD COWLES - MAYOR

EARLE CRAWFORD - MAYOR-PROTEM

MARJORIE LAWRENCE JACK Mc CABE ROOSEVELT WILLIAMS

1434 W. Ramsey

CITY MANAGER

SAM RACADIO

CITY ENGINEER

Ernie Wong, Prin. Engr. 922-1230

714/~~889-4541~~

FINANCING DIRECTOR

WILLIS OLSON

DIR. OF PUBLIC UTILITIES

ELDRIDGE W. SINCLAIR

PROJECT ENGINEER

J. F. DAVIDSON ASSOCIATES

3426 TENTH STREET

RIVERSIDE, CALIFORNIA 92502

W.O. # 84-8186-1

FIELD COPY

W. O'NEIL

REDUCED
NOT TO SCALE

1646

DRAWING INDEX

CIVIL

SHEET NO.	DESCRIPTION
N/A	TITLE SHEET
C - 1	DRAWING INDEX
C - 2	GRADING PLAN
C - 3	HYDRAULIC PROFILE/PROCESS FLOW DIAGRAM
C - 4	GRADING SECTIONS
C - 5	SLUDGE DRYING BEDS
C - 6	EFFLUENT DISPOSAL PONDS

STRUCTURAL

SHEET NO.	DESCRIPTION
S - 1	GENERAL NOTES AND DETAILS
S - 2	DETAILS
S - 3	RECIRCULATION PUMP STATION/PIPE GALLERY
S - 4	TRICKLING FILTER
S - 5	SECONDARY CLARIFIER
S - 6	CHLORINE CONTACT TANK
S - 7	CHLORINE EQUIPMENT BUILDING
S - 8	PRIMARY EFFLUENT PUMP STATION ROOF
S - 9	TRICKLING FILTER ACCESS
S - 10	DIGESTER CONTROL HOUSE - EXPANSION
S - 11	SLUDGE THICKENER

MECHANICAL

SHEET NO.	DESCRIPTION
M - 1	LEGEND AND PIPE MATERIAL SCHEDULE
M - 2	SITE PIPING PLAN
M - 3	VALVE AND SLIDE GATE SCHEDULE
M - 4	RECIRCULATION PUMP STATION/PIPE GALLERY
M - 5	TRICKLING FILTER
M - 6	SECONDARY CLARIFIER
M - 7	CHLORINE CONTACT TANK/CHLORINE EQUIPMENT BUILDING
M - 8	PLANT OUTFALL/PRIMARY EFFLUENT PUMP STA. EXPANSION
M - 9	MECHANICAL DETAILS
M - 10	SLUDGE HEATER
M - 11	SLUDGE THICKENER

ELECTRICAL

SHEET NO.	DESCRIPTION
E - 1	EQUIPMENT CHARACTERISTICS
E - 2	ELECTRICAL SITE PLAN
E - 3	SINGLE LINE DIAGRAM/SWITCHGEAR ELEVATIONS
E - 4	PANEL SCHEDULES/CHLORINE EQUIPMENT BUILDING
E - 5	PULLBOX DIAGRAMS/WORK SCHEDULE

ARCHITECTURAL ⚠

SHEET NO.	DESCRIPTION
	MAINTENANCE FACILITY:
A - 1	SITE PLAN
A - 2	FOUNDATION PLAN/FOOTING DETALS
A - 3	FLOOR PLAN (OFFICE & MAINT. AREA)
A - 4	FLOOR PLAN (STORAGE AREA)(ROOF PLAN)
A - 5	EXTERIOR ELEVATIONS
A - 6	CROSS SECTIONS
A - 7	ROOF PLAN
A - 8	ARCHITECTURAL DETAILS
A - 9	FINISH SCHEDULES, GLASS/GLAZING DETAILS
A - 10	INTERIOR ELEVATIONS
A - 11	EQUIPMENT LAYOUT
A/E	BUILDING ELECTRICAL
A/M	BUILDING HEATING & AIR CONDITIONING
A/P	BUILDING PLUMBING

REDUCED
NOT TO SCALE

⚠ REVISED PER 1986 GRANT — APR. '86

DESIGNED BY J.W. DRAWN BY J.S./R.B. CHECKED BY J.W.

PREPARED UNDER THE SUPERVISION OF:
Vincent M. Fraser 6.0 3/89
REGISTERED CIVIL ENGINEER NO. 12977 DATE: 6/27/85

APPROVED BY:
CITY ENGINEER R.C.E. 29720
CITY OF BANNING DATE: June 27 '85

J.F. DAVIDSON ASSOCIATES
CIVIL ENGINEERS • SURVEYORS • PLANNERS
P.O. BOX 485, RIVERSIDE, CA 92502 • (714) 686-0844
11200 SO. MT. VERNON AVE., #D, COLTON, CA 92324 (714) 825-1082
78-080 EL PASEO, ST. 108, PALM DESERT, CA 92260 (619) 346-6691
P.O. BOX 157, TEMECULA, CA 92390 (714) 676-5338

SCALE N/A
DATE MAY, 1985
BENCH MARK: N/A

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

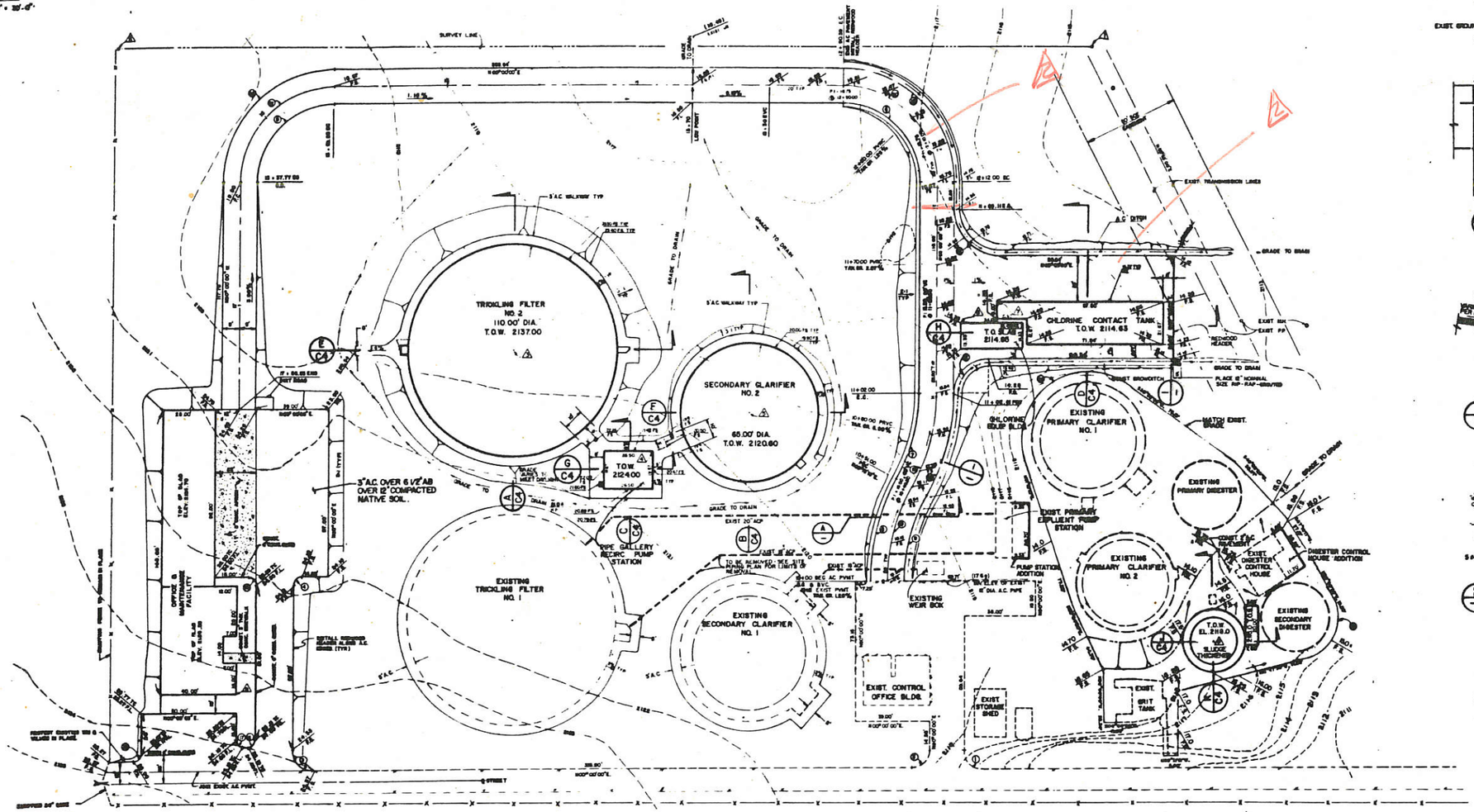
DRAWING INDEX

C-1
OF ___ SHEETS

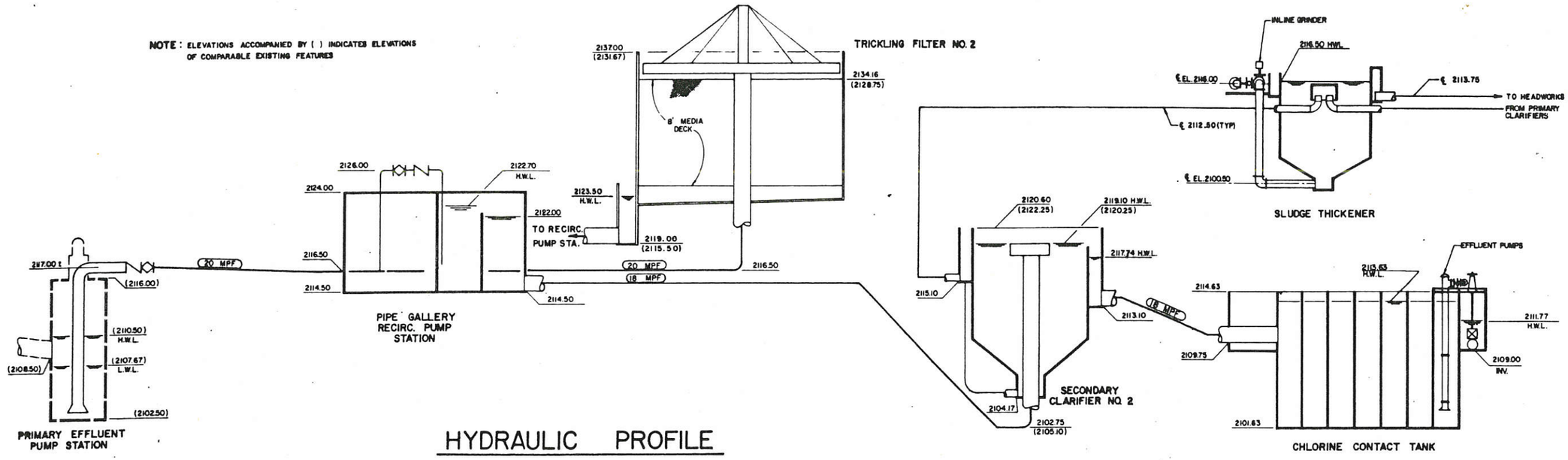
FOR CITY OF BANNING
W.O. F.B. FILE NO. 84-9186

1647

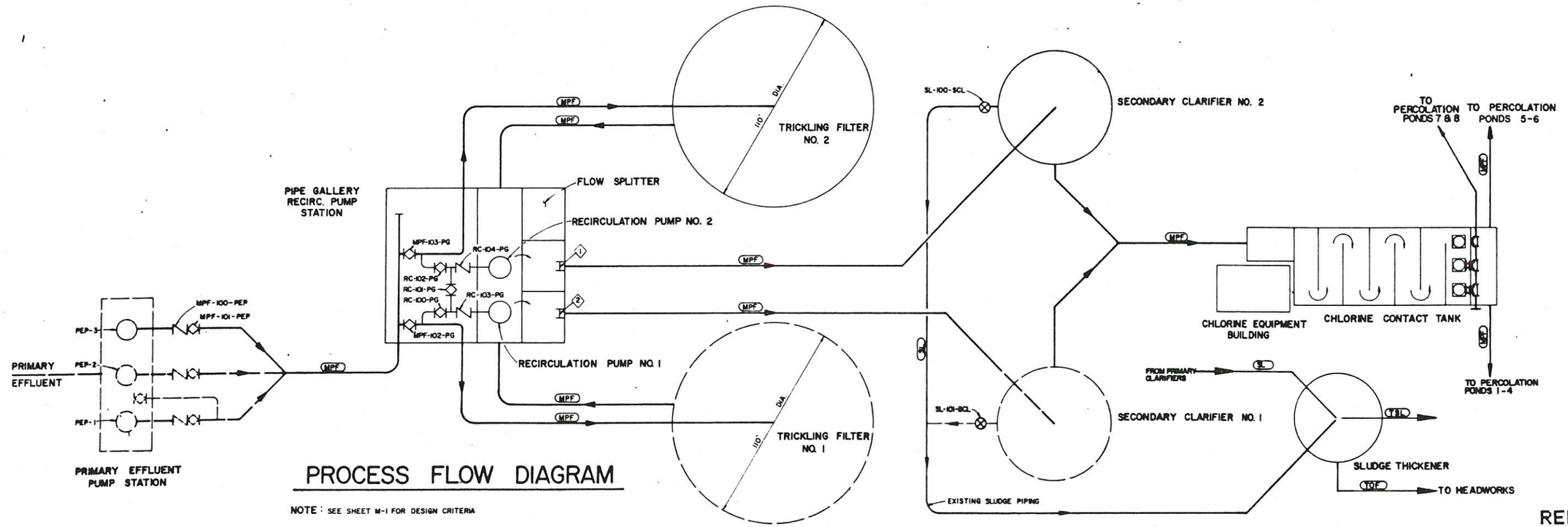
SCALE 1" = 30'-0"


SURVEY LINE
TRICKLING FILTER NO. 2 110.00' DIA. T.O.W. 2137.00
SECONDARY CLARIFIER NO. 2 65.00' DIA. T.O.W. 2120.60
T.O.W 2124.00
3" A.C. OVER 6 1/2" AB OVER 12" COMPACTED NATIVE SOIL.
EXISTING TRICKLING FILTER NO. 1
EXISTING SECONDARY CLARIFIER NO. 1
PIPE GALLERY RECIRC PUMP STATION
EXIST. 20" ACP
EXIST. 8" ACP
EXIST. 8" VCP
EXIST. 15" RCP
EXIST. 18" RCP
EXIST. 48" DIA A.C. PIPE
EXISTING WEIR BOX
EXIST. CONTROL OFFICE BLDG.
EXIST. STORAGE SHED
CHLORINE CONTACT TANK T.O.W 2114.63 T.O.W 2114.66
CHLORINE EQUIP BLDG.
EXISTING PRIMARY CLARIFIER NO. 1
EXISTING PRIMARY CLARIFIER NO. 2
EXIST. PRIMARY EFFLUENT PUMP STATION
EXISTING PRIMARY DIGESTER
EXIST. DIGESTER CONTROL HOUSE
DIGESTER CONTROL HOUSE ADDITION
EXISTING SECONDARY DIGESTER
T.O.W EL. 2110.0 SLUDGE THICKENER
EXIST. GRIT TANK
PUMP STATION ADDITION
EXIST. TRANSMISSION LINES
A.C. DITCH
GRADE TO DRAIN
MATCH EXIST. GRADE
EXIST. RIM
EXIST. PP
REDWOOD HEADER
PLACE 8" NOMINAL SIZE RIP-RAP-GROUTED
OFFICE & MAINTENANCE FACILITY
INSTALL REINFORCED CONCRETE A.C.P. (TYP.)
PROPERTY LINE
EXIST. 24" RCP
EXIST. 30" RCP
EXIST. 36" RCP
EXIST. 42" RCP
EXIST. 48" RCP
EXIST. 54" RCP
EXIST. 60" RCP
EXIST. 66" RCP
EXIST. 72" RCP
EXIST. 78" RCP
EXIST. 84" RCP
EXIST. 90" RCP
EXIST. 96" RCP
EXIST.

NOTE: ELEVATIONS ACCOMPANIED BY ( ) INDICATES ELEVATIONS OF COMPARABLE EXISTING FEATURES



HYDRAULIC PROFILE

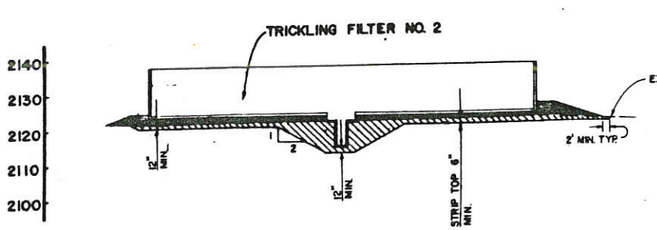


PROCESS FLOW DIAGRAM

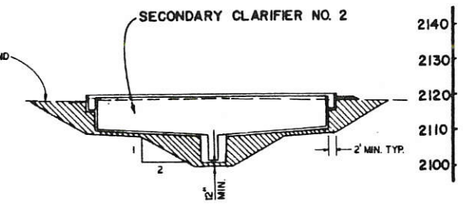
NOTE: SEE SHEET M-1 FOR DESIGN CRITERIA

REDUCED
NOT TO SCALE

⚠ REVISED PER 1986 GRANT — APR. '86	PREPARED UNDER THE SUPERVISION OF: Kenneth M. Fearn Exp 3/89 — REGISTERED CIVIL ENGINEER NO. 12977 — DATE 6/27/86	J.F. DAVIDSON ASSOCIATES CIVIL ENGINEERS • SURVEYORS • PLANNERS	IN THE COUNTY OF RIVERSIDE CALIFORNIA — CITY OF BANNING — WASTEWATER TREATMENT PLANT EXPANSION — C-3
DESIGNED BY J.W. — DRAWN BY J.S./R.B. — CHECKED BY J.W.	APPROVED BY: Charles A. Stevens R.C.E. 29725 — CITY ENGINEER CITY OF BANNING — DATE 6/27/86	P.O. BOX 493 RIVERSIDE, CA 92502 (714) 686-0844 • 11200 SO. MT. VERNON AVE. #D COLTON, CA 92324 (714) 825-1082 • 73-080 EL PASEO ST. #28 PALM DESERT, CA 92260 (619) 346-5691 • P.O. BOX 157 TEMECULA, CA 92390 (714) 676-5336	SCALE NONE — DATE MAY, 1985 — BENCH MARK: CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2 ELEV. = 2114.67 — HYDRAULIC PROFILE / ⚠ PROCESS FLOW DIAGRAM — OF ___ SHEETS
			FOR CITY OF BANNING — W.O. F.B. FILE NO. 84-8186



A/C2 SECTION



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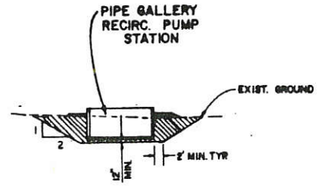

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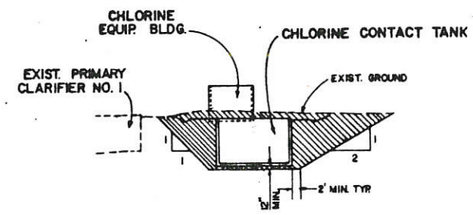
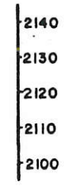
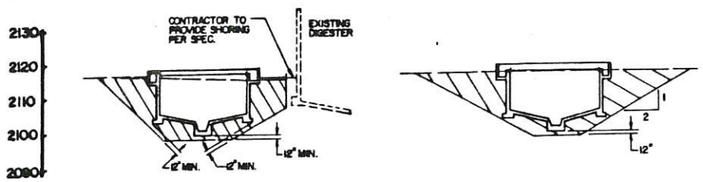


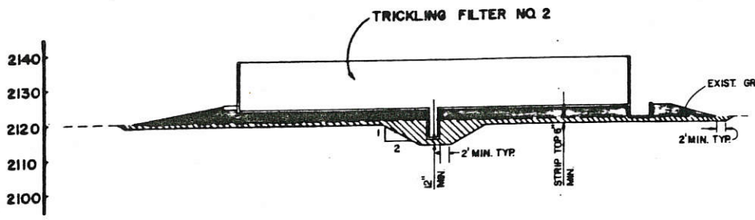
D/C2 SECTION



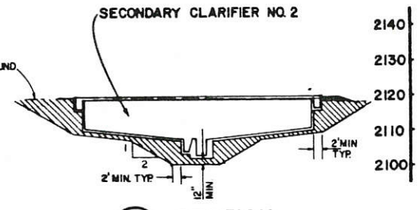


J/C2 SECTION ⚠

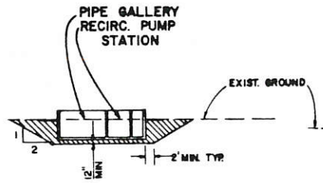
K/C2 SECTION ⚠



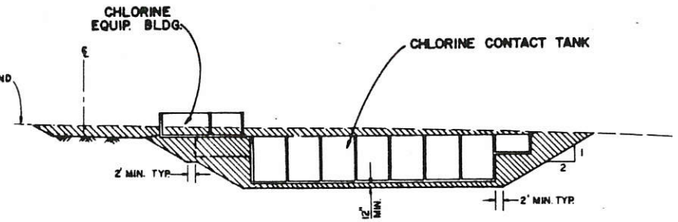
E/C2 SECTION



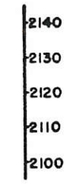
F/C2 SECTION



G/C2 SECTION



H/C2 SECTION



REDUCED
NOT TO SCALE

LEGEND:
- EXCAVATION
- FILL

⚠ REVISED PER 1986 GRANT

PREPARED UNDER THE SUPERVISION OF:
REGISTERED CIVIL ENGINEER NO. 12977 DATE 6/27/86

APPROVED BY
CITY ENGINEER
CITY OF BANNING DATE 6/27/86

J.F. DAVIDSON ASSOCIATES
CIVIL ENGINEERS • SURVEYORS • PLANNERS
P.O. BOX 493 RIVERSIDE, CA 92502 (714) 686-0844
11200 SO. MT. VERNON AVE. #D COLTON, CA 92324 (714) 825-1082
78-080 EL PASEO ST. 108 PALM DESERT, CA 92260 (619) 346-5691
P.O. BOX 157 TEMECULA, CA 92390 (714) 676-5335

SCALE HORIZ. 1"= 20' VERT. 1"= 20'
DATE MAY, 1986

BENCH MARK
CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2 ELEV.= 2114.67

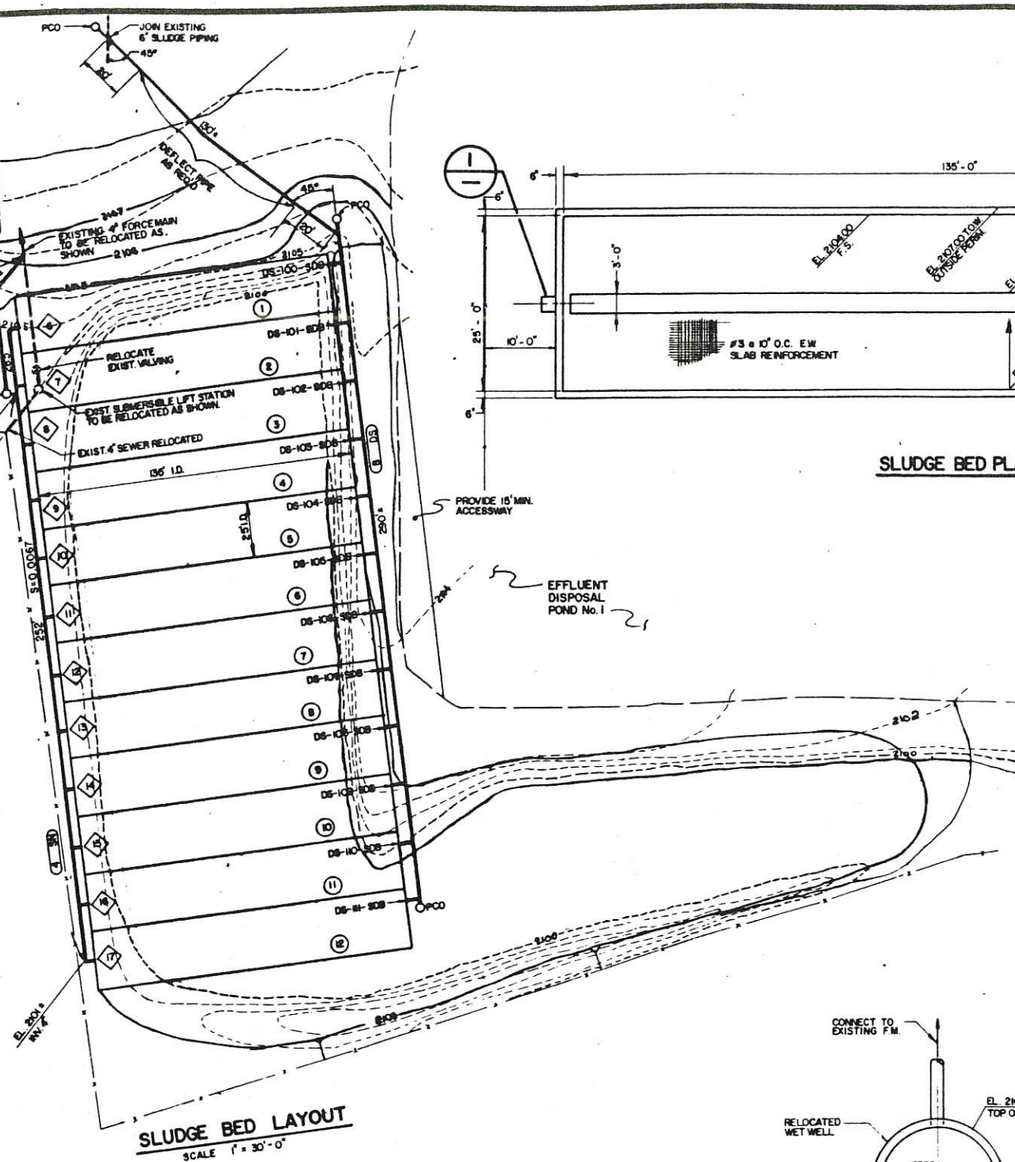
IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

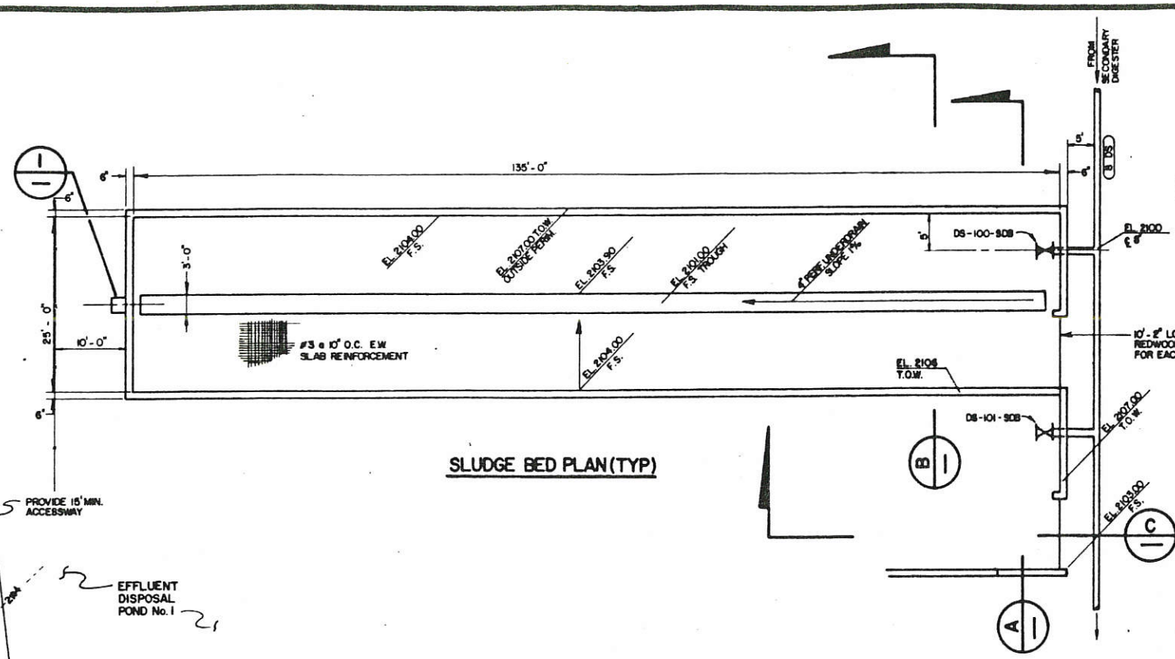
GRADING SECTIONS⚠

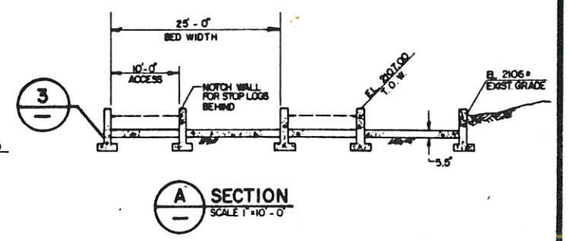
C-4
OF ___ SHEETS

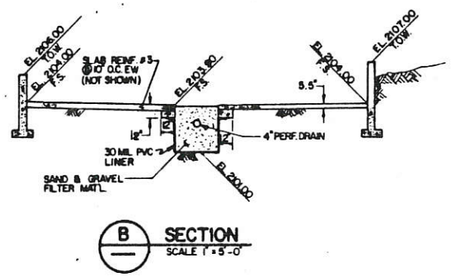
FOR CITY OF BANNING
W.O. F.B. FILE NO. 84-8186

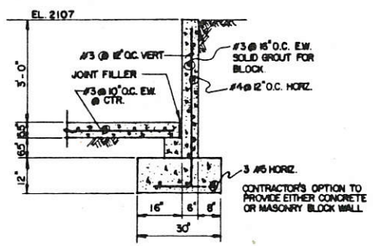
1650

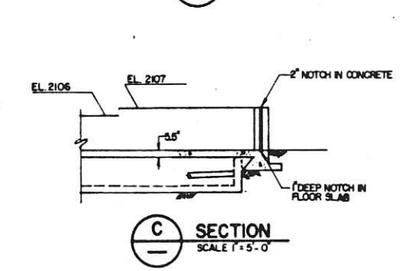


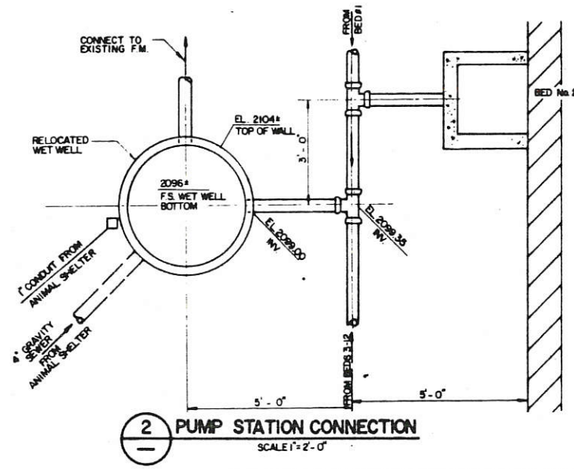


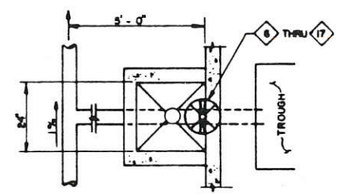


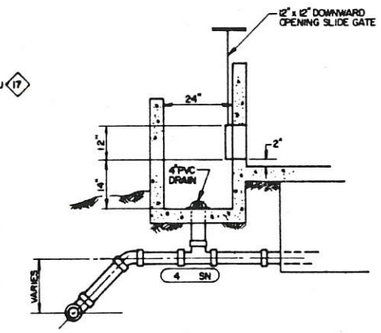












REDUCED
NOT TO SCALE

NOTES:

1. PRIOR TO CONSTRUCTION OF THIS FACILITY, CONTRACTOR SHALL COORDINATE WITH THE ENGINEER FOR INTERIM SLUDGE DRYING FACILITIES AND DISPOSAL OF EXISTING SLUDGE WITHIN THE AREA OF CONSTRUCTION.
2. CONTRACTOR SHALL REMOVE & DISPOSE OF APPROX. 3' OF EXISTING MATERIAL WITHIN THE SHADED AREA. AREA SHALL BE THEN FILLED TO THE ELEVATIONS SHOWN, WITH MATERIAL OBTAINED FROM EXCAVATION OF THE NEW PERCOLATION POND.

MARK	REVISIONS	APPR	DATE
DESIGNED BY J.W	DRAWN BY J.S.	CHECKED BY J.W.	

PREPARED UNDER THE SUPERVISION OF:
REGISTERED CIVIL ENGINEER NO. 12977 DATE 10/23/86 Exp 3/89

APPROVED BY:
CITY OF BANNING DATE 10-27-86 RCE 37413 Exp 6-30-88

J.F. DAVIDSON ASSOCIATES
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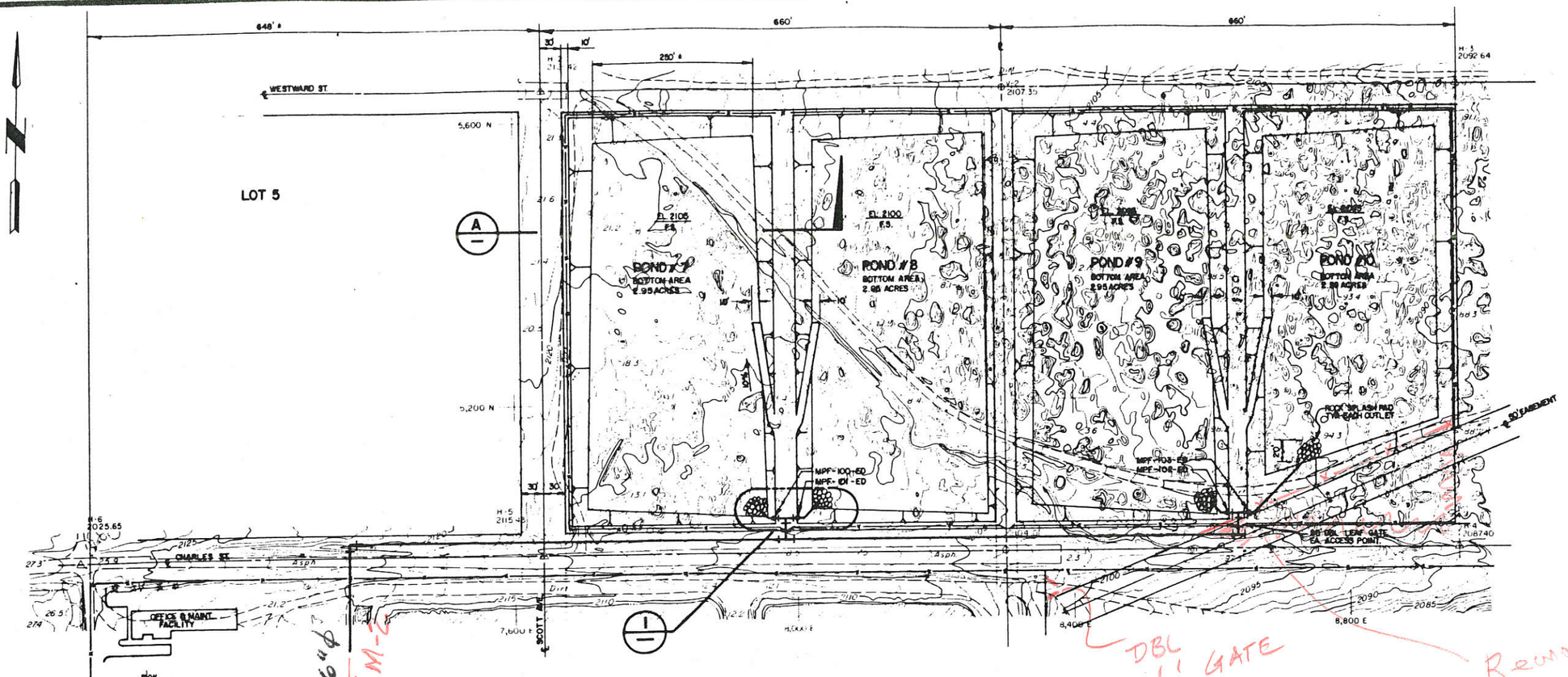
11200 SO. MT. VERNON AVE. #D, COLTON, CA 92324 (714) 825-1082
74-075 EL PASEO, #A-12, PALM DESERT, CA 92260 (619) 346-5691
P.O. BOX 157, TEMECULA, CA 92390 (714) 676-5335

SCALE: AS NOTED
DATE: APRIL 1986
BENCH MARK: CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER No. 2. ELEV. 2114.67

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION
C-5
OF ___ SHEETS

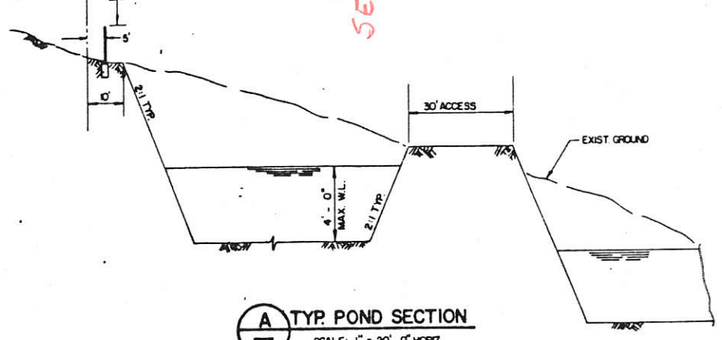
SLUDGE DRYING BEDS

FOR CITY OF BANNING
W.O. F.B. FILE NO. 84-8186

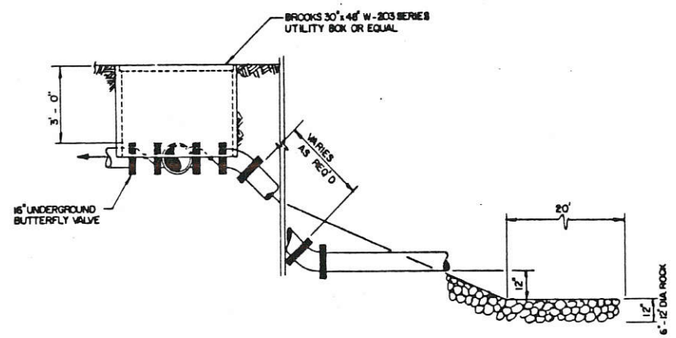


DBL 16' GATE

Remove Pipe & Fence from SCE R/W



A TYP. POND SECTION
SCALE: 1" = 20'-0" HORIZ.
1" = 4'-0" VERT.



1 PIPING / OUTLET
N.T.S.

NOTE:
CONTRACTOR TO STOCKPILE EXCESS MATERIAL ON 10' ± AC. PARCEL EAST OF POND #10 AT THE DIRECTION OF THE ENGINEER.

REVISED

REDUCED
NOT TO SCALE

A Fence

MARK	REVISIONS	APP	DATE
DESIGNED BY JW	DRAWN BY JS	CHECKED BY JW	

PREPARED UNDER THE SUPERVISION OF:
REGISTERED CIVIL ENGINEER NO. 12977
DATE: 10/27/96

APPROVED BY:
CITY OF BANNING
DATE: 10-27-96

J.F. DAVIDSON ASSOCIATES
CIVIL ENGINEERS • SURVEYORS • PLANNERS
P.O. BOX 493, RIVERSIDE, CA 92502 • (714) 686-0844
11200 SO. MT. VERNON AVE., #D, COLTON, CA 92324 • (714) 825-1082
34-075 EL PASEO, #A-12, PALM DESERT, CA 92260 • (619) 346-5691
P.O. BOX 157, TEMECULA, CA 92390 • (714) 676-5335

SCALE: AS NOTED
DATE:

BENCH MARK:
CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER No. 2 EL. 2114.67

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

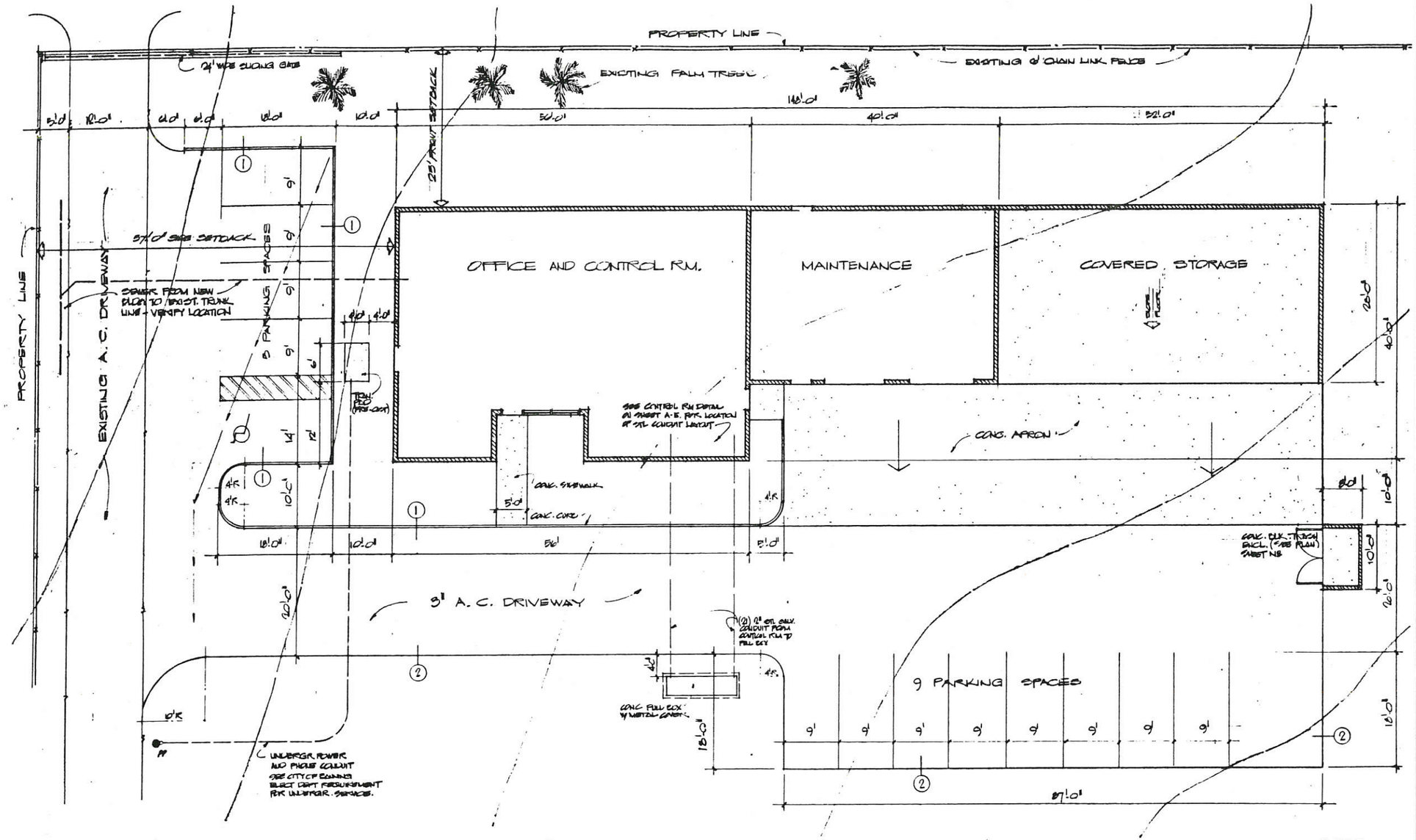
C-6
OF ___ SHEETS

EFFLUENT DISPOSAL PONDS

FOR CITY OF BANNING
W.O. F.B. FILE NO. 84-0186

1652

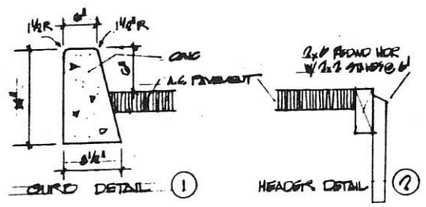
CHARLES ST.



SITE PLAN

SEE GENERAL SITE PLAN OF WASTE WATER TREATMENT PLANT FOR OVERALL SITE PLAN.

SCALE 1/8" = 1'-0"



SCHEDULE OF ARCHITECTURAL DRAWINGS

SHEET	TITLE
NO A1	SITE PLAN
NO A2	FOUNDATION PLAN FOOTING DETAILS
NO A3	FLOOR PLAN (OFFICE & MAINT. AREA)
NO A4	FLOOR PLAN (STORAGE AREA) (ROOF PLAN)
NO A5	EXTERIOR ELEVATIONS
NO A6	CROSS SECTIONS
NO A7	ROOF PLAN
NO A8	ARCHITECTURAL DETAILS
NO A9	FINISH SCHEDULES GLASS/ GLAZING DETAILS
NO A10	INTERIOR ELEVATIONS
NO A11	EQUIPMENT LAYOUT
NO A/E	BUILDING ELECTRICAL
NO A/M	BUILDING HEATING and AIR CONDITIONING
NO A/P	PLUMBING LAYOUT and SCHEDULE

GENERAL NOTES

- THE GENERAL CONTRACTOR SHALL VISIT THE BUILDING SITE AND VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO ANY WORK AND SHALL BE RESPONSIBLE FOR COORDINATION OF ALL WORK AND MATERIALS INCLUDING THOSE FURNISHED BY SUB-CONTRACTORS.
- STANDARD CONSTRUCTION METHODS SHALL APPLY WHERE NO SPECIAL DETAILS OR SECTIONS ARE SHOWN.
- ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE UNIFORM BUILDING CODE AND ALL APPLICABLE CODES OF THE CITY OF BANNING

REDUCED
NOT TO SCALE

PREPARED BY: Ray Stuke
REGISTERED ARCHITECT NO. C016381
DATE: 6/26/86

MARK | REVISIONS | APPD | DATE
DESIGNED BY R.J. DRAWN BY RS CHECKED BY

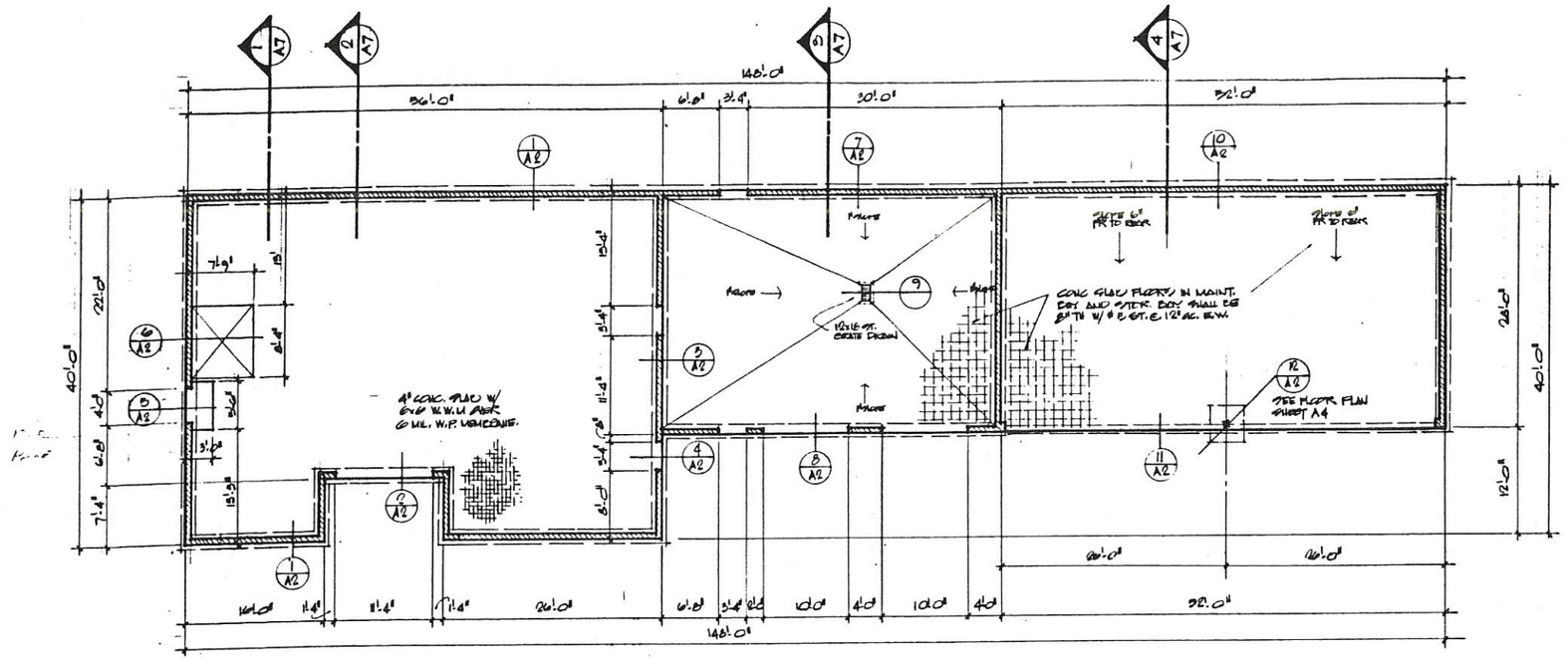
PREPARED UNDER THE SUPERVISION OF Garnett M Fraser Exp 3/89
REGISTERED CIVIL ENGINEER NO. 12977
DATE: 10/27/86

APPROVED BY: Garnett Fraser PER 6-30-88 BCB 83413
CITY OF BANNING
DATE: 10-27-86

J.F. DAVIDSON ASSOCIATES
CIVIL ENGINEERS • SURVEYORS • PLANNERS
P.O. BOX 893, RIVERSIDE, CA 92502, (714) 686-0844
11200 SO. MT. VERNON AVE. #D, COLTON, CA 92324, (714) 825-1082
73-080 EL PASEO, #103, PALM DESERT, CA 92260, (619) 346-5691

SCALE 1/8" = 1'-0"
DATE
BENCH MARK: CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2 ELEV. 2114.67

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTE WATER TREATMENT PLANT EXPANSION
MAINTENANCE FACILITY SITE PLAN
A-1
OF 14 SHEETS
FOR CITY OF BANNING
W.O. F& FILE NO. 84-8186



FOUNDATION PLAN

SCALE 1/8"=1'-0"

FOUNDATION and CONCRETE NOTES

A. FOUNDATIONS

- ASSUMED BEARING VALUE - SEE NOTE 'A'
- ALL BACKFILL SHALL BE COMPACTED TO MINIMUM OF 90% MAXIMUM DENSITY.
- ALL FOOTINGS SHALL BE EMBEDDED A MINIMUM OF 12" BELOW NATURAL GRADE.
- ALL WATER SHALL BE REMOVED FROM FOUNDATION EXCAVATIONS PRIOR TO PLACING ANY CONCRETE.

B. REINFORCING STEEL

- ALL STEEL SHALL BE INTERMEDIATE GRADE CONFORMING TO A.S.T.M. A-615 GR 40.
- ALL STEEL DWG. BRCHT'D BARS SHALL BE DEFORMED PER A.S.T.M. A 305.
- WELDED WIRE MESH SHALL CONFORM TO A.S.T.M. A-185 OR A-497.
- ALL STEEL SHALL BE PLACED AND TIED PROPERLY PRIOR TO POURING CONC.

C. CONCRETE

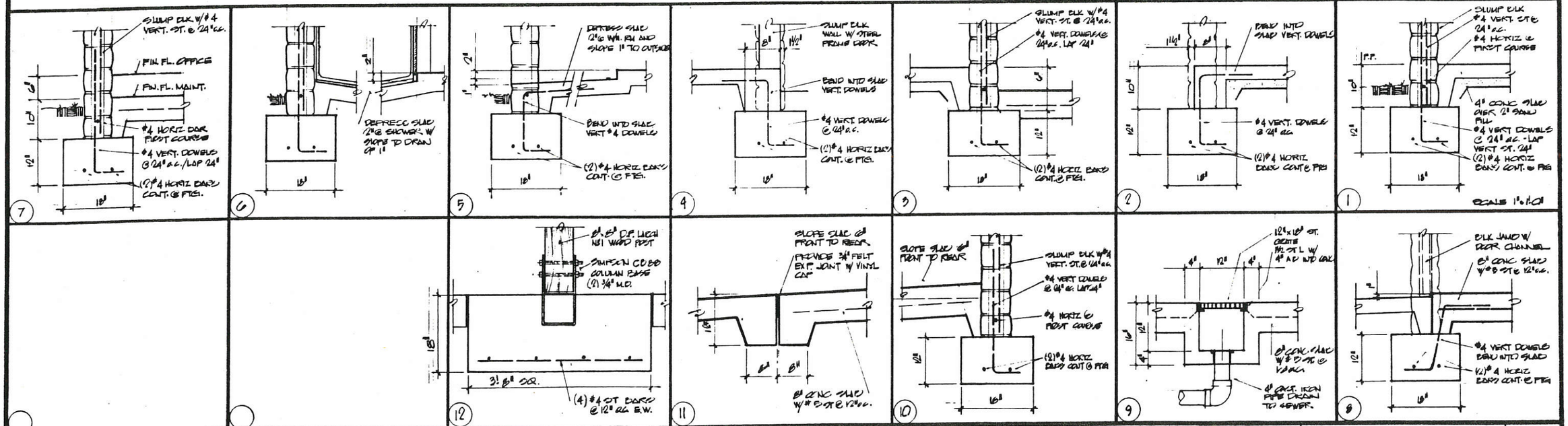
- CONCRETE USE IN THIS WORK SHALL HAVE THE FOLLOWING 28 DAY COMPRESSIVE STRENGTH WITH A 4" MAXIMUM SLUMP, SLABS ON GRADE AND FOOTINGS - 3,000 P.S.I.
- CONCRETE OVER STEEL SHALL BE PER AC I 318-83 REQUIREMENTS
- BEFORE PLACING ANY CONCRETE, CHECK WITH ALL TRADES TO INSURE PROPER PLACEMENT OF ALL OPENINGS, SLEEVES, CURBS, CONDUITS DRAINS, ANCHORS, ETC. RELATING TO THIS BLDG.
- ALL TRADES THAT ARE REQUIRED ACCESS THRU CONC. SHALL BE REQUIRED TO PLACE EQUIPMENT, MATERIAL OR MAKE ARRANGEMENT FOR PLACEMENT PRIOR TO POURING CONCRETE.

D. BLOCK MASONRY

- MASONRY BLOCK UNITS SHALL BE GRADE N-1 f'm = 1500 PSI, SLUMP BLOCK BY FIRST-LITE BLK. MFG. OR ORCO BLOCK MFG., MASONRY UNITS SHALL BE CLEAN AND FREE OF ALL SUBSTANCE THAT MAY INHIBIT BOND.
- MORTAR MIX SHALL CONFORM TO A.S.T.M. C-270 & TYPE S

NOTE 'A' - SEE REPORT OF PRELIMINARY FOUNDATION INVESTIGATION, PROPOSED ADDITIONS TO CITY OF BANNING SEWER AND TREATMENT PLANT 1985 AND 1986 BY ASSOCIATED SOILS ENGINEERING INC.

REDUCED
NOT TO SCALE



PREPARED BY: Roy Stoke
REGISTERED ARCHITECT NO. C016381
DATE: 6/16/86

MARK	REVISIONS	APPD	DATE
DESIGNED BY RS	DRAWN BY RS	CHECKED BY	

PREPARED UNDER THE SUPERVISION OF
Daniel W. Penn 6-30-86
REGISTERED CIVIL ENGINEER NO. 18977
DATE: 10/27/86

APPROVED BY: Garnet Ivey DWP 6-30-86 BAB 7/9/86
CITY OF BANNING
DATE: 10-27-86

J.F. DAVIDSON ASSOCIATES
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11200 SO. MT. VERNON AVE., #D, COLTON, CA 92324, (714) 825-1082
73-080 EL PASEO, #103, PALM DESERT, CA 92260, (619) 346-5691

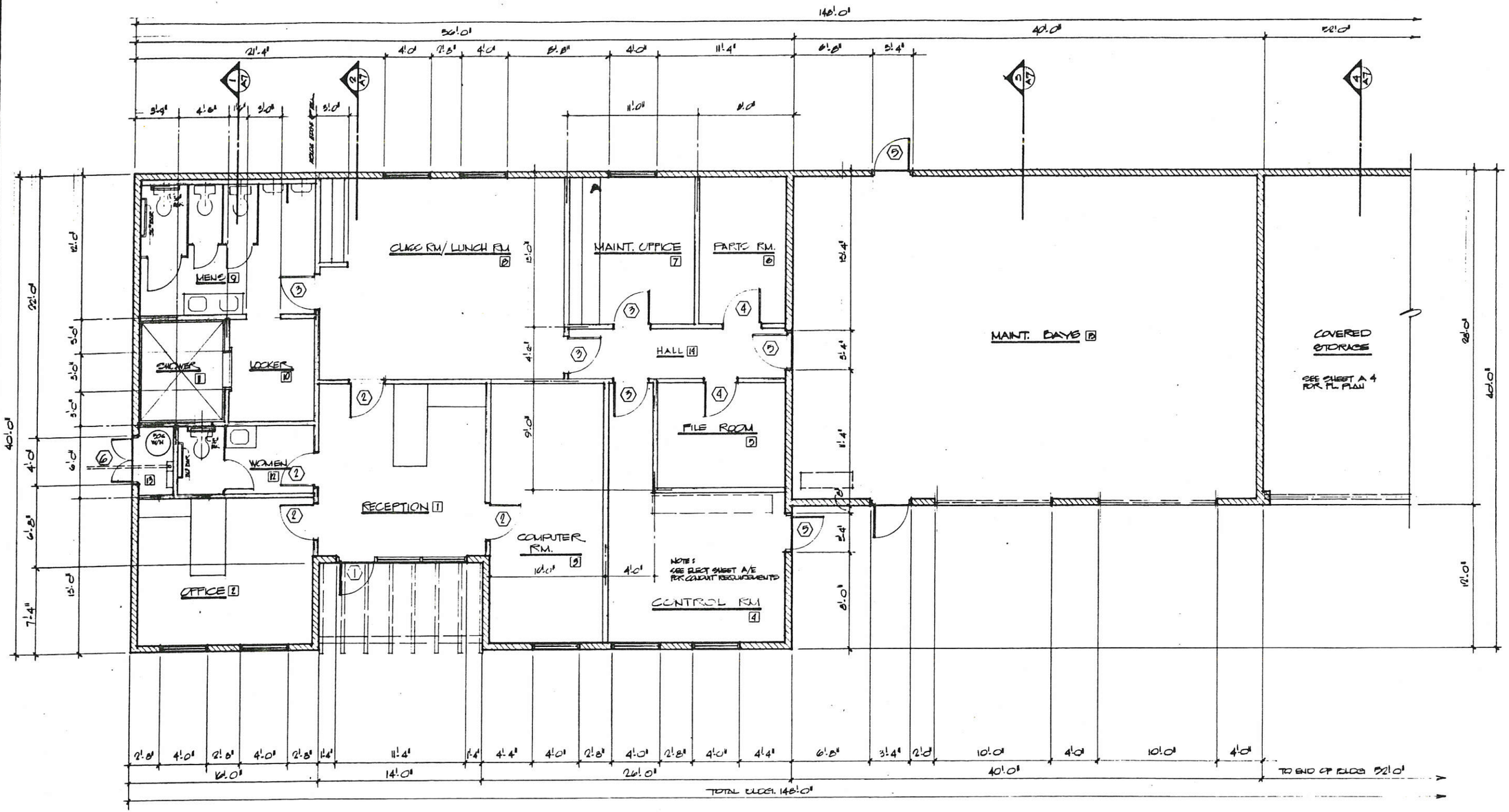
SCALE: SEE DRAWING
DATE:
BENCH MARK: SEE SHEET A-1

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

MAINTENANCE FACILITY FOUNDATION PLAN FOOTING DETAILS

A-2
OF 14 SHEETS

FOR CITY OF BANNING
W.O. F.B. FILE NO. 84-8186



FLOOR PLAN

OFFICE AREA – 2136 SQ. FT.
MAINTENANCE BAY – 1120 SQ. FT.
COVERED STORAGE – 1456 SQ. FT.

SCALE 1/4" = 1'-0"

REDUCED
NOT TO SCALE

PREPARED BY: Ray Stark
REGISTERED ARCHITECT NO. C016381
DATE: 6/16/86

MARK | REVISIONS | APPD | DATE
CHECKED BY: RS DRAWN BY: RS CHECKED BY:

PREPARED UNDER THE SUPERVISION OF
REGISTERED CIVIL ENGINEER NO. 18977 DATE: 10/27/86

APPROVED BY:
CITY OF BANNING DATE: 10-27-86

J.F. DAVIDSON ASSOCIATES
CIVIL ENGINEERS • SURVEYORS • PLANNERS
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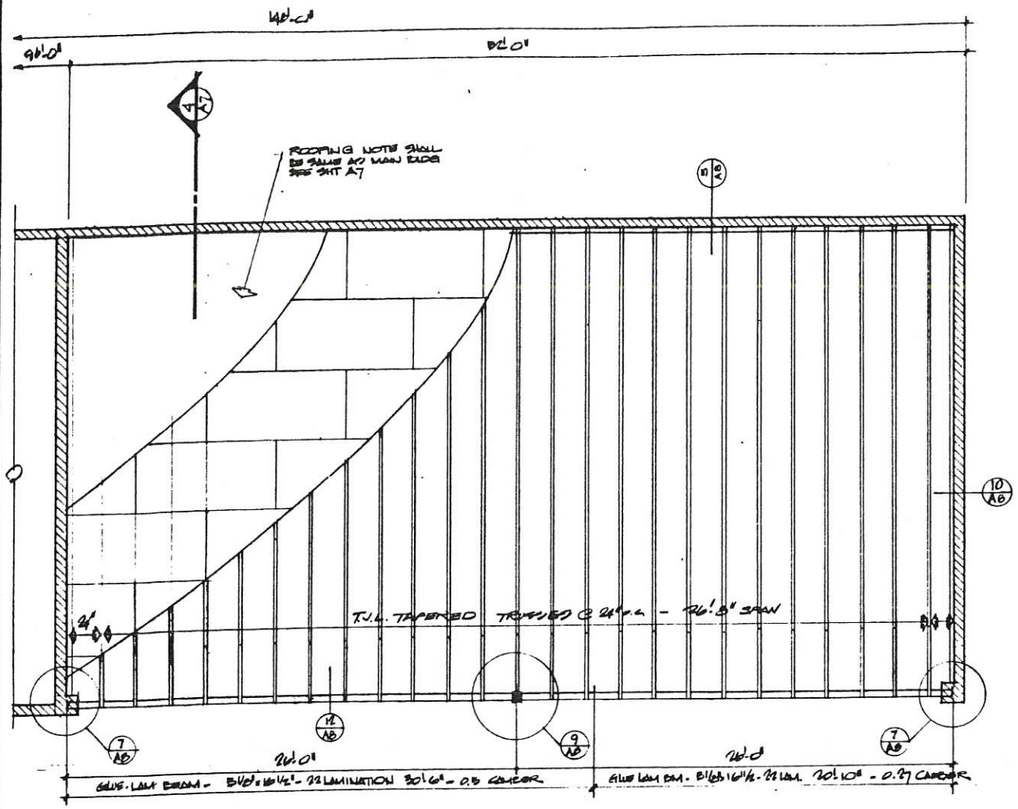
11200 SO. MT. VERNON AVE., #D, COLTON, CA 92324, (714) 825-1082
73-080 EL PASEO, #103, PALM DESERT, CA 92260, (619) 346-5691

SCALE 1/4" = 1'-0"
DATE
BENCH MARK: SEE SHEET A-1

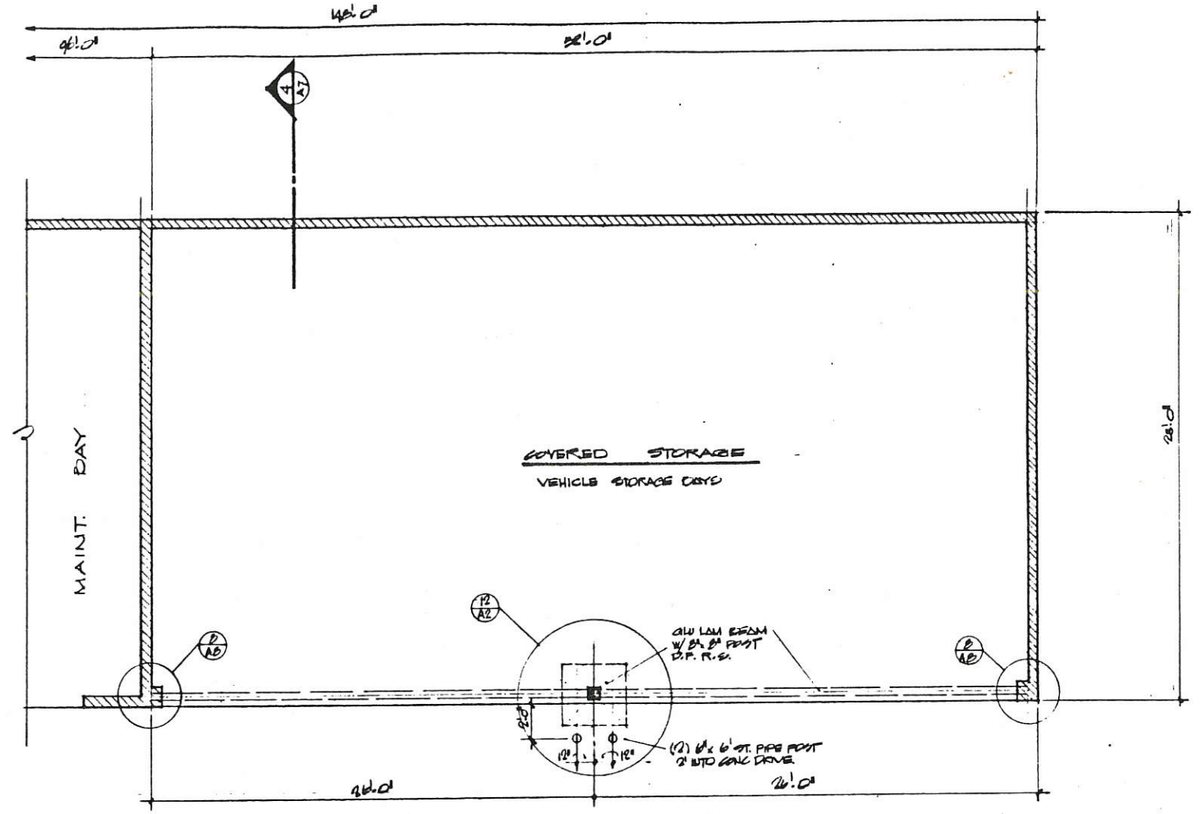
IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION
MAINTENANCE FACILITY FLOOR PLAN (OFFICE & MAINT. AREA)
FOR CITY OF BANNING

A-3
OF 14 SHEETS
W.O. F.B. FILE NO 84-8186



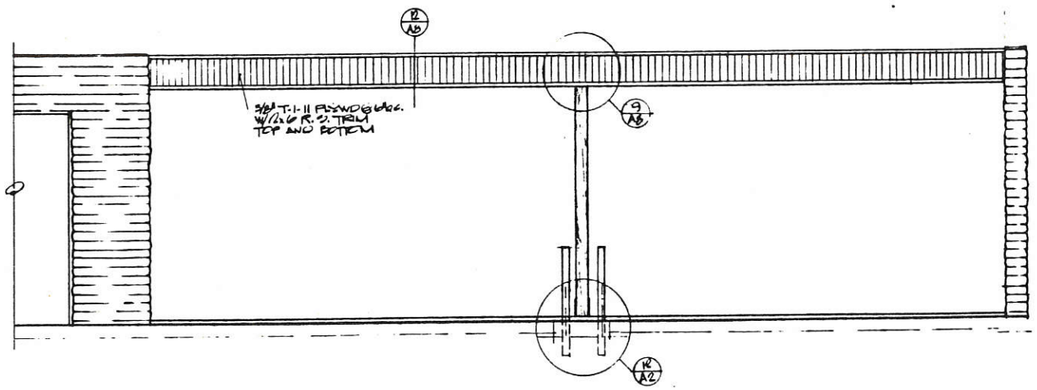
ROOF PLAN (VEHICLE STORAGE BAYS)

SCALE 1/4" = 1'-0"



FLOOR PLAN (VEHICLE STORAGE BAYS)

SCALE 1/4" = 1'-0"



ELEVATION OF VEHICLE STORAGE BAYS

REDUCED
NOT TO SCALE

PREPARED BY:
REGISTERED ARCHITECT NO. C 016381
DATE: 6/16/86

MARK REVISIONS APPR DATE

DESIGNED BY RC DRAWN BY RJ CHECKED BY

PREPARED UNDER THE SUPERVISION OF
REGISTERED CIVIL ENGINEER NO 12997 DATE: 10/27/86

APPROVED BY:
CITY OF BANNING DATE: 10-27-86

J.F. DAVIDSON ASSOCIATES
CIVIL ENGINEERS • SURVEYORS • PLANNERS
P.O. BOX 493, RIVERSIDE, CA 92502, (714) 686-0844
11200 SO. MT. VERNON AVE. #D, COLTON, CA 92324, (714) 825-1082
73-080 EL PASEO, #103, PALM DESERT, CA 92260, (619) 346-5691

SCALE 1/4" = 1'-0"
DATE
BENCH MARK: SEE SHEET A-1

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

MAINTENANCE FACILITY FLOOR PLAN (STORAGE AREA)

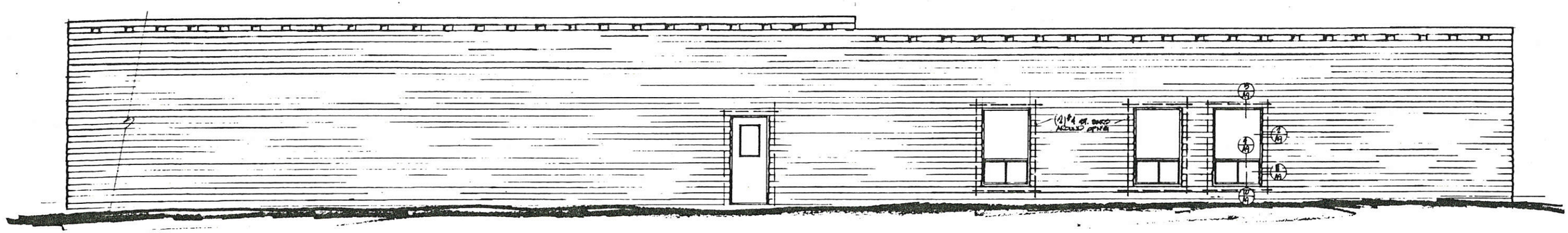
A-4
OF 14 SHEETS

FOR CITY OF BANNING
WO F.B. FILE NO 84-6186

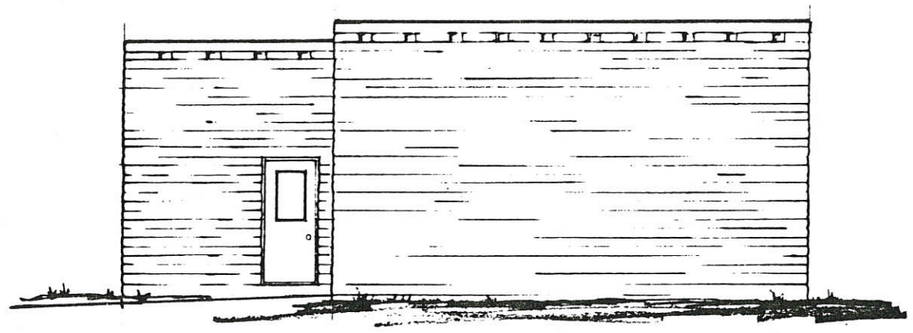


SOUTH ELEVATION

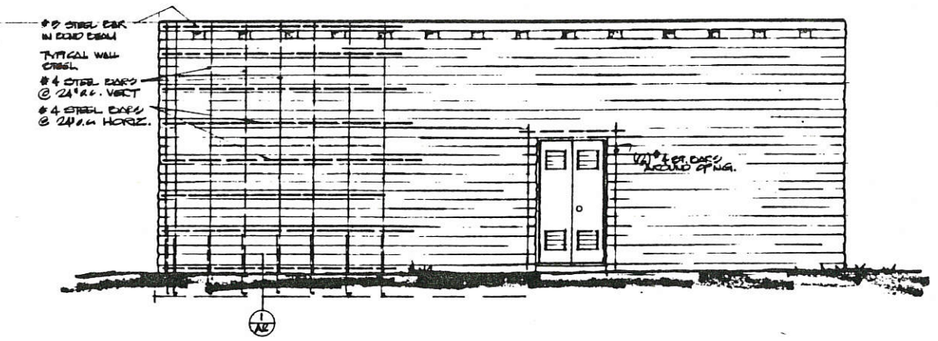
SCALE 1/4"=1'-0"



NORTH ELEVATION



EAST ELEVATION



WEST ELEVATION

REDUCED
NOT TO SCALE

PREPARED BY: Ray Hirsch
REGISTERED ARCHITECT NO. C016381
DATE: 6/10/88

MARK | REVISIONS | APPD | DATE
DESIGNED BY RD DRAWN BY RD CHECKED BY

PREPARED UNDER THE SUPERVISION OF Ernest W. Jones dcm 3/89
REGISTERED CIVIL ENGINEER NO 18977
DATE 10/27/88

APPROVED BY: Ernest Young dcm 3/14/8
CITY OF BANNING
DATE: 10-27-88

J.F. DAVIDSON ASSOCIATES
CIVIL ENGINEERS • SURVEYORS • PLANNERS
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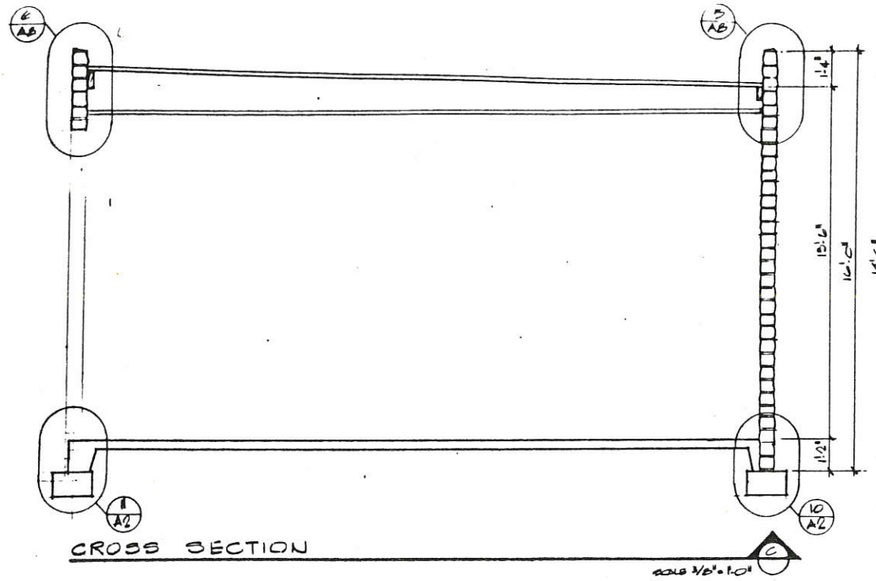
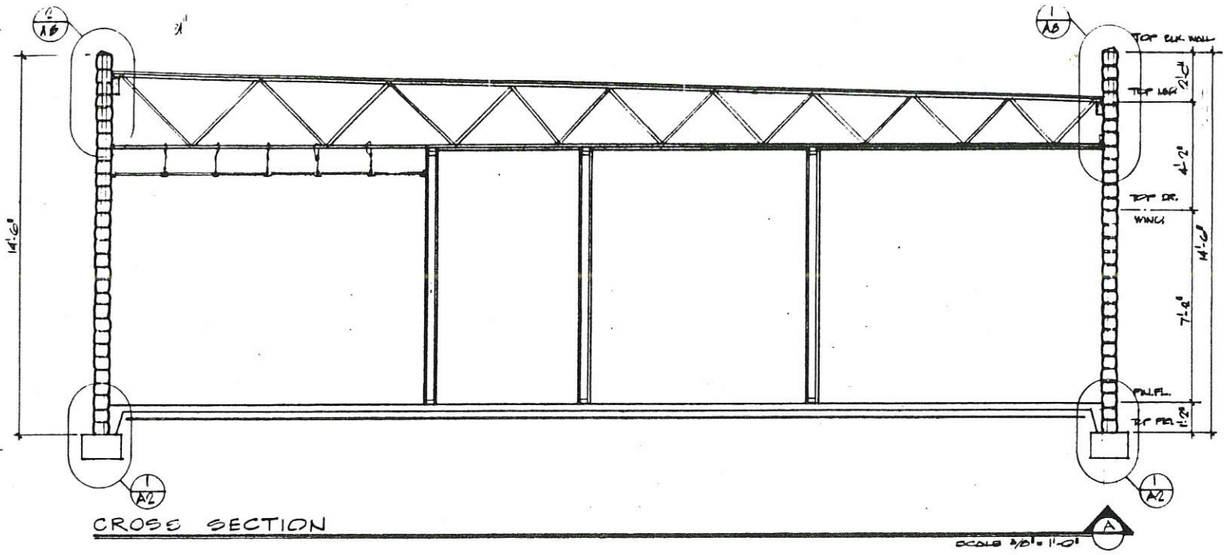
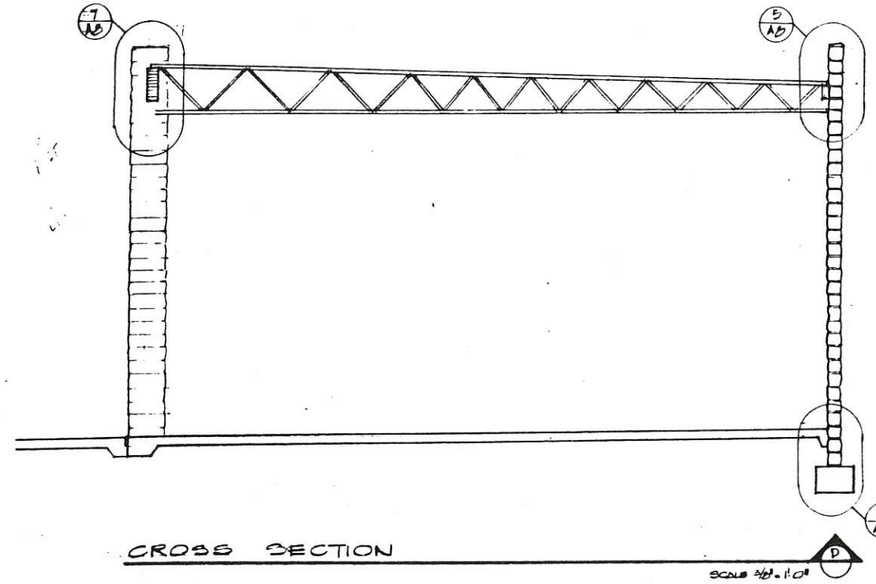
73-080 EL PASEO, #103, PALM DESERT, CA 92260, (619) 346-5691

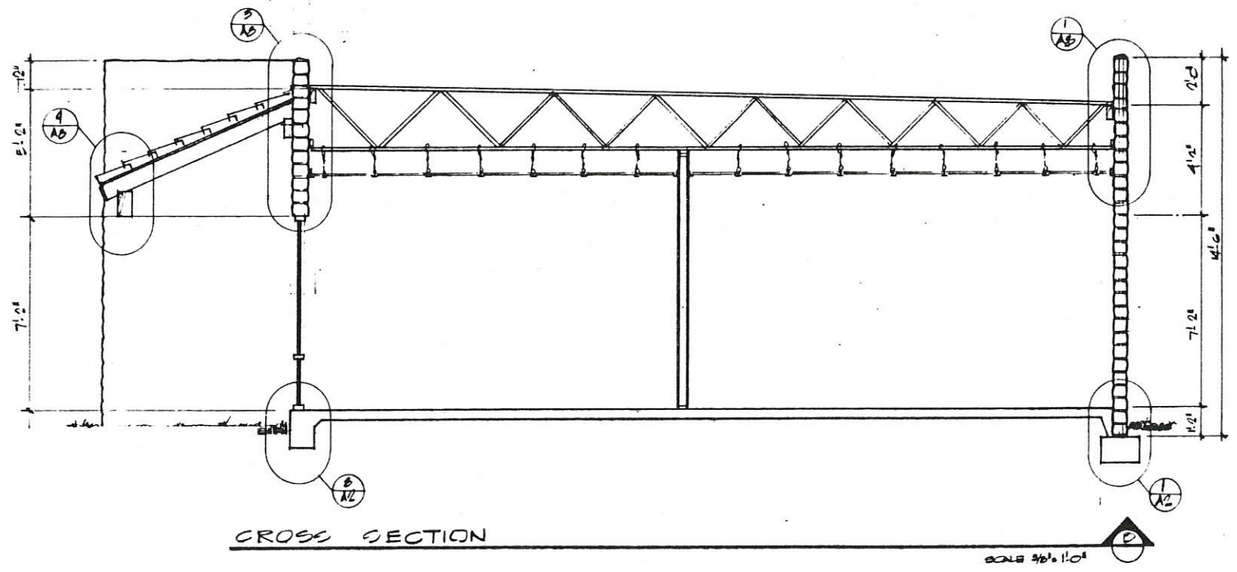
SCALE 1/4"=1'-0"
DATE
BENCH MARK: SEE SHEET A-1

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTE WATER TREATMENT PLANT EXPANSION
MAINTENANCE FACILITY EXTERIOR ELEVATIONS
A-5
OF 14 SHEETS
FOR CITY OF BANNING
WO FB FILE NO 94-8186









REDUCED
NOT TO SCALE

PREPARED BY:
REGISTERED ARCHITECT NO. C016381
DATE: 6/16/86

PREPARED UNDER THE SUPERVISION OF
REGISTERED CIVIL ENGINEER NO. 18977
DATE: 10/27/86

APPROVED BY:
CITY OF BANNING
DATE: 10-27-86

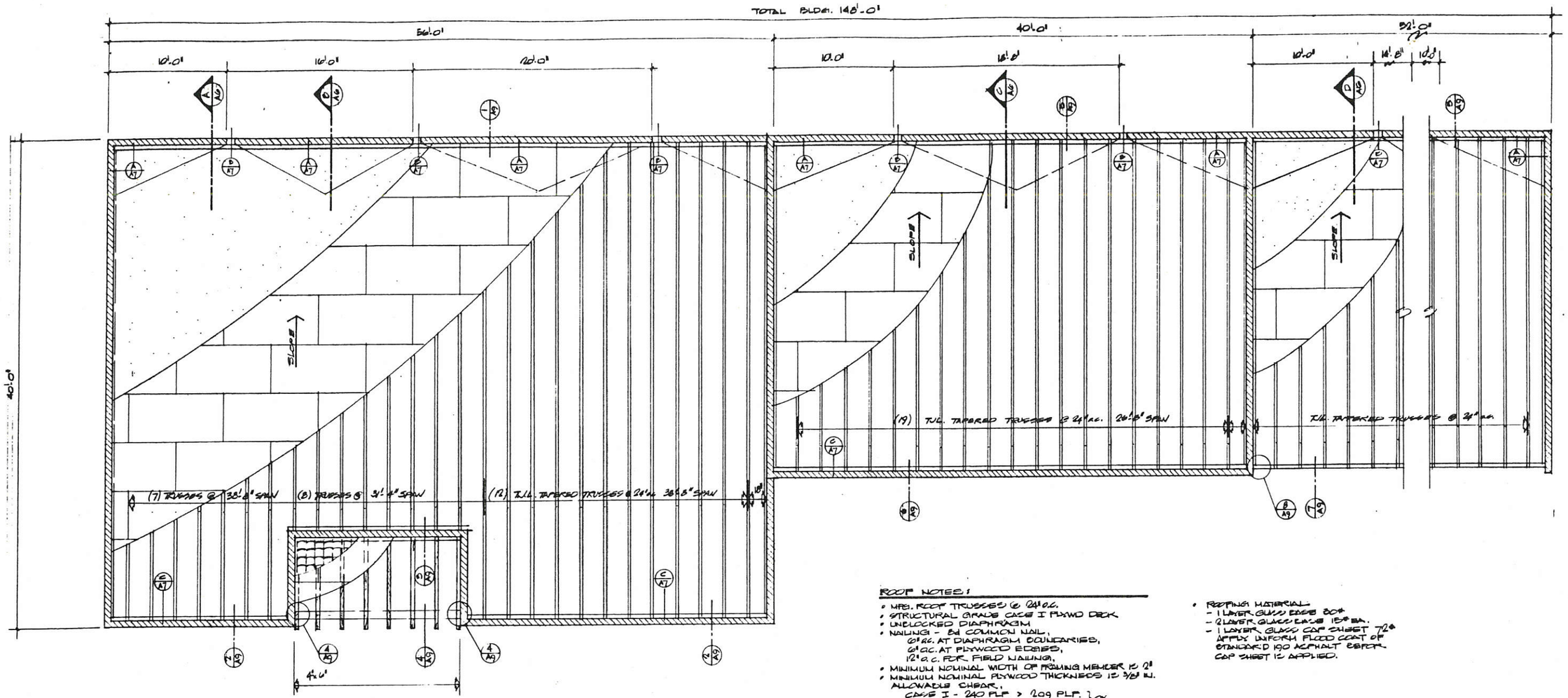
J.F. DAVIDSON ASSOCIATES
CIVIL ENGINEERS • SURVEYORS • PLANNERS
P.O. BOX 493, RIVERSIDE, CA 92502, (714) 686-0844
11200 SO. MT. VERNON AVE. #D, COLTON, CA 92324, (714) 825-1082
73-080 EL PASEO, #103, PALM DESERT, CA 92260, (619) 346-5691

SCALE 3/8" = 1'-0"
DATE
BENCH MARK: SEE SHEET A-1

IN THE COUNTY OF RIVERSIDE, CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION
MAINTENANCE FACILITY
CROSS SECTIONS

A-6
OF 14 SHEETS

FOR CITY OF BANNING
WO F& FILE NO 84-8186



ROOF PLAN

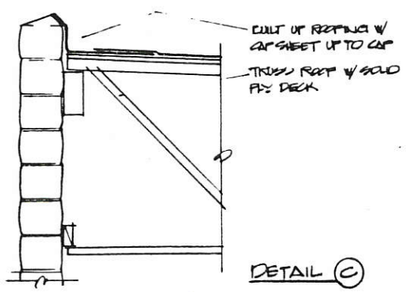
SCALE 1/4" = 1'-0"

ROOF NOTES:

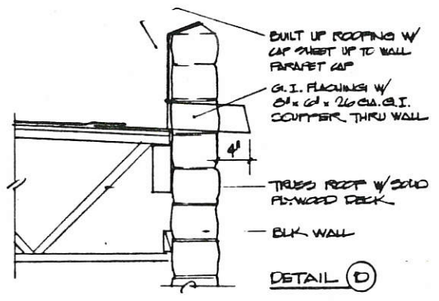
- MFG. ROOF TRUSSES @ 24" O.C.
- STRUCTURAL GRADE CASE I PLYWD DECK
- UNBLOCKED DIAPHRAGM
- NAILING - 8d COMMON NAIL, 6" o.c. AT DIAPHRAGM BOUNDARIES, 6" o.c. AT PLYWOOD EDGES, 12" o.c. FOR FIELD NAILING,
- MINIMUM NOMINAL WIDTH OF FRAMING MEMBER IS 2"
- MINIMUM NOMINAL PLYWOOD THICKNESS IS 3/8" U.N. ALLOWABLE SHEAR, CASE I - 240 PLF > 209 PLF. } OK
  CASE II - 180 PLF > 140 PLF. }

- ROOFING MATERIAL
  - 1 LAYER GLASS EDGE 30#
  - 2 LAYER GLASS BASE 15# EA.
  - 1 LAYER GLASS CAP SHEET 72# APPLY UNIFORM FLOOD COAT OF STANDARD 190 ASPHALT EFFER CAP SHEET IS APPLIED.

REDUCED
NOT TO SCALE



DETAIL (C)



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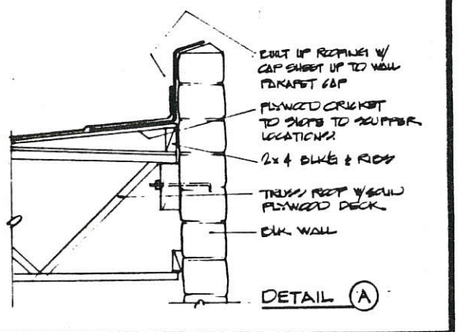

DETAIL (A)

PREPARED BY: Ray Stucke
REGISTERED ARCHITECT NO. C016381
DATE: 6/16/86

MARK	REVISIONS	APPR	DATE
DESIGNED BY	DRAWN BY	CHECKED BY	

PREPARED UNDER THE SUPERVISION OF
Lionel M. Fenn 8:10 3/89
REGISTERED CIVIL ENGINEER NO. 18977
DATE 10/29/86

APPROVED BY:
Grant Young RCE 37413
CITY OF BANNING
DATE 10-27-86

J.F. DAVIDSON ASSOCIATES
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11200 SO. MT. VERNON AVE. #D, COLTON, CA 92324, (714) 825-1082
73-080 EL PASEO, #103, PALM DESERT, CA 92260, (619) 346-5691

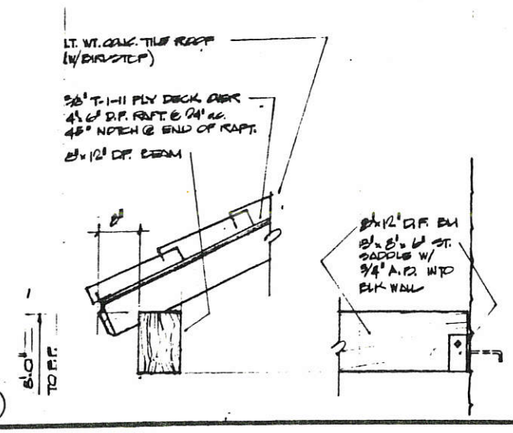
SCALE 1/4" = 1'-0"
DATE
BENCH MARK: SEE SHEET A-1

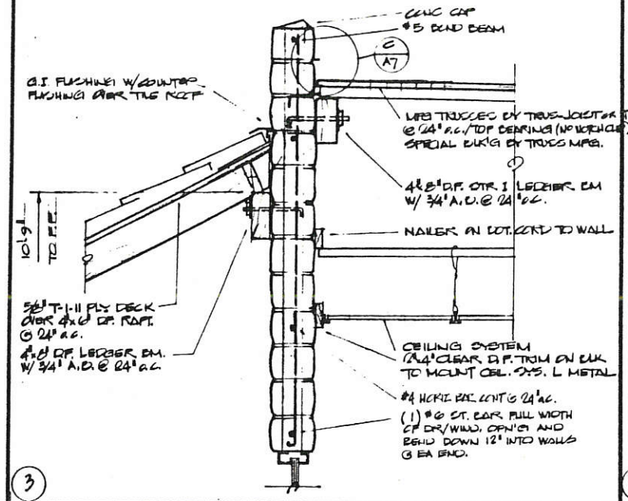
IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTE WATER TREATMENT PLANT EXPANSION

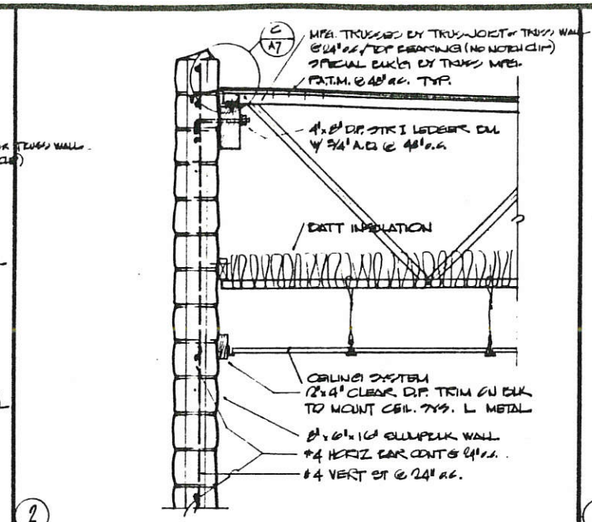
MAINTENANCE FACILITY ROOF PLAN

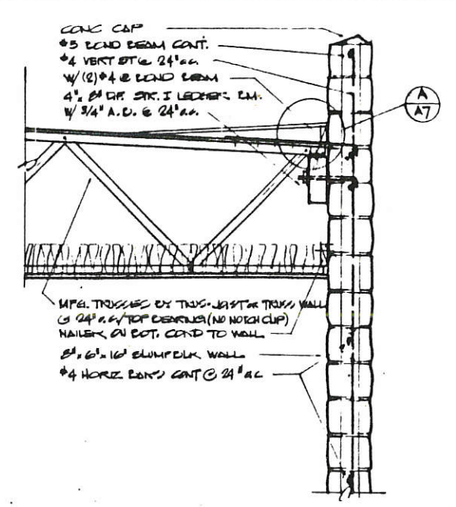
A-7
OF 14 SHEETS

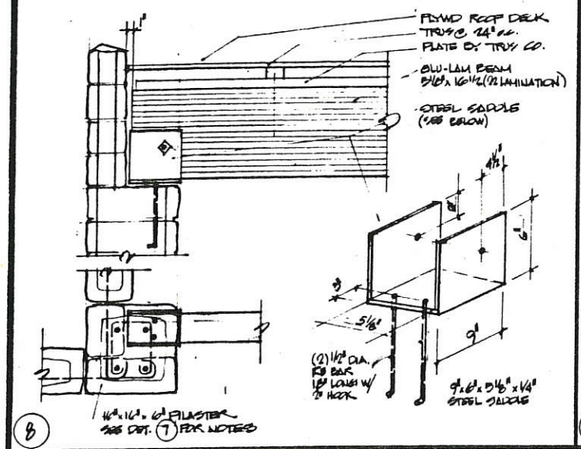
FOR CITY OF BANNING
W.O. F.B. FILE NO. 84-8186

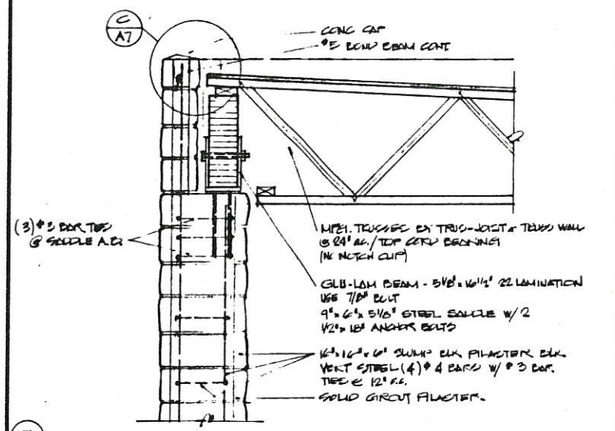


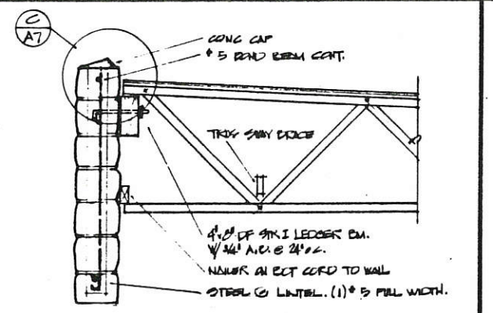


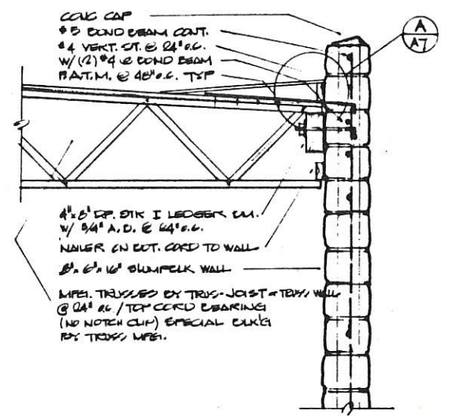


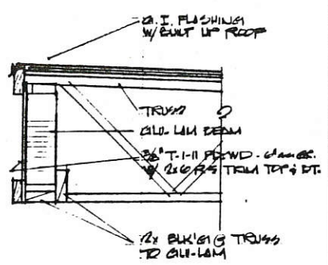


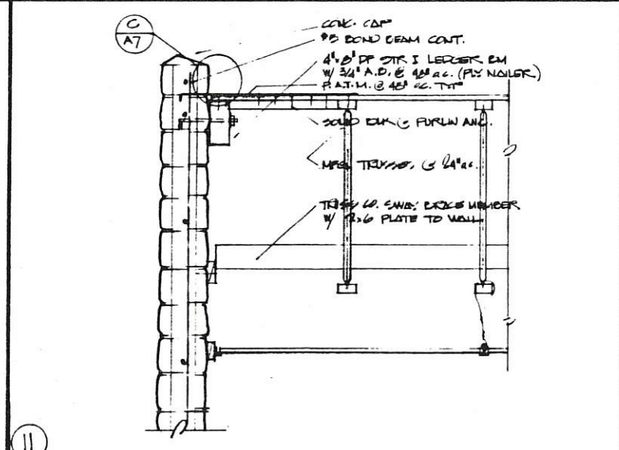


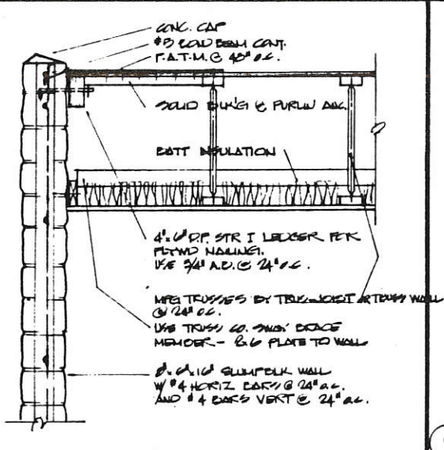


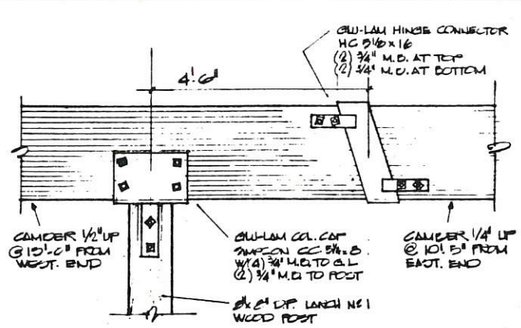












REDUCED
NOT TO SCALE

PREPARED BY: Roy Stark
REGISTERED ARCHITECT NO. C016381
DATE: 6/10/86

MARK	REVISIONS	APPR	DATE
DESIGNED BY	DRAWN BY	CHECKED BY	

PREPARED UNDER THE SUPERVISION OF
REGISTERED CIVIL ENGINEER NO. 12977 DATE: 10/22/86

APPROVED BY:
CITY OF BANNING DATE: 10-31-86

J.F. DAVIDSON ASSOCIATES
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P.O. BOX 893, RIVERSIDE, CA 92502, (714) 686-0844
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73-080 EL PASEO, #103, PALM DESERT, CA 92260, (619) 346-5691

SCALE
DATE
BENCH MARK: SEE SHEET A-1

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

MAINTENANCE FACILITY ARCHITECTURAL DETAILS

A-8 OF 14 SHEETS

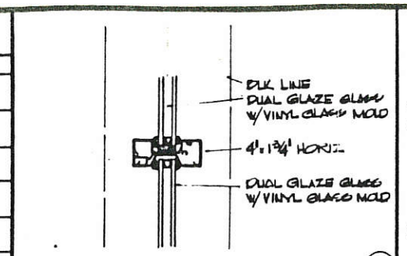
FOR CITY OF BANNING
W.O. F.B. FILE NO. 84-8186

INTERIOR FINISH SCHEDULE

ROOM NO	ROOM	FLOOR	BASE	NORTH WALL	EAST WALL	SOUTH WALL	WEST WALL	CEILING	REMARKS
1	RECEPTION	CARPET	6" VINYL TOPSET	DRYWALL PAINT - OFF WHITE	DRYWALL PAINT	BLK. (PAINT) OUTSIDE COLOR GLASS	DRYWALL PAINT	T-BAR	
2	OFFICE	CARPET	"	"	" BLK. WALL - PAINT OUTSIDE COLOR.	" "	BLK. WALL - PAINT OUTSIDE COLOR.	"	
3	COMPUTER	VINYL ASSC TILE	"	"	DRY WALL PAINT	BLK. WALL - PAINT OUTSIDE COLOR	DRYWALL PAINT	"	
4	CONTROL	VINYL ASSC TILE	"	"	BLK. WALL - PAINT OUTSIDE COLOR.	"	"	"	
5	FILES STORAGE	VINYL ASSC TILE	"	"	BLK. WALL - PAINT OFF WHITE - ENL.	DRYWALL PAINT	"	DRYWALL PAINT	
6	PARTS	CONC.	"	BLK - PAINT OFF WHITE - ENL.	" "	"	"	DRYWALL PAINT	
7	MAINT. OFFICE	VINYL ASSC. TILE	"	" "	DRYWALL PAINT.	"	"	T-BAR	
8	CLOSE/LUNCH	VINYL ASSC TILE	"	" "	"	"	"	"	
9	MENS	VINYL ASSC TILE	"	DRYWALL PAINT OFF WHITE - ENL.	"	"	BLK. WALL - PAINT ENL - OFF WHITE	DRYWALL PAINT	ENL. PAINT
10	LOCKER	CER. TILE	CER. TILE	" "	"	"	DRYWALL PAINT	DRYWALL PAINT	"
11	SHOWER	CER. TILE	CER. TILE	CER. TILE WAINS OVER CEM. PLAST.	CER. TILE WAINS OVER CEM. PLAST.	CER. TILE WAINS OVER CEM. PLAST.	CER. TILE WAINS OVER CEM. PLAST.	"	"
12	WOMEN	VINYL ASSC. TILE	6" VINYL TOPSET	DRYWALL PAINT OFF WHITE ENL.	DRYWALL PAINT	DRYWALL PAINT	DRYWALL PAINT - ENL	"	"
13	ELECT./W.H.	CONC.	"	" "	"	"	"	"	"
14	HALL	VINYL ASSC TILE	"	" "	"	"	"	"	

DOOR SCHEDULE

DR NO	OPN'G SIZE	TH.	TYPE	CONST.	FACING & FINISH	GLASS	FIRE RATE	REMARKS
1	3'-0" x 7'-0"	-		METAL FR.	ALUM/ENAMEL	1/4" TEMP.	—	
2	3'-0" x 7'-0"	1 3/8"		H.C.	BIRCH - STAINED	—	—	
3	3'-0" x 7'-0"	1 3/8"		H.C.	HARDBD. - PAINT	-	—	
4	3'-0" x 7'-0"	1 3/8"		S.C.	HARDBD. - PAINT	—	—	LOUVER VENTS (12" x 16") TOP/BOTTOM
5	3'-0" x 7'-0"	1 3/4"		S.C.	METAL - PAINT	1/4" TEMP.	U.L. LABELED 20 MIN.	CLEAR GLASS
6	6'-0" x 7'-0"	1 3/8"		S.C.	METAL - PAINT	—		LOUVER VENTS (12" x 16") TOP/BOTTOM



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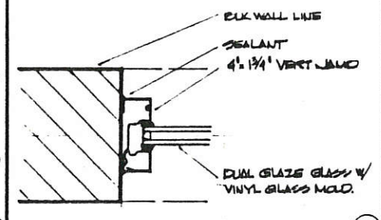

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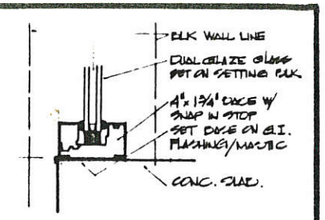

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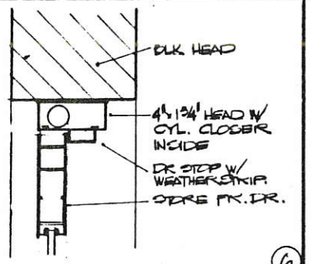

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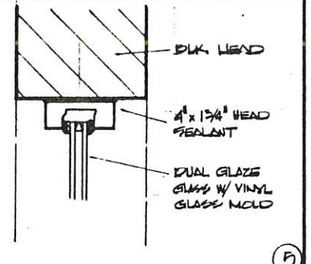

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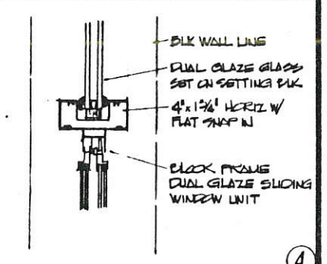

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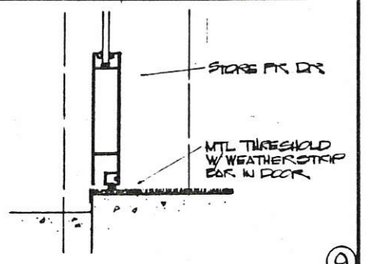

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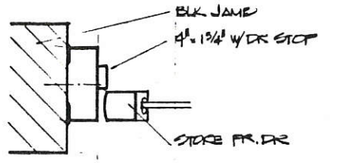

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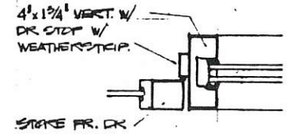

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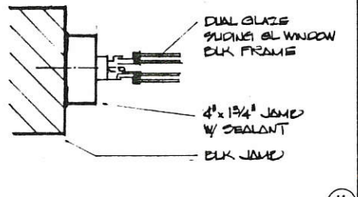

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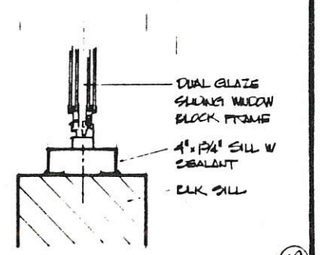

10

REDUCED
NOT TO SCALE

PREPARED BY:
Ray Stuck
REGISTERED ARCHITECT NO. C016380
DATE: 6/26/86

MARK	REVISIONS	APPR	DATE

DESIGNED BY | DRAWN BY | CHECKED BY

PREPARED UNDER THE SUPERVISION OF
Ernest M. Dean 6-10-86
REGISTERED CIVIL ENGINEER NO. 28977
DATE: 10/29/86

APPROVED BY:
Ernest Wong RCE 27478
CITY OF BANNING
DATE: 10-27-86

J.F. DAVIDSON ASSOCIATES
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11200 SO. MT. VERNON AVE. #D, COLTON, CA 92324, (714) 825-1082
73-080 EL PASEO, #103, PALM DESERT, CA 92260, (619) 340-5691

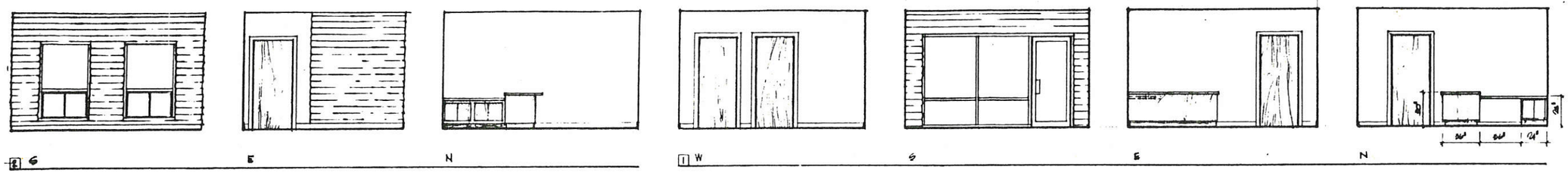
SCALE
DATE
BENCH MARK: SEE SHEET A-1

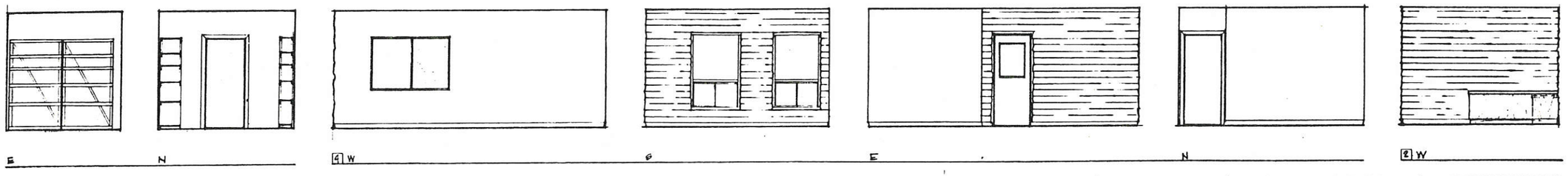
IN THE COUNTY OF RIVERSIDE, CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

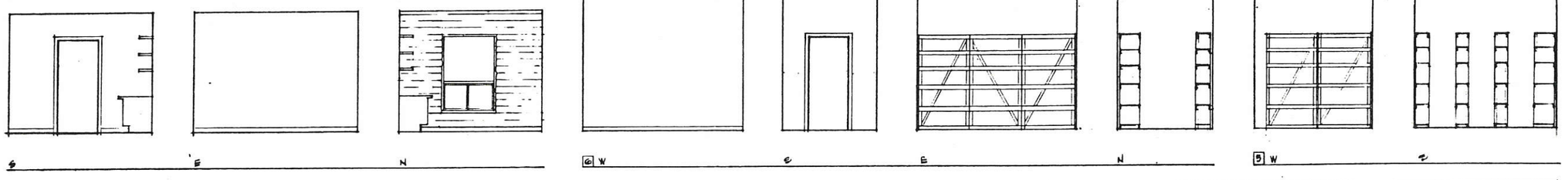
MAINTENANCE FACILITY FINISH SCHEDULES GLASS/GLAZING DETAILS

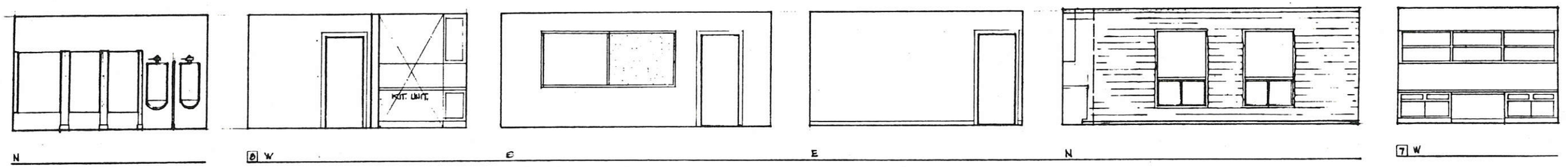
A-9
OF 14 SHEETS

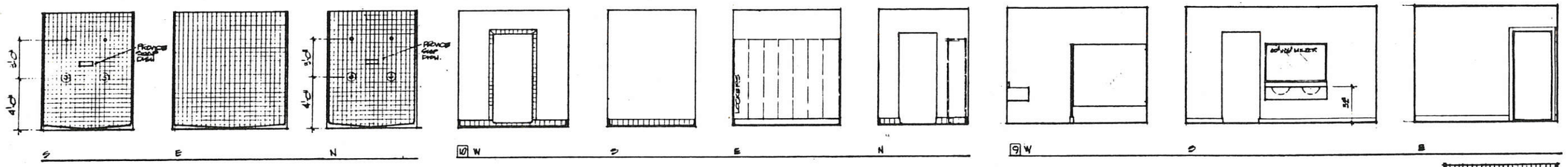
FOR CITY OF BANNING
W.O. F.B. FILE NO. 84-8186











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REDUCED
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PREPARED BY:
REGISTERED ARCHITECT NO. C016381
DATE: 6/16/86

MARK	REVISIONS	APPR	DATE
DESIGNED BY	DRAWN BY	CHECKED BY	

PREPARED UNDER THE SUPERVISION OF
REGISTERED CIVIL ENGINEER NO. 12977 Exp 3/89
DATE: 10/29/86

APPROVED BY:
CITY OF BANNING
DATE: 10-27-86

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11200 SO. MT. VERNON AVE., #D, COLTON, CA 92324, (714) 825-1082
73-080 EL PASEO, #103, PALM DESERT, CA 92260, (619) 346-5691

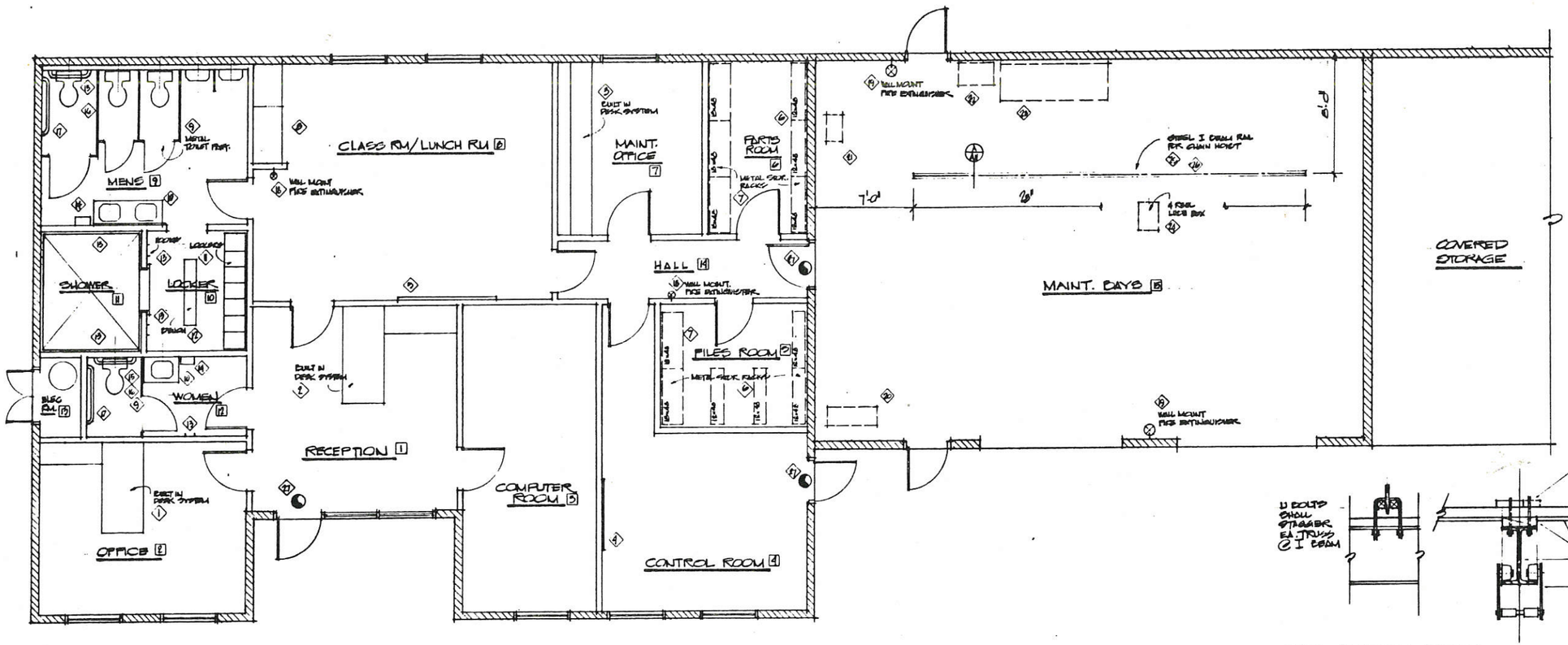
SCALE
DATE
BENCH MARK:
SEE SHEET A-1

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

MAINTENANCE FACILITY INTERIOR ELEVATIONS

A-10
OF 14 SHEETS

FOR CITY OF BANNING
JOB FB FILE NO 84-0106



ROOM EQUIPMENT LAYOUT

REDUCED
NOT TO SCALE

STEEL I BEAM DETAIL (A)

EQUIPMENT SCHEDULE AND NOTES:

ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION
1	DESK - BUILT-IN LAM. PLASTIC DESK SYSTEM (SEE SHEET A10)	9	METAL TOILET PARTITIONS - GLOBAL STEEL PRODUCTS OR SANITAIRE (OR APP. EQUAL. - COLOR: GRAY (SEE SHEET 10)	17	30" DIA. - 1 1/4" DIA. TYPE 304 S.S.	25	FREE WHEELING TROLLEY FOR HOIST - FREE WHEELING TROLLEY FOR CM COAL BRONCO IS, FIT I BEAM FLANGE - LONTEN NO 22646 OR CM BRAND 42464 (GRAINGER, CATALOG)
2	DESK - BUILT-IN LAM. PLASTIC DESK SYSTEM (SEE SHEET A10)	10	LAM PLASTIC COUNTER - WALL HUNG W/ LEGS INSTALLED W/ CHROME RINGS COLOR: F. LAM. PLAST. - WHITE	18	FIRE EXTINGUISHER AS MFG'D BY RED CAP OR PEMALL OFFICE - A.B.C. RATED 5 LBS W/ PRESSURE INDICATOR GAUGE 18" x 4" - 2 EA	26	1 TON MANUAL HOIST: - HAND OPERATED / 3/8 CHAIN. TOPPER NO 21490 OR CM BRAND NO 22846 - 11 3/4 LIFT IN FEET
3	DESK - BUILT-IN LAM. PLASTIC DESK SYSTEM (SEE SHEET A10)	11	METAL LOCKERS STANDARD SINGLE TIER: LOCKERS W/ 6" LOUVERED TOP & BOTTOM OF DOOR. 15" WIDE, 18" DEEP AND 72" HIGH - 6" I.C. AT BOTTOM.	19	FIRE EXTINGUISHER AS MFG'D BY RED CAP OR PEMALL SCP - B.C. RATED 10 LBS W/ PRESSURE INDICATOR GAUGE 18" x 6"	27	FLY FAN/AIR CURTAIN - MARKS CO. MODEL 36C OR HUNTER MODEL A
4	TACK/CHALK BOARD - 36" x 48" TACK/ 36" 48" CHALK NACO TACK/CHALK BD BY NELSON-ADDAMS CO. OR GREEN STEEL INC.	12	BENCH - ENAMELED STEEL BASE WITH HANDLED SEAT WITH CLEAR SEALER - 9 1/2" WIDE, 4'-10" LONG, 18" HIGH.	20	COMPRESSOR - 5 HP - DAYTON OR POWERBX BRAND MODEL 5.0 UMP, 230V. 1Ø COMPLETE WITH BELT GUARD, MOTOR AND BASE.		
5	TACK/CHALK BOARD - 36" 48" TACK/ 36" 48" CHALK. MFR STONE AGY NO 4	13	WALL HOOKS - SINGLE HOOK - WALL MOUNT - 60" FROM FIN. FL. PROVIDE 3000 PSI - SET IN TILE	21	WELDER - 125 AMP LINCOLN OR DAYTON BRAND. FLOOR MOUNT.		
6	STEEL SHELVING - REPUBLIC STEEL OR LYON METAL PROD INC. ANGLE POST, WITH OPEN SHELVING, 12" x 42" - 5 SHELVES 5 HI.	14	TOWEL CABINET - DISPENSER AND WASTE RECEPTACLE SEE A.B.M. SPEC'S FOR REST. RM. ACCESSORIES.	22	SAFETY STORAGE CABINET - 45 GAL. DBL DR. - 65" x 43" x 18" AS BUILT BY EAGLE MFG OR UNITED RECEPTACLE AND SHALL MEET NAT. FIRE PROTECTION ASS. FLAM. AND COMBUSTIBLE CODE 30.0145		
7	STEEL SHELVING - REPUBLIC STEEL OR LYON METAL PROD. INC. ANGLE POST, WITH OPEN SHELVING, 18" x 48" - 5 SHELVES HI	16	TOILET SEAT COVER.	23	INDUSTRIAL WORK BENCHES, MFG. BY UNITED RECEPTACLE OR DAYTON. STEEL TOP 72" x 30" x 12 GA - 33 1/2" HT. HEAVY DUTY, FLARED LEGS, BAKE ENL. FINISH. 3 REQUIRED.		
8	KITCHEN UNIT - DRYER - SERIES 48 OR DAVIS & DABL ELECT. KIT. UNIT - SINK, REF, COOKTOP - WHITE COLOR	24	TOILET PAPER HOLDER	24	RETRACTABLE LUBRICATION HOSE REEL - CEILING MOUNT - TO INCLUDE AIR, WATER, 2 LUBRICATION HOSES. STEEL #15 SAND OR DAYTON MFG.		

PREPARED BY: Roy Stick
REGISTERED ARCHITECT NO. C016381
DATE: 9/16/86

MARK	REVISIONS	APPR	DATE
DESIGNED BY	DRAWN BY	CHECKED BY	

PREPARED UNDER THE SUPERVISION OF
Bernard M. Lange 6-0 9/89
REGISTERED CIVIL ENGINEER NO 18977
DATE 10/27/86

APPROVED BY: Bernard Lange RCE 18977
CITY OF BANNING
DATE 10-27-86

J.F. DAVIDSON ASSOCIATES
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73-080 EL PASEO, #103, PALM DESERT, CA 92260, (619) 346-5691

SCALE
DATE
BENCH MARK: SEE SHEET A-1

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

MAINTENANCE FACILITY EQUIPMENT LAYOUT

A-11
OF 14 SHEETS

FOR CITY OF BANNING
W.O. F.B. FILE NO 84-8186

NOTES 1 - FUSE RATING PROTECTING THIS EQUIP. SHALL NOT EXCEED THE MAX FUSE SIZE SHOWN ON THE EQUIP. NAME PLATE.

NOTES 2.- THE FEEDER AND BRANCH CKT WIRE AMPACITY SHALL NOT BE LESS THAN THE MIN CIRCUIT AMPS SHOWN ON THE EQUIP NAME PLATE.

ALL CONDUCTORS SHALL BE COPPER WITH THWN INSULATION UNLESS SHOWN OTHERWISE.

NOTE 3. - AT EA. PHONE AND INTERCOM OUTLET PROVIDE A 4"x4" PLASTER RING AND A 3/4" C RISER FROM THE TOP OF THE PLASTER RING UP THRU THE WALL 3' ABOVE THE TOP PLATE. PROVIDE A CONDUIT BOX CONNECTOR AT EA END OF THE CONDUIT

HEAT PUMP ON ROOF

240 V, 3P, 60 A, F DISC. WITH MAX 50 A FUSE (NOTE 1 & 2)

#6 C (3) #4 G IN CONDUIT

A24, 28, 30

MENS 9

CLASS RM/LUNCH RM 6

MAINT. OFFICE 7

PATIO RM 6

HALL 14

MAINT. BAYS 12

SHOWER 11

LOCKER 10

WOMEN 14

FILES ROOM 5

RECEPTION 1

COMPUTER RM 3

OFFICE 2

CONTROL RM 4

CONTROL RM

VEH. STORAGE BAYS

TO NEXT FIXT @ ON MAINT BAY

FROM FIXT @ ON WALL AT ELECT. RM

TO NEXT FIXT @ ON WALL AT MAINT. BAYS

FROM FIXT @ ON WALL @ MAINT BAYS

NOTE: 3/4" CONTROL ROOM CLOW UP OF CONDUIT RUNS OUT TO PULL BOX

ELECTRICAL LAYOUT

REDUCED
NOT TO SCALE

SYMBOL LIST

- RECESSED FLUORESCENT LIGHTING FIXTURE
- SURFACE MOUNTED FLUORESCENT LIGHTING FIXTURE
- SURFACE MOUNTED INCANDESCENT FIXTURE
- RECESSED FLUSH INCANDESCENT FIXTURE
- JUNCTION BOX
- DUPLEX CONVENIENCE OUTLET + 12" AFF (UNLESS SHOWN OTHERWISE)
- SINGLE CONVENIENCE OUTLET, SPECIAL PURPOSE, RATING AS SHOWN OR PLAN
- DUPLEX CONVENIENCE OUTLET, WP WEATHERPROOF.
- TOGGLE SWITCH + 4'-0"
- TOGGLE SWITCH + 4'-0" - 3 WAY SWITCH.
- GROUND LIGHT FIXTURE ON PHOTO CELL
- WALL MOUNTED OUTDOOR AREA LTG THRU CLOCK CONTROLLED
- EXHAUST FAN - SWITCHED WITH LIGHTS
- FIXTURE DESIGNATION ON SCHEDULE
- TELEPHONE OUTLET (SEE NOTE 3)
- INTERCOM OUTLET (SEE NOTE 3)
- 3/4" CONDUIT LINE ARE RUNS THAT ARE EXPOSED
- BROKEN LINE ARE RUNS IN CEILING, ATTIC SPACE, ETC.
- DASHED LINE ARE RUNS UNDERGROUND
- EXH. FAN & DOOR SWIT. W/MICO. SWITCH

LIGHTING FIXTURE SCHEDULE

LETTER	WATTS	VOLT	LAMPS/NS/TYPE	DESCRIPTION	MFR.	REMARKS
A	156	120	(4)-F40 RS/CW 34 WATT-WHITE MISER II	24" x 48" RECESSED LAY IN FIXTURE WITH PRISMATIC ACRYLIC LENS	PRUDENTIAL CO. OR SUPERSEDE LIGHTING CO. OR EQUAL	
B	78	120	(1)-F40 RS/CW 34 WATT W.M.II	48" OPEN STRIP	SAME AS NO A	SURFACE MOUNT TO DRYWALL CEIL.
C	156	120	(2) F96 T12/CW/HO 60 WATT W.M.II	96" OPEN STRIP WITH REFLECTOR AT 45° FROM HORIZONTAL	PRUDENTIAL CO. P. 222-SL-RO OR SUPERSEDE CO.	SURFACE MOUNT TO DRYWALL CEIL.
D	60	120	(1) 60 W INCANDESCENT	PORCELAIN KEYLESS LAMP HOLDER, 600 W/250 V	LEVITON 7875 ONE PIECE - TEFLON OR EAGLE CO.	SURFACE MOUNT TO DRYWALL CEIL.
E	100	120	(1) 100 W INCANDESCENT	W.P. CEILING OUTLET WITH GROUND CAST ALUM	LEVITON CR HALO BROAD	MOUNT FLUSH TO CEILING OUTLET BOX
F	100	120	(1) 100 W INCANDESCENT	RECESSED CEILING FIXT W/ DIRECT ALZALITE LENS. DAMP LOCATION	CAMEL NO. 5310 D W 5116 C ANOD OR HALO BROAD	CHROME ALUM TRIM
G	175	120	(1) HPS CLOCK	OUTDOOR WALL FIXT W. P.F. PLATED, CAST ALUM, BRONZE FINISH	HOLOPHANE WALL PACK II WL2-SK-100 HP-12-CS-FI OR WESTINGHOUSE	TIME CLOCK CONTROLLED
H	100	120	(1) 60 W INCANDESCENT	GR. WALKWAY LIGHTS 27" HT	HUBBELL 340 HB OR DOU LIGHT NO 1102	

SINGLE LINE DIAGRAM

- UL LISTED AC SERVICE EQUIP.
- 225 A. FUSED HT-THRU LOAD THRU 10,000 AMPS
- TO 10' MIN UL INSTALLING WATER PIPE
- 225 A 3φ, 115/208Y 4W RMS 10K A.I.C. BRKRS.
- 2" C 4 #4/0 CU THWN
- 3/4" C. EARTH
- TO UTILITY TRAN
- 20' OF #4 Δ (4/0) RECEIVER IN BOTTOM OF EXCAV. CONC. FTG. (UFER)

PANEL 'A'

LOCATION - ELECT RM - SURFACE MOUNTED

FEEDER - (4) # 3/0 CU, THHN, 2" C

M.L.O. AMP MAIN

225 AMP BUS, 120/208 VOLTS 3 PHASE, 4 WIRES

CKT	NOTE	AMP	LOCATION	LTG	REC	MIS	A	D	C	Δ	DC	A	D	C	MIS	REC	LTG	LOCATION	AMP	NOTE	CKT
1	LCL	20/1	LTG, LUNCH, MAINT, OFC, PATIO	9			1170					936					8	LTG, HALL, FILES, CONTROL	20/1	LCL	2
3			LTG, ENTRY, COMPUTER, BUS	7				1092					1010		2		7	LTG MENS, LOCK, SH. & P.			4
5			LTG, OFC, WOMEN, BUS RM	6		88			1012					1088			8	LTG, MAINT BAYS			6
7			LTG, VEHICLE STOR., BAY	5			900					324					5	LTG, OUTDOOR WALL			8
9			OUTDOOR RECEPT & LTG	3	2			680					-					SPARE			10
11			RECEPT		6				1080					1260		7		RECEPTS			12
13			RECEPT		7		1260					1260				7		RECEPTS			14
15			RECEPT		6			1080					360					RECEPTS TEL.			16
17			RECEPT KITCHEN COUNTER		2				360					720		4		RECEPTS MAINT BAYS			18
19		30/2	RANGE TOP/REFRIG 9.1 KW			1	1050					720				4		RECEPTS MAINT BAYS			20
21		/2	—					1050					9205		1			COMPRESSOR 3 HP	30/3		22
23		30/2	WATER HEATER 4.8 KW			1			2250					9205				—			24
25		/2	—				2250					4325			1			HEAT PUMP	30/2		26
27		30/2	SPACE HTR 5 KW			1		2900					4325					—			28
29		/2	—						2900					4325				—	/3		30
31		30/2	SPACE HTR 5 KW			1	2900					4440			1			WELDER	60/2		32
33		/2	—					2800					6240					—	/2		34
35		30/1	EVAP COOLER			1			2184												36
37		30/1	FLY FAN NO1			1	1127														38
39			FLY FAN NO2			1		1127													40
41			FLY FAN NO3			1			1127												42
COLUMN TOTALS							9907	10,009	10,765			13865	15156	10934							

PANEL TOTAL 71972 WATTS

LOAD CONT. LOAD (.75 x 76.92) 19125 WATTS

LARGEST MOTOR (.75 x 1934) 3626 WATTS

TOTAL PANEL LOAD 76483 WATTS

TOTAL PANEL LOAD AMPS 212.1

* TIME CLOCK CONTROL

HILLER ELECTRICAL ENGINEERING
1123 DEVONSHIRE
SAN BERNARDINO, CA. 92404
TEL. (714) 883-1115

APPROVED BY: Irving Hiller
DATE: 7-30-86

PREPARED BY: Ray Stark
REGISTERED ARCHITECT NO. C016381
DATE: 6/16/86

MARK	REVISIONS	APP	DATE
—	CRIA. ISSUE	WJK	7/30/86

DESIGNED BY | DRAWN BY | CHECKED BY

PREPARED UNDER THE SUPERVISION OF
REGISTERED CIVIL ENGINEER NO. 18997
DATE: 10/27/86

APPROVED BY:
CITY OF BANNING
DATE: 10-27-86

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73-080 EL PASEO #103, PALM DESERT, CA 92260, (619) 346-5691

SCALE
DATE
BENCH MARK: SEE SHEET A-1

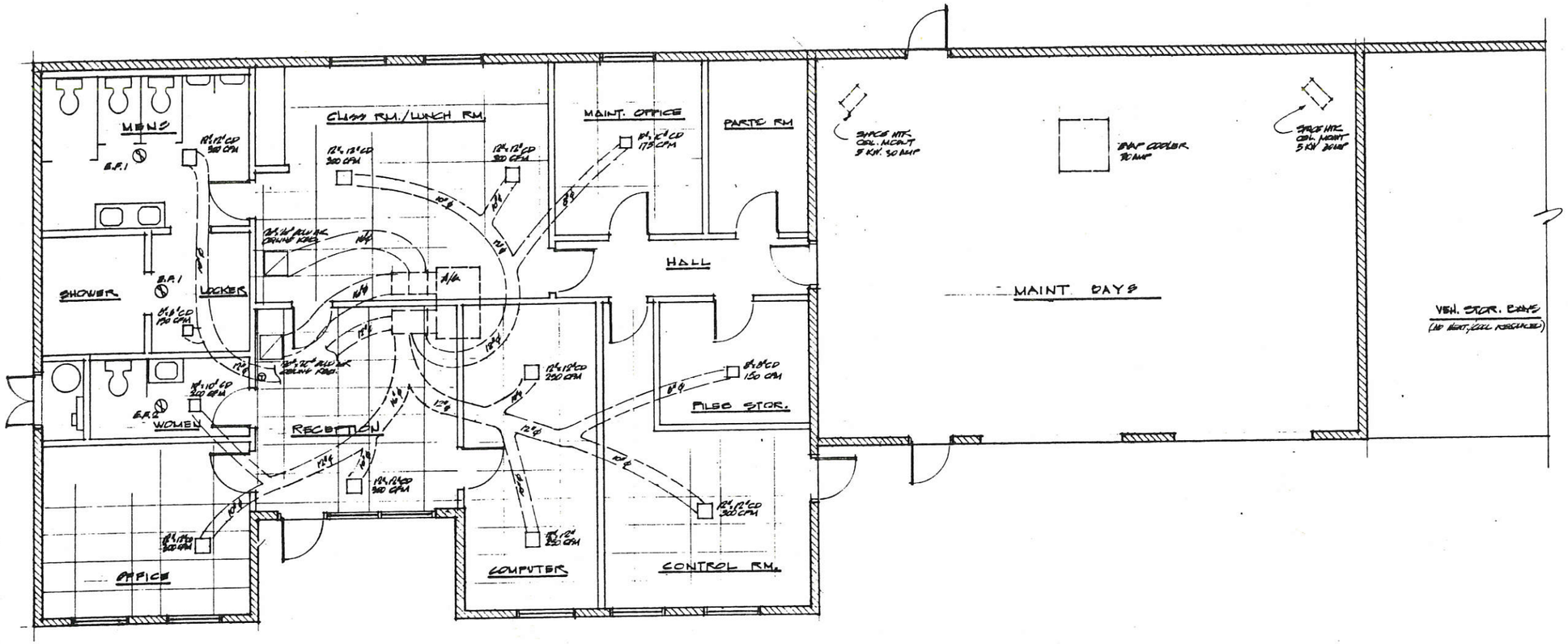
IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

MAINTENANCE FACILITY BUILDING ELECTRICAL

A/E
OF 14 SHEETS

FOR CITY OF BANNING
WO F.B. FILE NO 84-8186

1664



HEATING and AIR CONDITIONING LAYOUT

EQUIPMENT SCHEDULE

HEAT PUMP - HEATING and COOLING (USE LENNOX, CARRIER OR APP. EQ)
UNIT - LENNOX # CHP11-953 (ROOF MOUNT PACKAGE HEAT PUMP)
89,000 BTU COOLING CAPACITY 7.95 E.R.
89,000 BTU HEATING CAPACITY 2.8 C.O.P.

460V-3ϕ-60~ 22.8 MIN. CIR AMPS
W/ RMP 11-93 ROOF MOUNTING FRAME
PSD 11-93 POWER SAVER (OPT.)
GSD 11-93 GRAVITY DAMPER (OPT.)

EVAP COOLER (USE WILLIAMS OR ARTIC AIR OR APP. EQ)
ROOF MOUNT. - 115V - 1ϕ ¾ HP. W/ DOWN DISCHARGE.

SPACE HEATER (USE DAYTON BRAND OR FENBAL RAY BY APP. EQ)
5 KW - CEILING MOUNT W/ WALL CONTROL -

EXHAUST FANS (USE TRADEWIND OR THERODERS)
EF1 - TRADEWIND # VBT-400, 390 CFM/115V-1ϕ W/ DUCT AND
EFC - TRADEWIND # VBT-200, 190 CFM/ 115V-1ϕ W/ DUCT AND
THERMOSTAT (USE ROBERT SHAW OR
ROBERT CHAIN #
REGISTERS

SYMBOLS

- T THERMOSTAT
- E EXHAUST FAN
- COLD AIR RETURN CEILING REGISTER
- HEAT AND COOLING SUPPLY CEILING REGISTER
- 22" DUCT RUNS - ROUND (8"ϕ) 8"
- EQUIPMENT (SEE PLAN FOR CALL OUT OF EQUIP.)
- T-BAR GRID SYSTEM

REDUCED
NOT TO SCALE

PREPARED BY: Ray Stick
REGISTERED ARCHITECT NO. C016381
DATE: 6/16/86

MARK	REVISIONS	APPD	DATE
DESIGNED BY	DRAWN BY	CHECKED BY	

PREPARED UNDER THE SUPERVISION OF
REGISTERED CIVIL ENGINEER NO. 18997 DATE 10/27/86

APPROVED BY:
CITY OF BANNING DATE 10-27-86

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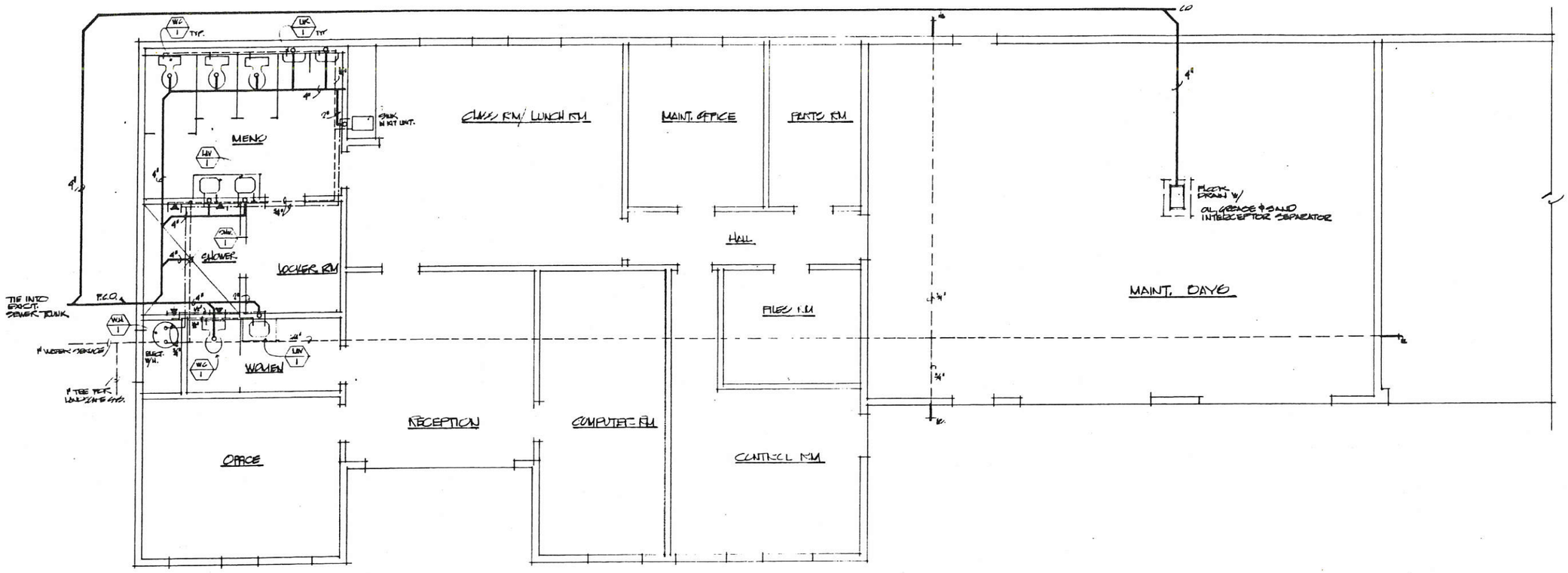
73-080 EL PASEO, #103, PALM DESERT, CA 92260, (619) 346-5691

SCALE
DATE
BENCH MARK: SEE SHEET A-1

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION
A/M
MAINTENANCE FACILITY
BUILDING HEATING & AIR CONDITIONING
OF 14 SHEETS
FOR CITY OF BANNING
WO FB FILE NO 84-6186



PLUMBING LAYOUT

SCALE 1/4" = 1'-0"

FIXTURE SCHEDULE

ITEM	FIXTURE	DESCRIPTION
WC 1	WATER CLOSET	AMERICAN STANDARD 2019.016 "WATER SAVER" CADET OR BRIGGS # 6925 "CONSERVER" WHITE PLASTIC SEAT AND COVER.
LAV 1	LAVATORY	AMERICAN STANDARD OR COMMERCIAL C.I. 20x19x 7½ WHITE / 4 HOLE IN SINK. W/ C.S. RIMS TO MOUNT INTO LAM PLASTIC COUNTER.
UR 1	URINAL	AMERICAN STANDARD # 6500.11 OR CRANE # 7500 WALL HUNG, 3/4" IPS TYP, COMPLETE W/ S.S. STRAINER. AND SLOAN ROYAL # 186-11 FLUSH VALVE
SHR 1	SHOWER	WALL VALVE - A/M # 1346.160 AQUARIAN OR BRADLEY "BRAUTIL" S.S. AND SHOWER HEAD A/M. 1413.012 ASTRO JET SHOWER HEAD OR BRADLEY TYPE 1C-DV SHOWERHEAD
WH 1	WATER HEATER	ELECTRIC 50 GAL. - RANDFORD WHITE # MF52R100/2 OR STATE # RV-52-2RT 45/46 GLASS LINED - UL RATED./APP.

REDUCED
NOT TO SCALE

PREPARED BY: Ray Stuck
REGISTERED ARCHITECT NO. C016381
DATE: 6/16/86

MARK	REVISIONS	APPR	DATE
DESIGNED BY	DRAWN BY	CHECKED BY	

PREPARED UNDER THE SUPERVISION OF
REGISTERED CIVIL ENGINEER NO. 12977 DATE 10/22/86

APPROVED BY:
CITY OF BANNING DATE

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73-080 EL PASEO, #103, PALM DESERT, CA 92260, (619) 346-5691

SCALE
DATE
BENCH MARK: SEE SHEET A-1

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

MAINTENANCE FACILITY PLUMBING

A-P
OF 14 SHEETS

FOR CITY OF BANNING
WO FB RE NO 84-8186

1666

GENERAL NOTES:

GENERAL CONSTRUCTION

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE AND TO CROSS CHECK DETAILS AND DIMENSIONS SHOWN ON THE CIVIL, MECHANICAL AND ELECTRICAL DRAWINGS. FLOOR AND WALL OPENINGS, SLEEVES, VARIATIONS IN THE STRUCTURAL SLAB ELEVATIONS AND OTHER CIVIL, MECHANICAL OR ELECTRICAL REQUIREMENTS MUST BE COORDINATED BEFORE THE CONTRACTOR PROCEEDS WITH CONSTRUCTION.

2. IN ALL CASES WHERE A CONFLICT MAY OCCUR SUCH AS ITEMS COVERED BY SPECIFICATIONS OR NOTES ON THE DRAWINGS OR BETWEEN GENERAL NOTES AND SPECIFIC DETAILS, THE CIVIL ENGINEER SHALL BE NOTIFIED AND HE WILL INTERPRET THE INTENT OF THE CONTRACT DOCUMENTS.

3. IN NO CASE SHALL WORKING DIMENSIONS BE SCALED FROM PLANS, SECTIONS OR DETAILS ON STRUCTURAL DRAWINGS.

4. THE DETAILS ON DRAWING S-1 AND S-2 SHALL APPLY IN ALL CASES UNLESS SPECIFICALLY DETAILED OR NOTED OTHERWISE. WHERE NO SPECIFIC DETAIL IS SHOWN, THE FRAMING OR CONSTRUCTION SHALL BE IDENTIFIED OR SIMILAR TO THAT INDICATED FOR LIKE CASES OF CONSTRUCTION ON THIS PROJECT.

5. WALL AND FLOOR OPENINGS AS REQUIRED BY CIVIL, MECHANICAL, ELECTRICAL OR SIMILAR REQUIREMENTS AS WELL AS EQUIPMENT INSTALLATION SHALL BE VERIFIED BY SHOP DRAWINGS, EQUIPMENT DATA, ETC. AS REQUIRED.

6. STRUCTURES HAVE BEEN DESIGNED FOR OPERATIONAL LOADS ON THE COMPLETED STRUCTURES. DURING CONSTRUCTION, THE STRUCTURES SHALL BE PROTECTED BY BRACING AND BALANCING WHEREVER EXCESSIVE CONSTRUCTION LOADS MAY OCCUR.

7. WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE UNIFORM BUILDING CODE AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND ADDENDA.

8. WHEN FILLING THE STRUCTURES WITH WATER, AS REQUIRED IN THE SPECIFICATIONS, ALL BASINS (IF ANY) LOCATED IN THE SAME STRUCTURE SHALL BE FILLED SIMULTANEOUSLY AT THE SAME RATE IN ORDER TO KEEP THE WATER LEVEL CONSTANT THROUGHOUT.

REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL BE GRADE 40 FOR #4 AND SMALLER; GRADE 60 FOR #5 AND LARGER REINFORCING STEEL SHALL CONFORM TO ASTM A-615. DEFORMATION SHALL BE IN ACCORDANCE WITH ASTM A-305.

2. ALL DETAILING, FABRICATION AND PLACING OF REINFORCING BARS, UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE OR DETAILING REINFORCED CONCRETE STRUCTURES" ACI-315, LATEST EDITION.

3. REINFORCING MARKED "CONTINUOUS" AND TEMPERATURE REINFORCING OF WHICH THE LAP LENGTH HAS NOT BEEN SPECIFIED MAY BE SPLICED WITH A LAP AS INDICATED ON NOTE 3 OF DETAIL 8, PAGE S-2. ALL OTHER LAPS REQUIRED SHALL BE AS SHOWN ON THE DRAWINGS OR AS APPROVED BY THE ENGINEER.

4. UNLESS OTHERWISE SHOWN, ASIDE FROM NORMAL ACCESSORIES USED TO HOLD REINFORCING BARS FIRMLY IN POSITION, THE FOLLOWING SHALL BE ADDED:

   A. IN SLAB: #4 MIN RISER BARS AT 48 INCHES O.C. MAX. TO SUPPORT TOP REINFORCING BARS.

   B. IN WALLS: WITH 2 CURTAINS #3 U OR I SHAPE SPACERS AT 6 FEET O.C. EACH WAY.

5. METAL CLIPS OR SUPPORTS SHALL NOT BE PLACED IN CONTACT WITH THE FORMS OR THE SUBGRADE. CONCRETE BLOCKS (OR DOBBIES) SUPPORTING BARS ON SUBGRADE SHALL BE IN SUFFICIENT NUMBERS TO SUPPORT THE BARS WITHOUT SETTLEMENT, BUT IN NO CASE SUCH SUPPORT SHALL BE CONTINUOUS.

6. DOWELS SHALL BE WIRED OR OTHERWISE HELD IN POSITION. THEY SHALL NOT BE PLACED INTO FRESHLY POURED CONCRETE.

7. REINFORCING BARS AND ACCESSORIES SHALL NOT BE PLACED IN CONTACT WITH ANY PIPE, PIPE FLANGE OR METAL PARTS EMBEDDED IN CONCRETE. A MINIMUM OF 2 INCHES CLEARANCE SHALL BE PROVIDED AT ALL TIMES.

8. CERTIFICATION AND TESTING OF REINFORCED STEEL SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF ASTM STANDARDS. THE CONTRACTOR SHALL SUPPLY SUCH CERTIFICATION TO THE ENGINEER PRIOR TO PLACEMENT OF ANY REINFORCEMENT.

9. UNLESS OTHERWISE SHOWN ON DRAWINGS, ALL REINFORCING SHALL HAVE THE FOLLOWING CONCRETE COVERAGE.

   A. SLABS OR WALLS (SURFACES EXPOSED TO THE WEATHER OR IN CONTACT WITH EARTH OR WATER).....2"

   B. WALL (UNEXPOSED, INTERIOR).....1-1/2"

   C. BEAMS AND COLUMNS (MAIN REINF.).....2"

   D. SLABS (UNEXPOSED, INTERIOR).....1-1/2"

   E. SURFACES DEPOSITED DIRECTLY AGAINST EARTH.....3"

   F. SURFACES DEPOSITED DIRECTLY AGAINST EARTH (FORMED).....2"

STRUCTURAL STEEL

1. STEEL CONSTRUCTION SHALL CONFORM TO THE SPECIFICATIONS AND STANDARDS AS CONTAINED IN THE LATEST EDITION OF THE AISC STEEL CONSTRUCTION MANUAL.

2. ALL STRUCTURAL SHAPES, BARS, PLATES AND SHEETS SHALL MEET ASTM A-36 SPECIFICATIONS.

3. ALL WELDING SHALL BE BY THE SHIELDED ARC METHOD AND SHALL CONFORM TO AWS CODE FOR ARC AND GAS WELDING. QUALIFICATION OF WELDERS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS FOR STANDARD QUALIFICATION PROCEDURE OF AWS.

MASONRY

1. CONCRETE BLOCK MASONRY SHALL BE NORMAL WEIGHT, HOLLOW UNITS CONFORMING TO ASTM C-90, GRADE "N" SIZE OF UNITS, COLOR AND TEXTURE SHALL BE AS PER SPECIFICATIONS.

2. ALL CELLS OF MASONRY CONCRETE BLOCK SHALL BE GROUTED UNLESS OTHERWISE NOTED ON DRAWINGS.

3. BAR SPLICES SHALL BE 40 BAR DIAMETER UNLESS OTHERWISE NOTED.

4. MORTAR SHALL BE IN ACCORDANCE WITH TABLE 24-A OF U.B.C. TYPE M AND SHALL HAVE MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 2500 PSI. GROUT SHALL BE IN ACCORDANCE WITH PARA. 2403(8) OF U.B.C. AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI.

WOOD

1. ALL HORIZONTAL LOAD CARRYING MEMBERS AND POSTS SHALL BE NO. 1 GRADE DOUGLAS FIR OR LARCH (EXCEPT AS NOTED).

2. STUDS, PLATES, SILLS AND BLOCKING TO BE CONSTRUCTION GRADE DOUGLAS FIR OR BETTER.

3. SILLS UNDER BEARING AND NON-BEARING STUD PARTITIONS SHALL BE PRESSURE TREATED DOUGLAS FIR BOLTED TO CONCRETE WITH 5/8" DIA X 10" ANCHOR BOLTS SPACED NOT MORE THAN 4'-0" O.C. UNLESS NOTED OTHERWISE, THERE SHALL BE ONE BOLT WITHIN 9" OF EACH END OF ALL SILL PLATE, MINIMUM 2 BOLTS PER PIECE.

4. BRIDGING SHALL BE PROVIDED AS PER CODE.

5. FRAMING MEMBERS SHALL NOT BE NOTCHED IN ANY MANNER EXCEPT WHERE SPECIFICALLY DETAILED OR APPROVED BY THE ENGINEER.

6. MINIMUM NAILING FOR ALL WOOD MEMBERS SHALL BE PER CODE UNLESS SPECIFICALLY NOTED.

7. STRUCTURAL PLYWOOD SHALL BE C-DX (32/16) IN CONFORMANCE WITH UBC STANDARD NO. 25-9 AND OF THICKNESS AS NOTED ON PLANS.

8. EDGES OF ALL OPENINGS THROUGH THE ROOF SHALL BE NAILED PER BOUNDARY OF PLYWOOD DIAPHRAGM NAILING REQUIREMENTS.

9. JOIST HANGERS AND OTHER CONNECTORS SHALL BE SIMPSON TYPE OR EQUAL.

FOUNDATIONS

1. FOUNDATION DESIGN BASED UPON CRITERIA PRESENTED IN "REPORT OF PRELIMINARY FOUNDATION INVESTIGATION PROPOSED ADDITIONS TO CITY OF BANNING SEWER TREATMENT PLAN CHARLES STREET, BANNING, CALIFORNIA".

2. ALL FOOTINGS SHALL EXTEND 12" MINIMUM INTO FIRM NATURAL MATERIAL

CONCRETE

1. ALL STRUCTURAL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI IN 28 DAYS.

2. ALL KEYWAYS IN CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED TO OBTAIN MAXIMUM BONDING.

3. THE LOCATION OF ALL CONSTRUCTION JOINTS NOT SPECIFICALLY NOTED OR SHOWN SHALL BE APPROVED BY THE CIVIL OR STRUCTURAL ENGINEER.

4. ALL WATER HOLDING STRUCTURES SHALL REQUIRE WATERSTOPS AT ALL CONSTRUCTION AND EXPANSION JOINTS, EXCEPT AT JOINTS ONLY COMMON TO WATER HOLDING STRUCTURES.

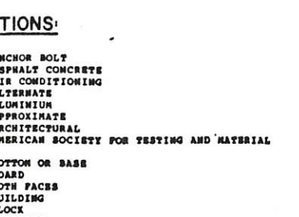
5. DOWELS, PIPES, WATERSTOPS AND OTHER INSTALLED MATERIALS OR ACCESSORIES SHALL BE HELD SECURELY IN POSITION WHILE CONCRETE IS BEING PLACED.

6. ALL EXPOSED CORNERS AND EDGES OF SLABS, WALLS AND COLUMNS SHALL HAVE TOOLED EDGES OR 3/4" CHAMFER.

ABBREVIATIONS:

AB	ANCHOR BOLT
AC	ASPHALT CONCRETE
A/C	AIR CONDITIONING
ALT	ALTERNATE
ALUM	ALUMINUM
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIAL
B	BOTTOM OR BASE
BD	BOARD
BF	BOTH FACES
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
BOT	BOTTOM
BRIG	BRIDGE
CC	CENTER TO CENTER
CJ	CONSTRUCTION JOINT
CL	CLEAR
C/W	COMPLETE WITH
CO	COMPANY
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
CTR	CENTER
DET	DETAIL
DF	DOUGLAS FIR
DIA	DIAMETER
DIMS	DIMENSIONS
DP	DEEP
DR	DOOR
DWG	DRAWING
DWLS	DOWELS
E	EAST
EA	EACH
EF	EACH FACE
EL	ELEVATION
EN	EACH END
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EACH WAY
EXIST	EXISTING
EXPJT	EXPANSION JOINT
EXT	EXTERIOR
FF	FAR FACE
FG	FINISHED GRADE
FL	FLOOR
FS	FINISHED SURFACE
FTG	FOOTING
GA	GAGE
GAL	GALLON
GALV	GALVANIZED
GYP	GYPSUM
HK	HOOK
HORIZ	HORIZONTAL
HT	HEIGHT
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN	INCH
INC.	INCORPORATE
INFL	INFLUENT
INV	INVERT
LA	LOW PRESSURE AIR
LG	LONG
LL BB	LONG LEG BACK TO BACK
LONGIT	LONGITUDINAL MATERIAL
MAT'L	MATERIAL
MB	MACHINE BOLT
MECH	MECHANICAL
MFR.	MANUFACTURER
MIN	MINIMUM
N	NORTH
NF	NEAR FACE
NIC	NOT IN CONTACT
NO	NUMBER
NS	NEAR SIDE
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OH	OVER HEAD
OPNG	OPENING
PNEU	PNEUMATIC
PSF	POUND PER SQUARE FOOT
PSI	POUND PER SQUARE INCH
R	RADIUS
RAD	RADIUS
RC	REINFORCED CONCRETE
RECT	RECTANGULAR
REINF	REINFORCEMENT
REQ'D	REQUIRED
RM	ROOM
RO	ROUGH OPENING
RT	RIGHT
S	SOUTH
SCHED	SCHEDULE
SECT	SECTION
SHT	SHEET
SIM	SIMILAR
SL BB	SHORT LEG BACK TO BACK
SP	SPACING
SPECS	SPECIFICATIONS
SQ	SQUARE
STA	STATION
STAGG	STAGGER
STD	STANDARD
STL	STEEL
STRUCT	STRUCTURAL
SYM	SYMMETRICAL
T	TOP
T & B	TOP AND BOTTOM
TC	TOP OF CURB
THK	THICK
THRU	THROUGH
TO	TOP OF
TRANS	TRANSVERSE
TS	TUBULAR STEEL
TW	TOP OF WALL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
V	VERTICAL
VERT	VERTICAL
VOL	VOLUME
W	WEST OR WIDE FLANGE
W/	WITH
W/O	WITHOUT
WP	WORKING POINT
WS	WATER SURFACE OR WATER STOP
WT	WEIGHT
WWM	WELDED WIRE MESH
@	AT
℄	CENTER LINE
℄	PLATE

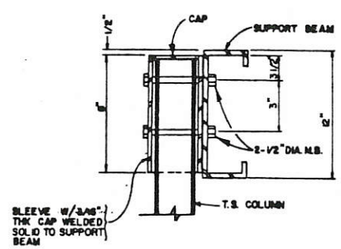
REDUCED
NOT TO SCALE



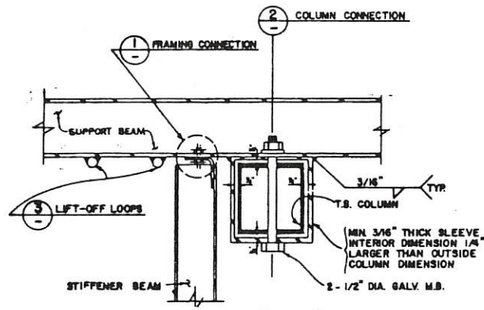
1/- FRAMING CONNECTION



3/- LIFT - OFF LOOPS



2/- COLUMN CONNECTION



4/- FRAMING DETAIL

MARK	REVISIONS	APPD	DATE
ISSUED BY	DRAWN BY	CHECKED BY	

PREPARED UNDER THE SUPERVISION OF:
REGISTERED CIVIL ENGINEER NO. 12977
DATE 6/27/85

APPROVED BY:
CITY ENGINEER
CITY OF BANNING
R.C.E. 29725
DATE 6/27/85

J.F. DAVIDSON ASSOCIATES
CIVIL ENGINEERS • SURVEYORS • PLANNERS
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11200 SO. MT. VERNON AVE. #D, COLTON, CA 92324 (714) 825-1082
78-080 EL PASEO ST. #28, PALM DESERT, CA 92260 (619) 346-5691
P.O. BOX 157, TEMECULA, CA 92390 (714) 676-5336

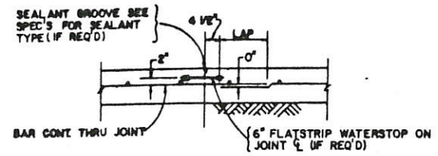
SCALE N/A
DATE MAY, 1985
BENCH MARK
CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2
ELEV. = 2114.67

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

GENERAL NOTES & TYPICAL DETAILS

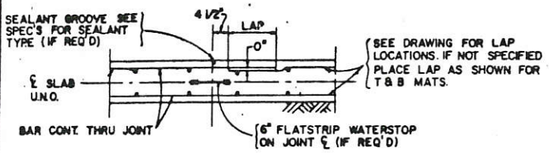
S-1
OF ___ SHEETS

FOR CITY OF BANNING
W.O. F.B. FILE NO. 84-8186



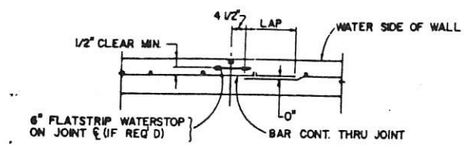
SINGLE MAT REINFORCEMENT

NOTE: WATERSTOPS AND SEALANT GROOVES TO BE PROVIDED IN SLAB OF ALL WATER RETAINING STRUCTURES.



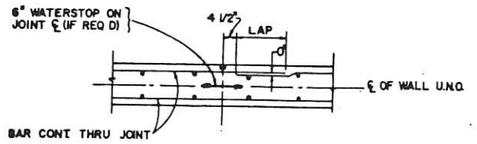
DOUBLE MAT REINFORCEMENT

(1) SLAB ON GRADE: CONSTRUCTION JOINT



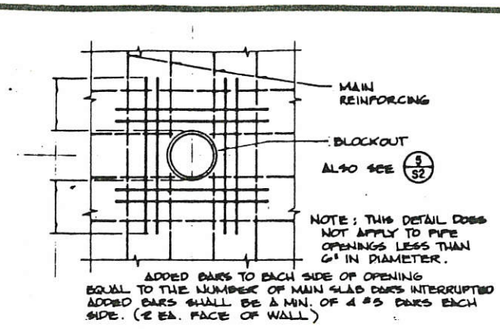
SINGLE CURTAIN REINFORCEMENT

NOTE: WATERSTOPS AND SEALANT GROOVES TO BE PROVIDED IN WALLS OF ALL WATER RETAINING STRUCTURES.

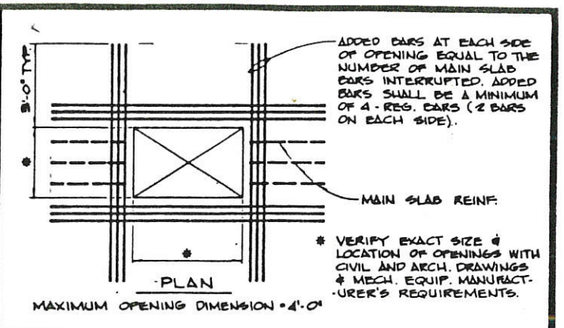


DOUBLE CURTAIN REINFORCEMENT

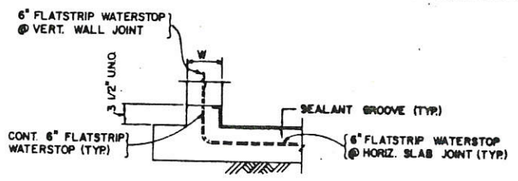
(2) WALL CONSTRUCTION JOINT



(6) PIPE THROUGH CONCRETE

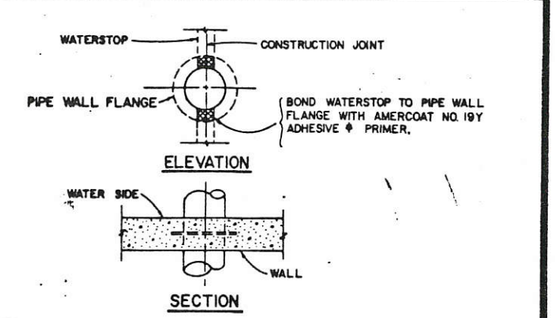


(10) SLAB OPENING REINFORCING

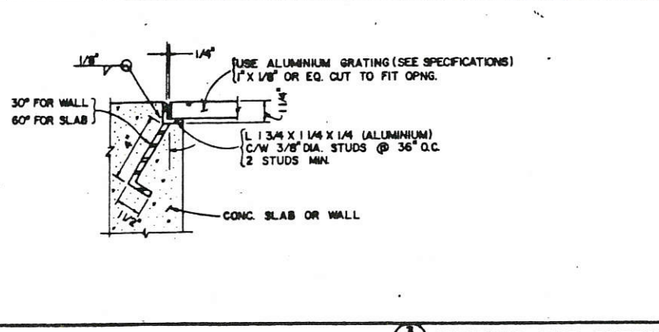


NOTES:
1. SEALANT GROOVE SHALL BE CONT. UNDER WALL & SEALANT SHALL BOND WITH WATERSTOP IN ALL CASES WHERE SUCH WATERSTOP OCCURS.
2. SEALANT UNDER WALL SHALL BE IN PLACE PRIOR TO PLACEMENT OF CONC. FOR WALL.

(7) CONSTRUCTION JOINT: WALL TO FOUNDATION



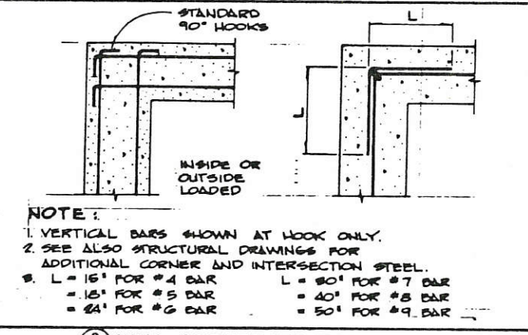
(11) WALL INTERSECTION REINFORCING



GRATING ANCHOR DETAIL

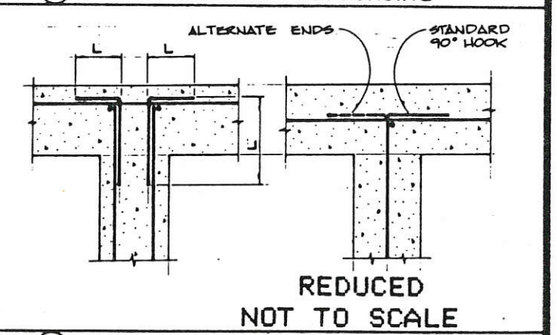
PROVIDE 4 CLIPS PER GRATING PANEL, APPROX. 4" FROM PANEL CORNERS MAX. CLIP SPACING AT 36" O.C. STUD, NUT, WASHER AND CLIP TO BE OF SAME MATERIAL AS THE GRATING

(3) GRATING AND SUPPORT

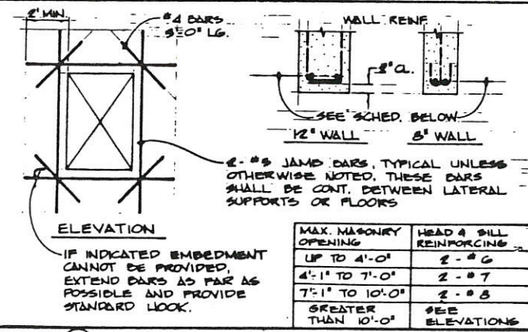


NOTE:
1. VERTICAL BARS SHOWN AT HOOK ONLY.
2. SEE ALSO STRUCTURAL DRAWINGS FOR ADDITIONAL CORNER AND INTERSECTION STEEL.
3. L = 16" FOR #4 BAR, L = 30" FOR #7 BAR
   = 18" FOR #5 BAR, = 40" FOR #8 BAR
   = 24" FOR #6 BAR, = 50" FOR #9 BAR

(8) WALL CORNER REINFORCING

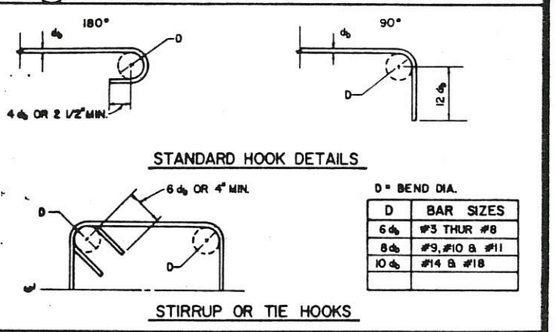


(12) WALL INTERSECTION REINFORCING



MAX. MASONRY OPENING	HEAD & SILL REINFORCING
UP TO 4'-0"	2 - #6
4'-1" TO 7'-0"	2 - #7
7'-1" TO 10'-0"	2 - #8
GREATER THAN 10'-0"	SEE ELEVATIONS

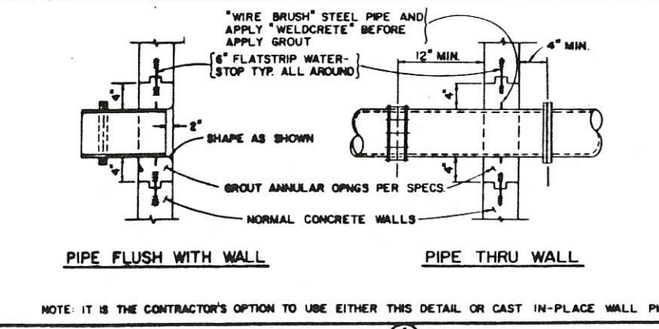
(9) WALL OPENING REINFORCING



D = BEND DIA.

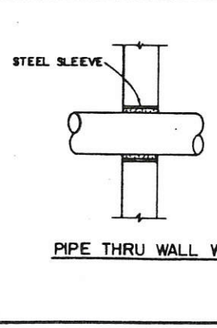
D	BAR SIZES
6 d_b	#3 THUR #8
8 d_b	#9, #10 & #11
10 d_b	#14 & #18

(13) REBAR BENDING



PIPE FLUSH WITH WALL

PIPE THRU WALL



PIPE THRU WALL W/SLEEVE

NOTE: IT IS THE CONTRACTOR'S OPTION TO USE EITHER THIS DETAIL OR CAST IN-PLACE WALL PIPE

(4) PIPE INSERT AT WALL

I = .354 IN⁴
Sp = .398 IN³
Sn = .413 IN³



(5) STRUCTURAL RIB DECKING SECTION

MARK	REVISIONS	APPR	DATE

DESIGNED BY L.C. DRAWN BY L.W. CHECKED BY L.C.

PREPARED UNDER THE SUPERVISION OF:
REGISTERED CIVIL ENGINEER NO. 12977 DATE 6/27/85

APPROVED BY:
CITY ENGINEER
CITY OF BANNING DATE 6/27/85 R.C.E. 29725

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73-080 EL PASEO, ST. 108, PALM DESERT, CA 92260 (619) 346-5691
P.O. BOX 157, TEMECULA, CA 92390 (714) 676-5336

SCALE N/A
DATE MAY, 1985

BENCH MARK:
CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2
ELEV. = 2114.67

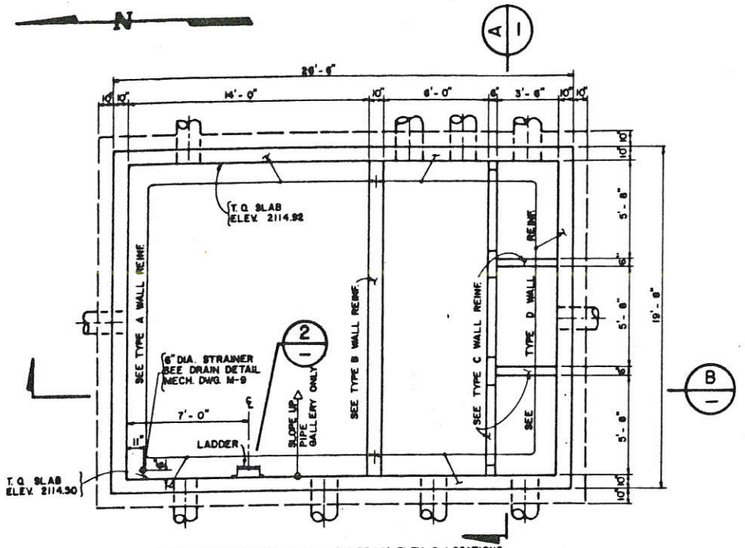
IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

TYPICAL DETAILS

S-2
OF ___ SHEETS

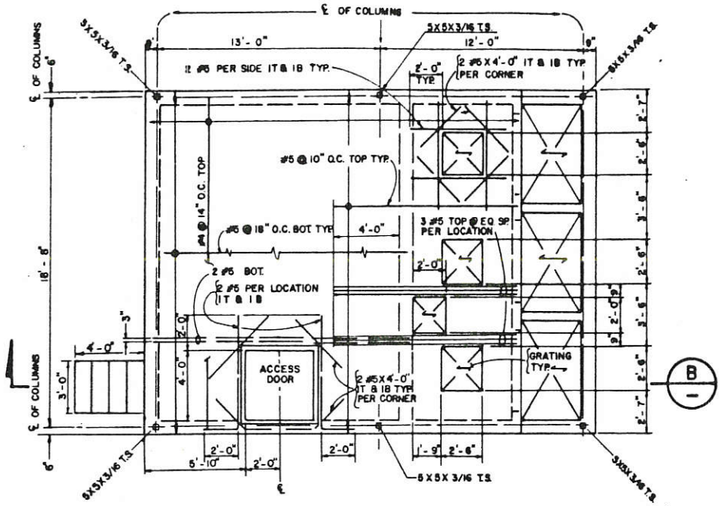
FOR CITY OF BANNING
W.O. F.B. FILE NO. 84-8186

1668

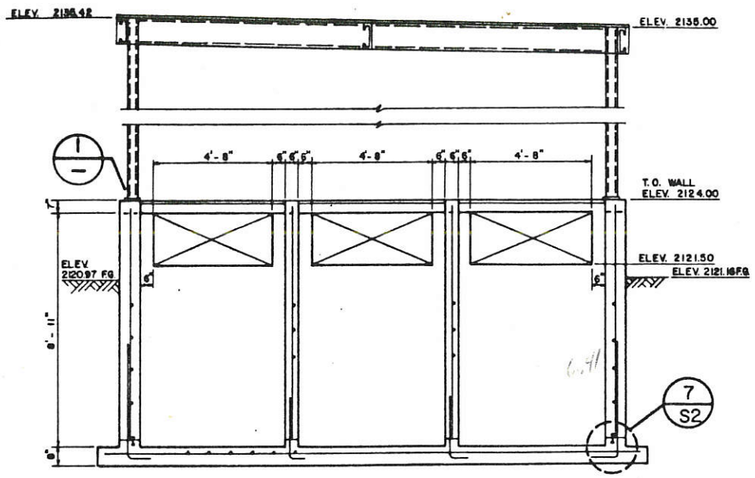


NOTE: SEE MECH. DWG. FOR PIPE SIZE, INV. ELEV. & LOCATIONS
SEE WALL TYPE IN SECTION (1)

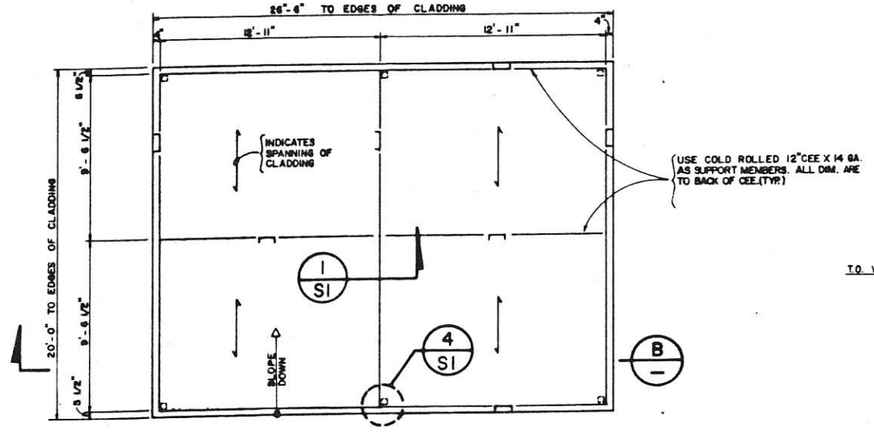
FOUNDATION PLAN
SCALE: 1/4" = 1'-0"



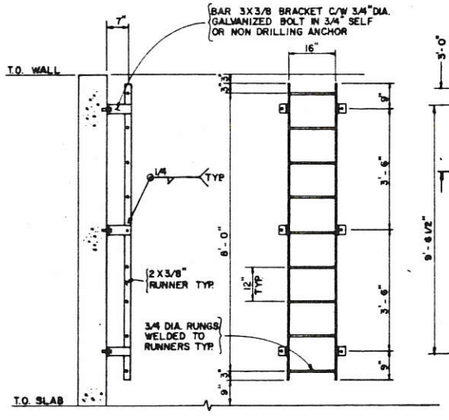
DECK PLAN @ ELEV. 2124.00
SCALE: 1/4" = 1'-0"

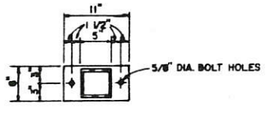


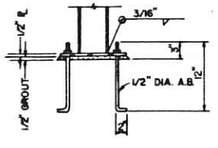
A — SECTION
SCALE: 3/8" = 1'-0"



ROOF PLAN
SCALE: 1/4" = 1'-0"

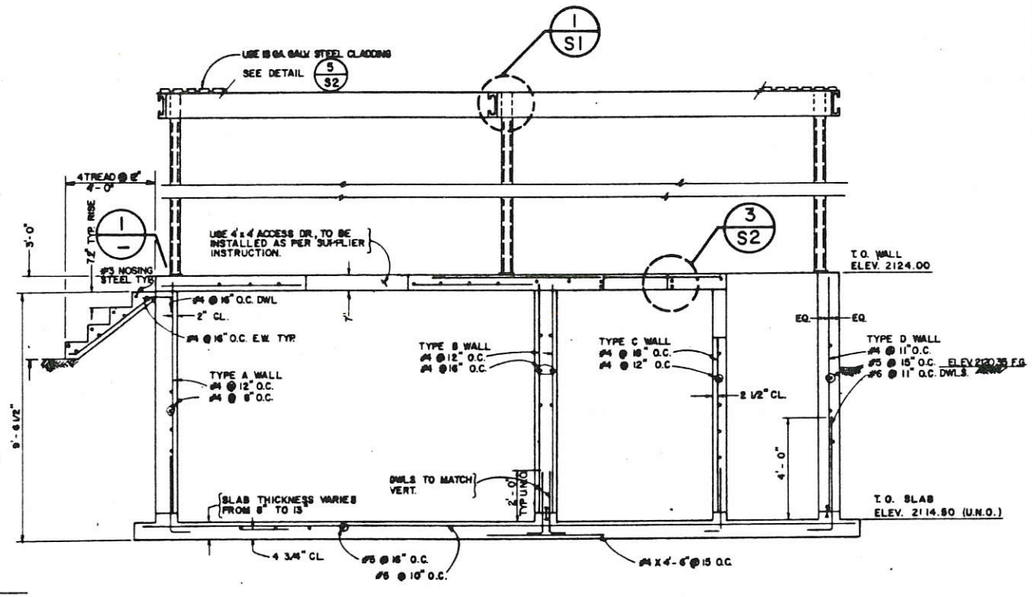






1 — COLUMN BASE PLATE DETAIL
SCALE: 1" = 1'-0"

2 — LADDER DETAIL
SCALE: 1/2" = 1'-0"



B — SECTION
SCALE: 3/8" = 1'-0"

REDUCED
NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:
REGISTERED CIVIL ENGINEER NO. 12977
DATE 6/27/85

APPROVED BY
CITY ENGINEER
CITY OF BANNING
R.C.E. 29725
DATE 6/27/85

J.F. DAVIDSON ASSOCIATES
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1173-080 EL PASEO ST. 108, PALM DESERT, CA 92260 (619) 346-5691
P.O. BOX 157, TEMECULA, CA 92390 (714) 676-5335

SCALE: AS NOTED
DATE: MAY, 1985
BENCH MARK: CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2 ELEV. = 2114.67

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

RECIRCULATION PUMP STA. PIPE GALLERY

S-3
OF ___ SHEETS

FOR CITY OF BANNING
W.O. F.B. FILE NO. 84-8186

DESIGNED BY L.C. DRAWN BY L.W. CHECKED BY L.C.

1669

N

REFERENCE LINE OF TRICKLING FILTER ACCESS STRUCTURE SEE SHEET S-5 FOR DETAILS

CONSTRUCTION JOINTS OF FOUNDATION WALL 60° TYP.

VENT OPNGS.

T.O. TROUGH SLAB @ HIGH POINT ELEV. 2123.30

C.J. OF SLAB TYP.

C.J.

C.J.

C.J.

RADIUS = 54'-0" (TO BE VERIFIED)

℄ VENT OPNG.

VENT OPNG.

8'-0" O.C. TYP

℄ OF 6" WALL

2'-0"

EQ

EQ

G TYP DETAIL

2'X1/2" FIBER, ASPHALT IMPREGNATED EXPANSION JOINT MATERIAL

INSIDE RADIUS = 56'-0"

T.O. METAL RING WALL ELEV. 2137.00

METAL RING WALL FOR TRICKLING FILTER TANK. SEE SPECIFICATION

STRUCTURAL SUPPORT REQUIREMENTS IN RING WALL ABOVE JOINT SHALL BE PROVIDED BY METAL RING WALL SUPPLIER

± 2" GROUT

T.O. CONCRETE PIER ELEV. 2134.16

A.B. TO BE SUPPLIED BY TRICKLING FILTER SUPPLIER & INSTALLED BY CONTRACTOR PER APPROVED SHOP DRAWINGS.

FILLET @ SLAB TO FOUNDATION WALL ALONG CIRCUMFERENCE OF TANK INCREASES AS FLOOR OF TANK SLOPE INCREASES TOWARDS CENTER.

T.O. TROUGH WALL ELEV. 2123.80 TYP

T.O. SLAB @ CIRCUMFERENCE ELEV. 2124.50 TYP

T.O. CONCRETE RING WALL ELEV. 2125.50 TYP

A.B. TO BE SUPPLIED BY RING WALL SUPPLIER & INSTALLED BY CONTRACTOR

TO BE VERIFIED BY METAL WALL SUPPLIER.

JOINT @ ELEV. 2124.50

JOINT

TYP. T.O. FTG. ELEV. 2123.25

10 #4 @ EQ. SP VERT.

2 #4 HORIZ. TIES

T.O. WALL ELEV. 2123.80

ELEV. 2123.50

T.O. TROUGH SLAB ELEV. 2122.80

#4 @ 12" O.C. E.W. TYP

#4 DWLS @ 12" O.C.

#4 @ 12" O.C. E.W. TYP

#4 @ 12" O.C. TYP. ALL AROUND EXCEPT @ OPNG. LOCATIONS.

2 #4 CONT. OMIT @ WALL OPNG.

2 #5 CONT. IN FTG.

10 #5 @ EQ. SP VERT.

#4 TIES @ 12" O.C.

#4 x 2'-6" DWLS @ 12" O.C. FROM FTG. INTO PIT SLAB.

RADIUS = 54'-2" (TO BE VERIFIED)

OMIT W.S. @ WALL OPNG. LOCATIONS

20" DIA. STEEL PIPE TO BE SUPPLIED BY TRICKLING FILTER SUPPLIER

ELEV. 2114.83

RAD. 1'-8"

STD. HK.

A SECTION
SCALE: 3/8"=1'-0"

INDICATES SPANNING OF OF GRATING AT TOP.

T.O. SLAB ELEV. 2123.30

METAL RING WALL

2 DETAIL
SCALE: 3/8"=1'-0"

6" 2'-0" 4'-4" DIA. 2'-0" 6"

T.O. TROUGH WALL ELEV. 2123.80 TYP (BOTH SIDES)

ELEV. 2125.50

SAME AS TROUGH REINF.

10 #4 DWLS @ EQ. SP

B SECTION
SCALE: 3/8"=1'-0"

INDICATES SPANNING OF GRATING AT TOP

METAL RING WALL

T.O. SLAB ELEV. 2119.00

T.O. SLAB EL. 2122.80

SLOPE UP

3'-0" 6" 2'-6" 6" 6'-6"

8'-0"

I DETAIL
SCALE: 3/8"=1'-0"

FOUNDATION PLAN
SCALE: 3/32"=1'-0"

METAL RING WALL

BOT. OF STARTER PANEL

2'-0"

ELEV. 2125.50

ELEV. 2124.50

ELEV. 2123.30

ELEV. 2123.25

2'-6"

3'-0"

4'-0"

2 #5 X 7'-0" BOT.

3 S2

F SECTION
SCALE: 3/8"=1'-0"

METAL RING WALL

2'-0" 4'-0" 2'-0"

BOT. OF STARTER PANEL

ELEV. 2124.50

ELEV. 2123.25

2 #5 X 8'-0" TYP.

G SECTION
SCALE: 3/8"=1'-0"

TYP. VENT OPNG. DETAIL
4 REQ'D

PRESSURE TREATED 4 X 8 D.F. STANDARD OR BETTER @ 16" O.C. OVER 6" WALL TYP.

T.O. WALL TYP. ELEV. 2125.50

VARIES

#4 @ 12" O.C.E.W. TYP

T.O. SLAB VARIES

D SECTION
SCALE: 3/4"=1'-0"

16" O.C.

ELEV. 2125.50

ELEV. 2123.80 TYP (BOTH SIDES)

T.O. TROUGH ELEV. VARIES

#4 @ 12" O.C.E.W. TYP SLAB & TROUGH REINF.

C SECTION
SCALE: 3/8"=1'-0"

METAL RING WALL

BOT. OF STARTER PANEL

ELEV. 2125.50

ELEV. 2123.80

ELEV. 2123.25

2'-0"

2'-6"

4'-0"

5'-0"

2 #5 X 6'-6" BOT.

3 S2

E SECTION
SCALE: 3/8"=1'-0"

REDUCED
NOT TO SCALE

MARK	REVISIONS	APPD	DATE
DESIGNED BY L.C.	DRAWN BY L.W.	CHECKED BY L.C.	

PREPARED UNDER THE SUPERVISION OF:
REGISTERED CIVIL ENGINEER NO. 12977 DATE 6/27/85

APPROVED BY:
R.C.E. 29725
CITY ENGINEER
CITY OF BANNING DATE 6/27/85

J.F. DAVIDSON ASSOCIATES
CIVIL ENGINEERS • SURVEYORS • PLANNERS
P.O. BOX 493 RIVERSIDE, CA 92502 (714) 686-0844
11200 SO. MT. VERNON AVE. #D COLTON, CA 92324 (714) 825-1082
1175-080 EL PASEO ST. #28 PALM DESERT, CA 92260 (619) 346-5691
P.O. BOX 157 TEMECULA, CA 92390 (714) 676-5335

SCALE AS NOTED
DATE MAY, 1985

BENCH MARK
CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2
ELEV.= 2114.67

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

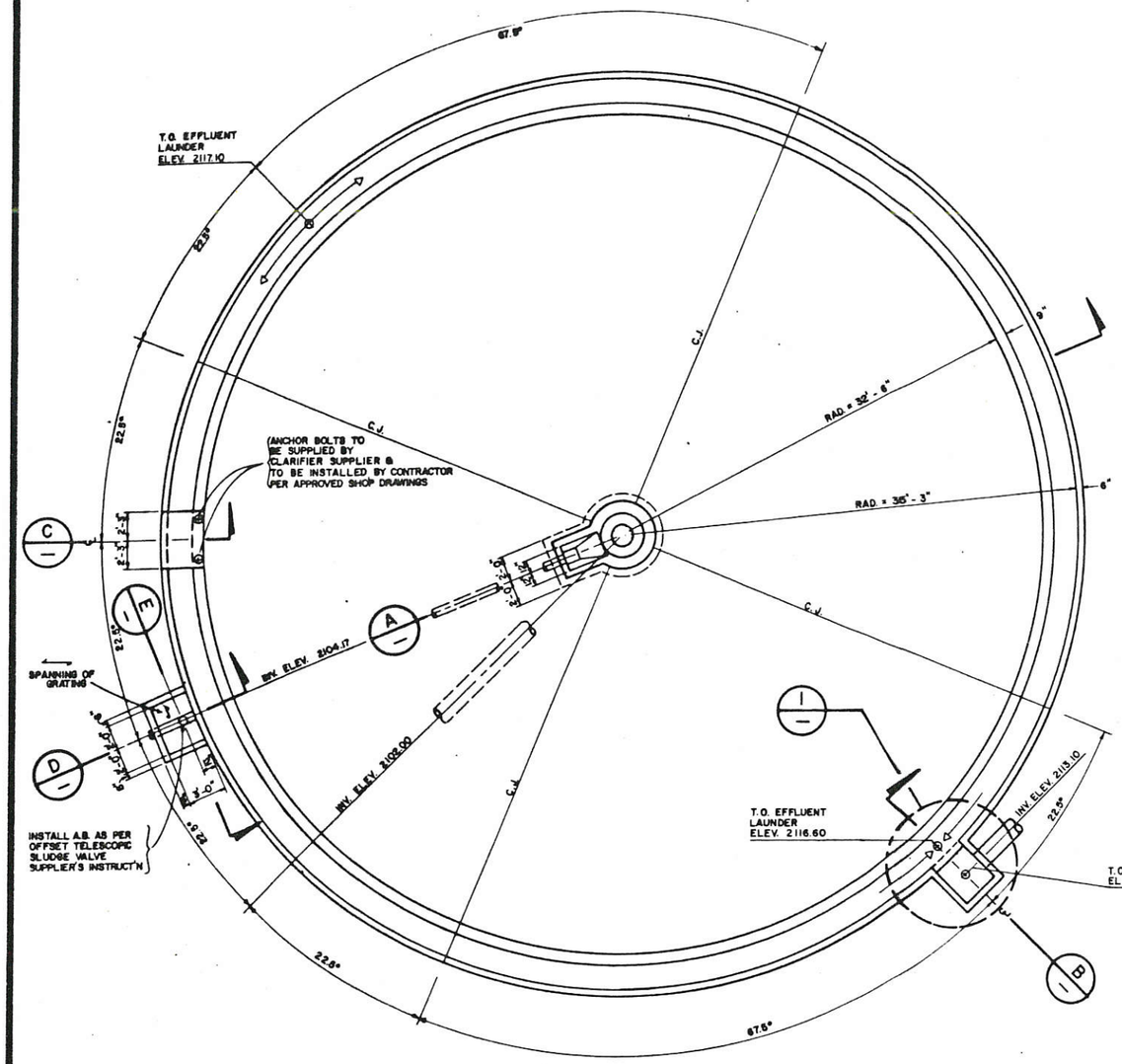
TRICKLING FILTER

S-4
OF ___ SHEETS

FOR CITY OF BANNING

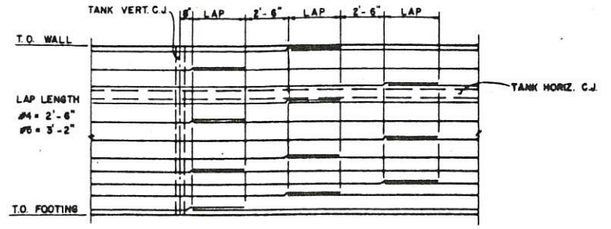
W.O. F.B. FILE NO. 84-8188

1670



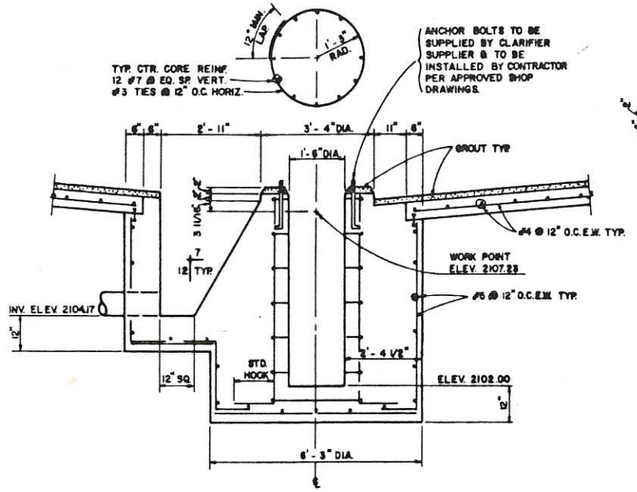
PLAN

SCALE: 3/16" = 1'-0"



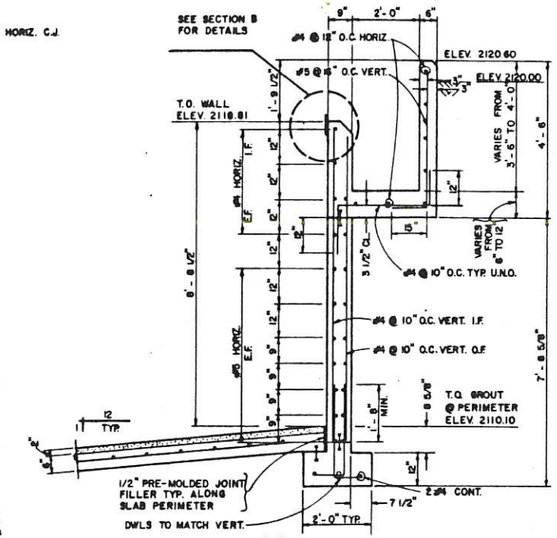
TYP. LAP FOR TANK WALL HORIZ. REINF.

NO SCALE

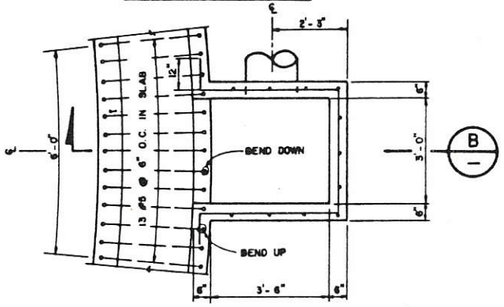


A SECTION

SCALE: 1/2" = 1'-0"
(CONT'D UPPER RIGHT)

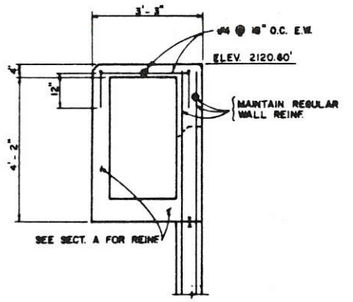


SECTION 'A' (CONT.)



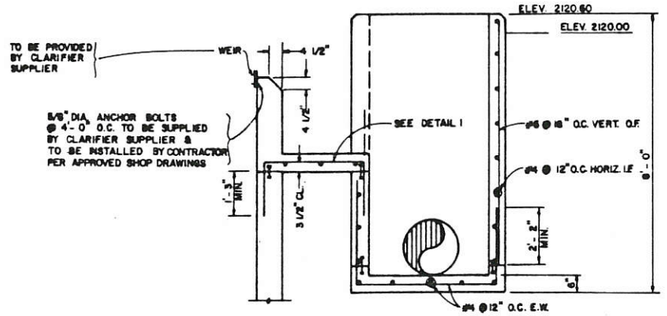
I DETAIL

SCALE: 1/2" = 1'-0"



C SECTION

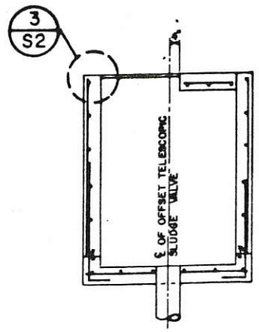
SCALE: 1/2" = 1'-0"



B SECTION

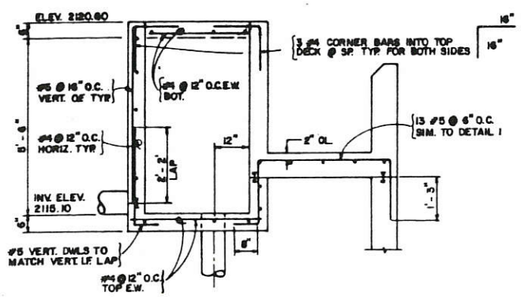
SCALE: 1/2" = 1'-0"

REDUCED
NOT TO SCALE



E SECTION

SCALE: 1/2" = 1'-0"



D SECTION

SCALE: 1/2" = 1'-0"

PREPARED UNDER THE SUPERVISION OF:
REGISTERED CIVIL ENGINEER NO. 12977
DATE 6/27/85

APPROVED BY:
CITY ENGINEER
CITY OF BANNING
DATE 6/27/85

J.F. DAVIDSON ASSOCIATES
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IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

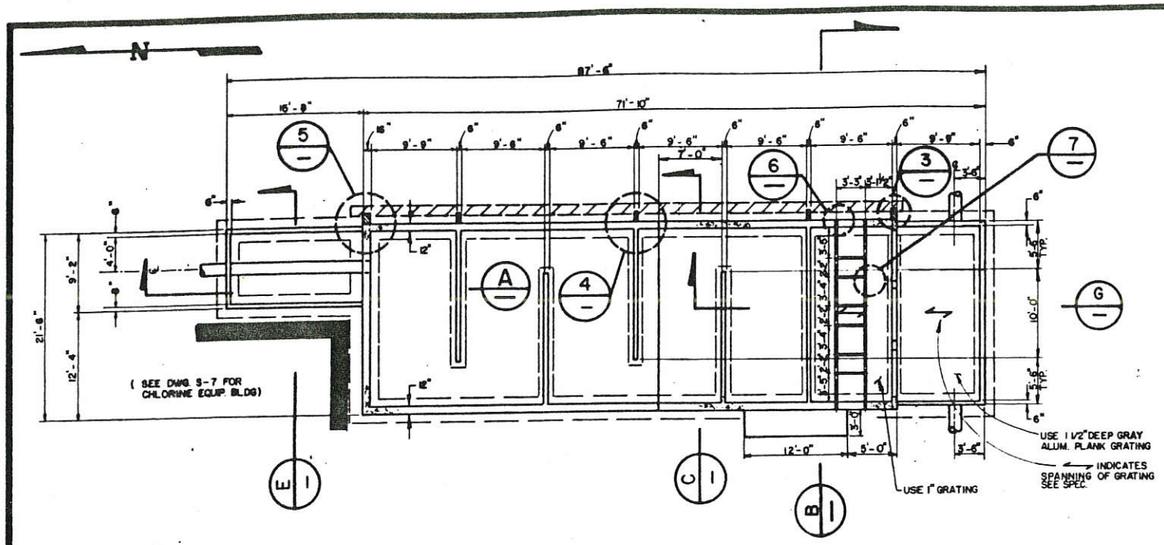
SECONDARY CLARIFIER

S-5
OF ___ SHEETS

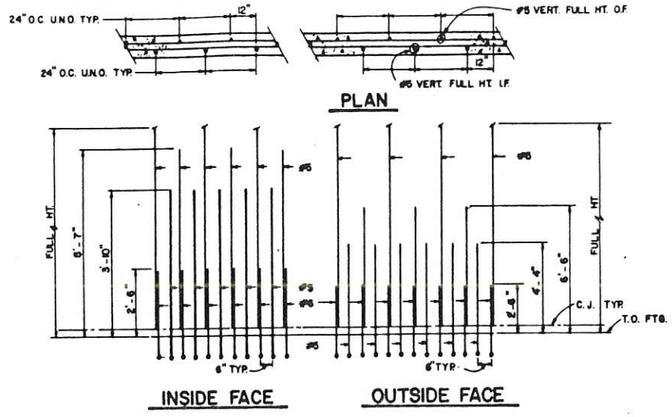
SCALE: AS NOTED
DATE: MAY, 1985
BENCH MARK: CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2 ELEV. = 2114.67
FOR: CITY OF BANNING
W.O. FB FILE NO. 84-8186

MARK | REVISIONS | APPR | DATE
DESIGNED BY: C.C. DRAWN BY: C. W. CHECKED BY: C.C.

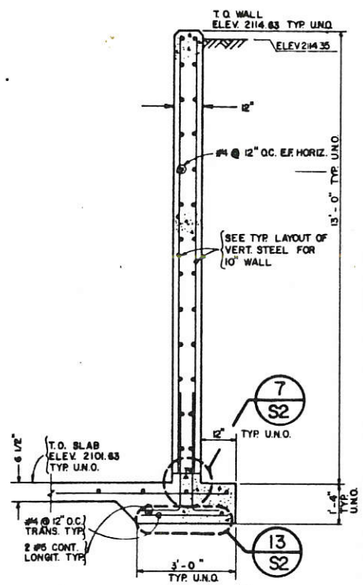
1671



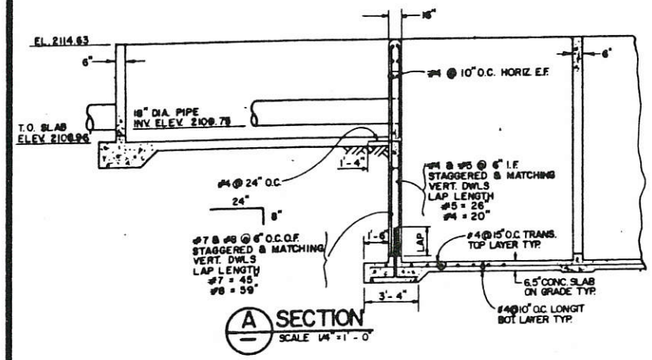
PLAN VIEW
SCALE: 1/8" = 1'-0"



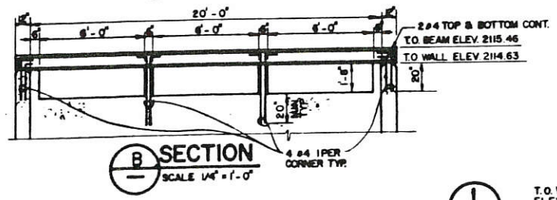
TYPICAL LAYOUT OF VERTICAL STEEL FOR 12" WALL
NO SCALE



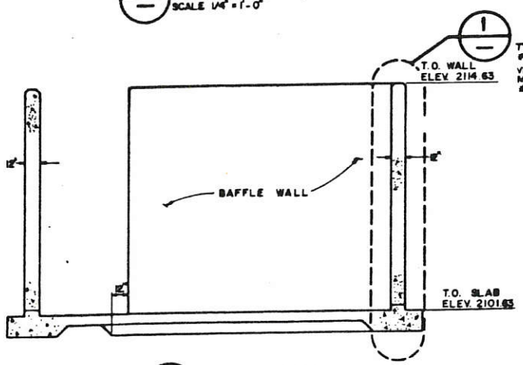
TYP. REINF. FOR 12" WALL
1 DETAIL
SCALE: 1/2" = 1'-0"



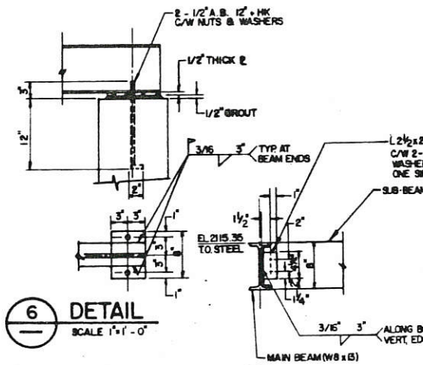
A SECTION
SCALE 1/4" = 1'-0"



B SECTION
SCALE 1/4" = 1'-0"

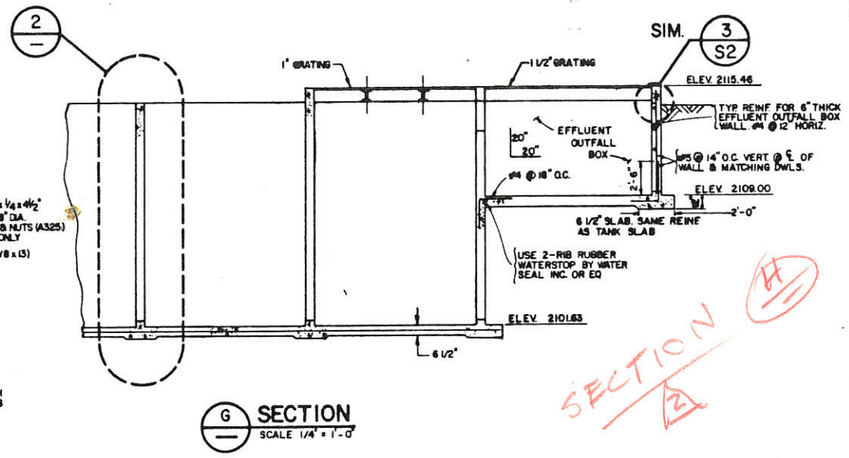


C SECTION
SCALE: 1/4" = 1'-0"



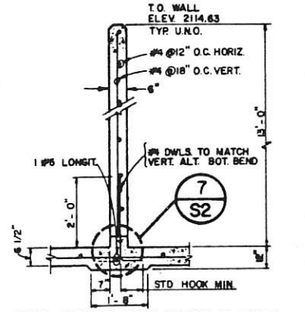
6 DETAIL
SCALE 1" = 1'-0"

7 DETAIL
SCALE 1" = 1'-0"

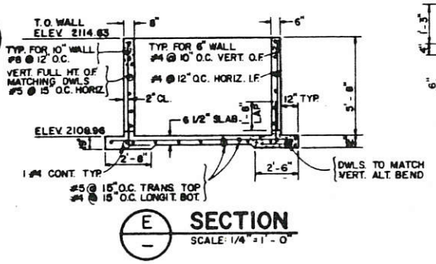


G SECTION
SCALE 1/4" = 1'-0"

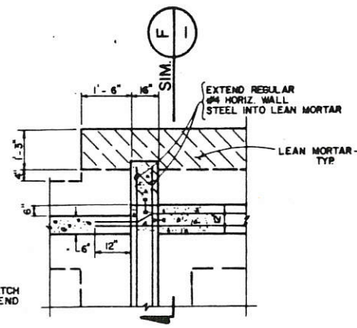
SECTION H / 2



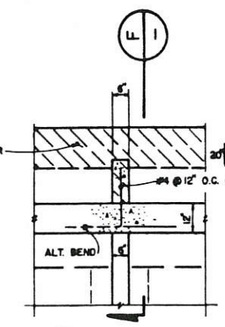
TYP. REINF FOR BAFFLE WALL
2 DETAIL
SCALE: 1/2" = 1'-0"



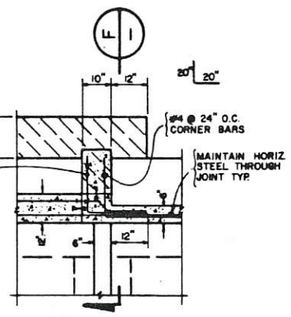
E SECTION
SCALE: 1/4" = 1'-0"



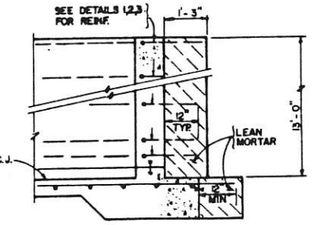
5 DETAIL
N.T.S.



4 DETAIL
SCALE: 1/2" = 1'-0"



3 DETAIL
SCALE: 1/2" = 1'-0"



F SECTION
SCALE: 1/2" = 1'-0"

REDUCED NOT TO SCALE

REVISED

MARK	REVISIONS	APPD	DATE
A	REVISED PER 1986 GRANT		APR. 86

DESIGNED BY: J.C. DRAWN BY: L.W. CHECKED BY:

PREPARED UNDER THE SUPERVISION OF: Kenneth W. Thomas Exp 3/89
REGISTERED CIVIL ENGINEER NO. 12977 DATE: 6/27/85

APPROVED BY: Kenneth W. Thomas R.C.E. 28725
CITY ENGINEER CITY OF BANNING DATE 6/27/85

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73-080 EL PASEO, ST 108, PALM DESERT, CA 92260 • (619) 346-5691
P.O. BOX 157, TEMECULA, CA 92390 • (714) 676-5335

SCALE: AS NOTED
DATE: MAY, 1985

BENCH MARK: CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2 ELEV. = 2114.67

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

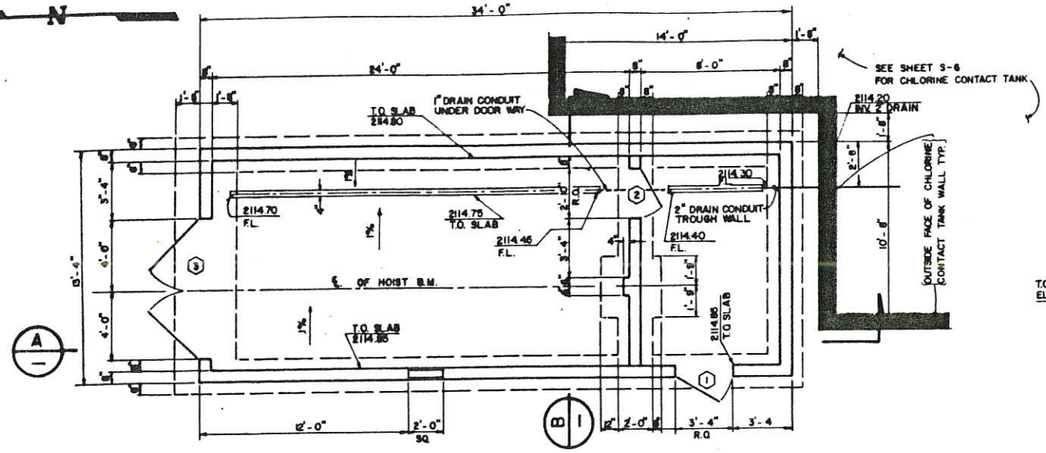
CHLORINE CONTACT TANK

S-6 OF SHEETS

FOR CITY OF BANNING

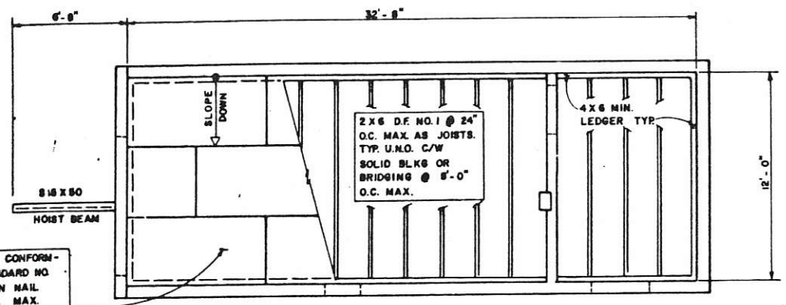
W.O. F.B. FILE NO. 84-8186

1672



FOUNDATION PLAN

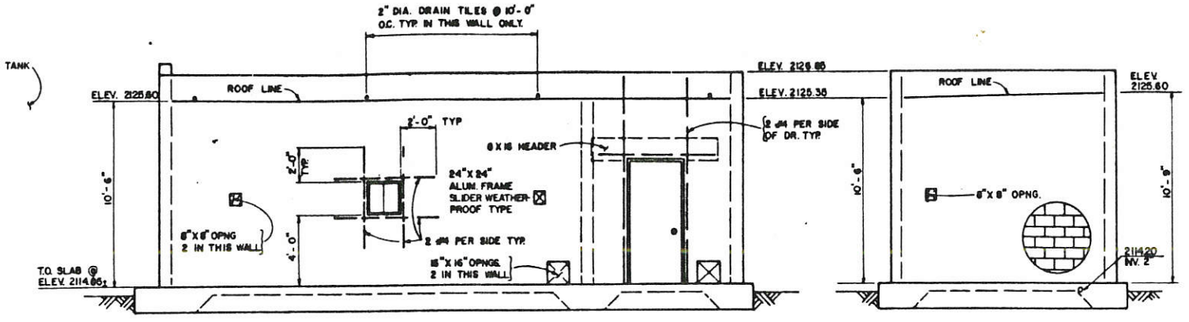
SCALE: 1/4" = 1'-0"



1/8" C-DX PTF (24/0) IN CONFORMANCE WITH U.B.C. STANDARD NO. 25-9. USE 8d COMMON NAIL SIZE SPACED @ 4" O.C. MAX. ALONG LEDGERS, @ 6" O.C. MAX. @ OTHER PANEL EDGES & 12" O.C. MAX. FOR FIELD NAILS. MIN. NORMAL PENETRATION SHALL BE 1 1/2"

ROOF PLAN

SCALE: 1/4" = 1'-0"

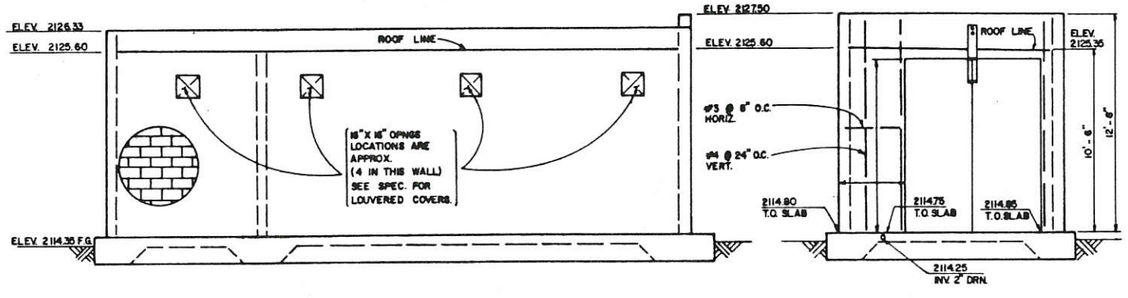


WEST ELEVATION

SCALE: 1/4" = 1'-0"

SOUTH ELEVATION

SCALE: 1/4" = 1'-0"

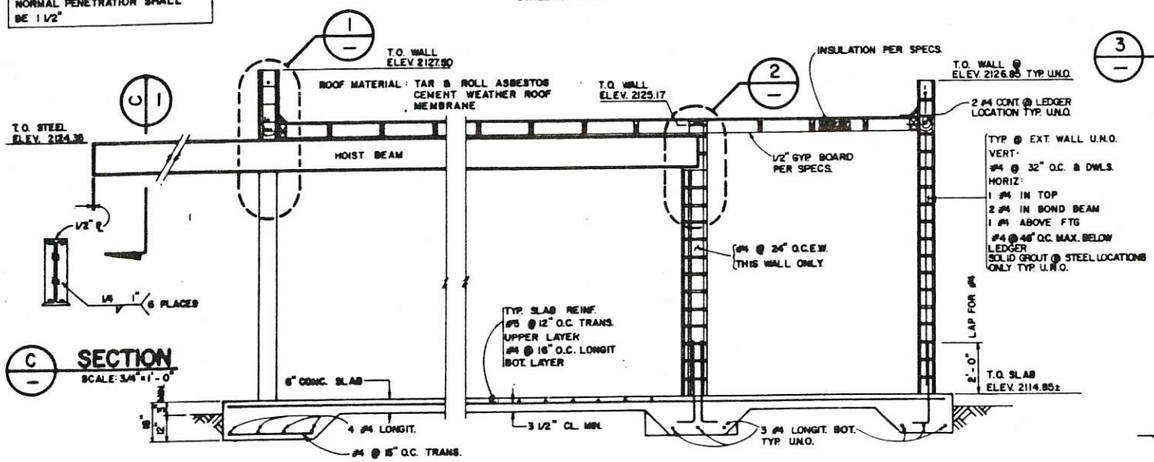


EAST ELEVATION

SCALE: 1/4" = 1'-0"

NORTH ELEVATION

SCALE: 1/4" = 1'-0"

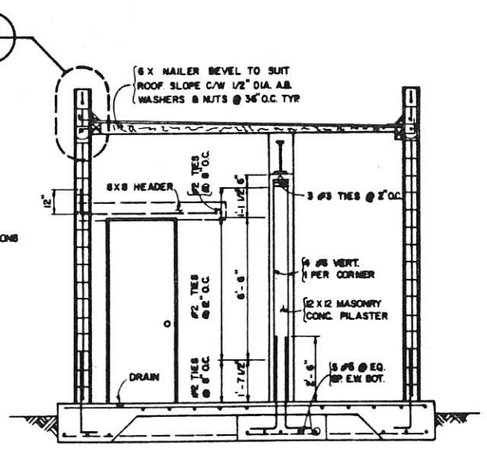


C SECTION

SCALE: 3/4" = 1'-0"

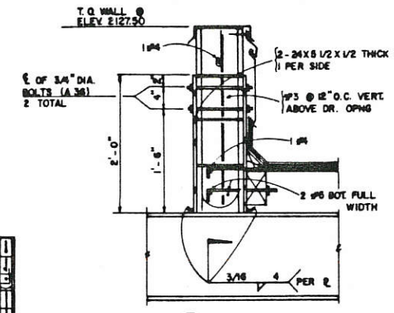
A SECTION

SCALE: 3/8" = 1'-0"



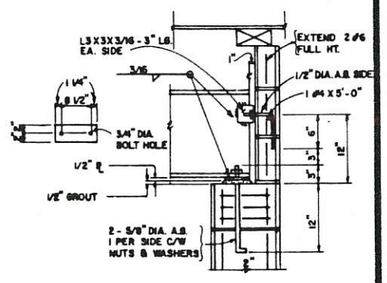
B SECTION

SCALE: 3/8" = 1'-0"



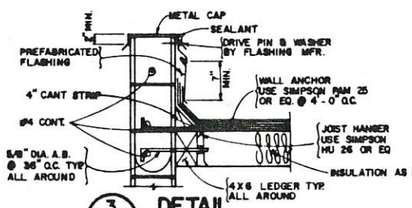
1 DETAIL

SCALE: 1" = 1'-0"



2 DETAIL

SCALE: 1" = 1'-0"



3 DETAIL

SCALE: 1" = 1'-0"

REDUCED NOT TO SCALE

DOOR SCHEDULE

SYMBOL	DESCRIPTION	SIZE	QUAN'TY	NOTE
1	U.S.F. SINGLE STEEL DOOR	3⁰ X 7⁰	1	
2	HOLLOW CORE WOOD	2⁸ X 7⁰	1	
3	18" GA 4 PANEL-BI FOLD DOOR	8⁰ X 10⁰	1	2700 SERIES BY AMERICAN METAL DOOR CO.

MADE	REVISIONS	APPR	DATE
LAYOUT BY: C.C / J.W	DRAWN BY: C.W	CHECKED BY: C.C	

PREPARED UNDER THE SUPERVISION OF:
REGISTERED CIVIL ENGINEER NO. 12977
DATE 6/24/85

APPROVED BY:
CITY ENGINEER
CITY OF BANNING
R.C.E. 29725
DATE 6/27/85

J. F. DAVIDSON ASSOCIATES
CIVIL ENGINEERS • SURVEYORS • PLANNERS
P.O. BOX 493, RIVERSIDE, CA 92502 * (714) 686-0844
11200 SO. MT. VERNON AVE., #D, COLTON, CA 92324 * (714) 825-1082
73-080 EL PASEO, ST. #28 * PALM DESERT, CA 92260 * (619) 346-5691
P.O. BOX 167, TEMECULA, CA 92390 * (714) 676-5335

SCALE: AS NOTED
DATE: MAY, 1985
BENCH MARK: CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2 ELEV. = 2114.67

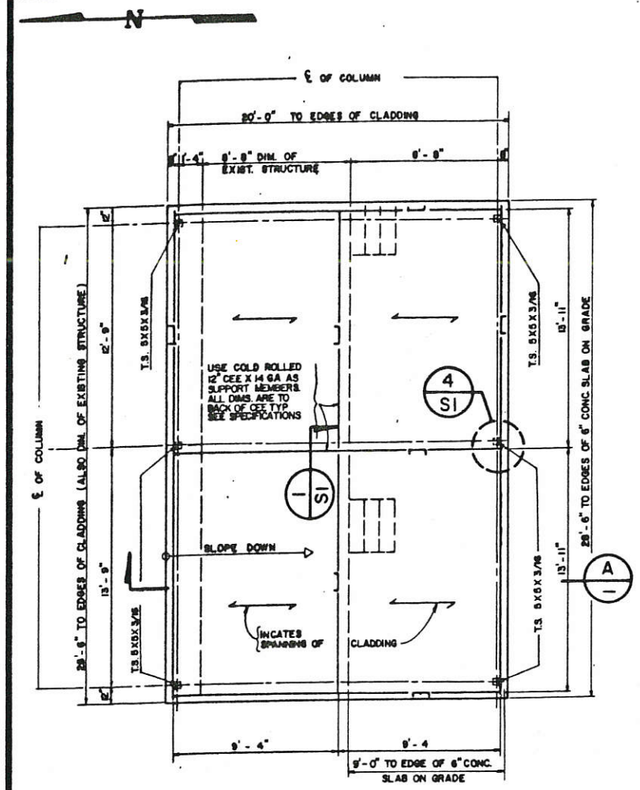
IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

CHLORINE EQUIPMENT BUILDING

S-7
OF ___ SHEETS

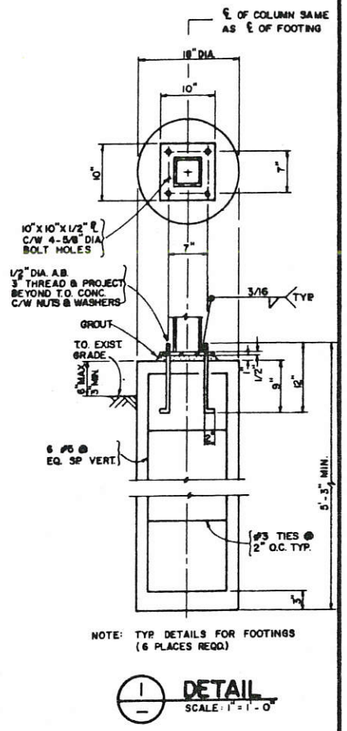
FOR CITY OF BANNING
W.O. F.B. FILE NO. 84-8186

1673



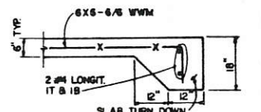
ROOF PLAN OVER EXISTING RECIRC. PUMPING STA.

SCALE: 1/4 = 1'-0"



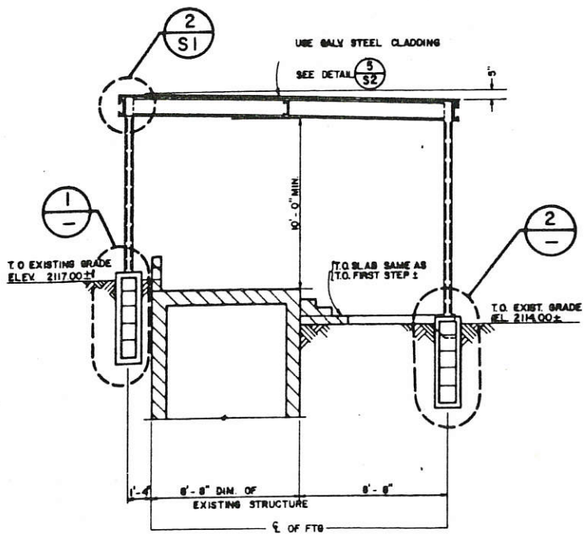
1 — DETAIL

SCALE: 1" = 1'-0"



2 — DETAIL

SCALE: 1/2" = 1'-0"



A — SECTION

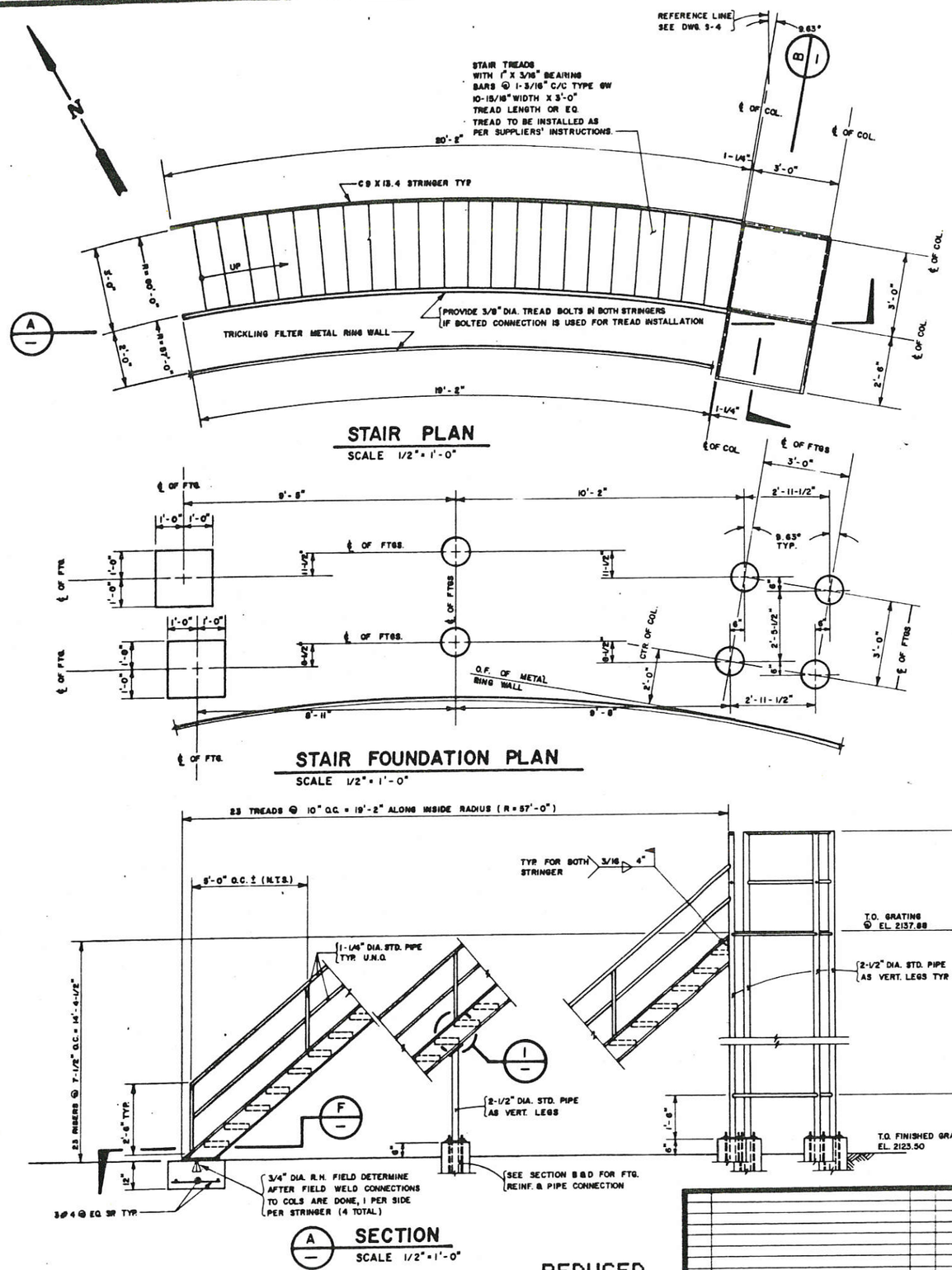
SCALE: 1/4" = 1'-0"

REDUCED
NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF: [signature] 6-20-85 REGISTERED CIVIL ENGINEER NO. 12977 DATE 6/27/85 APPROVED BY: [signature] R.C.E. 29725 CITY ENGINEER CITY OF BANNING DATE 6/27/85	J.F. DAVIDSON ASSOCIATES CIVIL ENGINEERS • SURVEYORS • PLANNERS P.O. BOX 493, RIVERSIDE, CA 92502 • (714) 686-0844 11200 SO. MT. VERNON AVE., #D, COLTON, CA 92324 (714) 825-1082 173-080 EL PASEO ST. 108, • PALM DESERT, CA 92260 (619) 346-5691 P.O. BOX 157, TEMECULA, CA 92390 (714) 676-5335	IN THE COUNTY OF RIVERSIDE CALIFORNIA CITY OF BANNING WASTEWATER TREATMENT PLANT EXPANSION PRIMARY EFFLUENT PUMP STA. ROOF	S-8 OF ___ SHEETS
	SCALE: AS NOTED DATE: MAY, 1985	BENCH MARK: CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2 ELEV. = 2114.67	FOR: CITY OF BANNING W.O. F.B. FILE NO. 84-8186

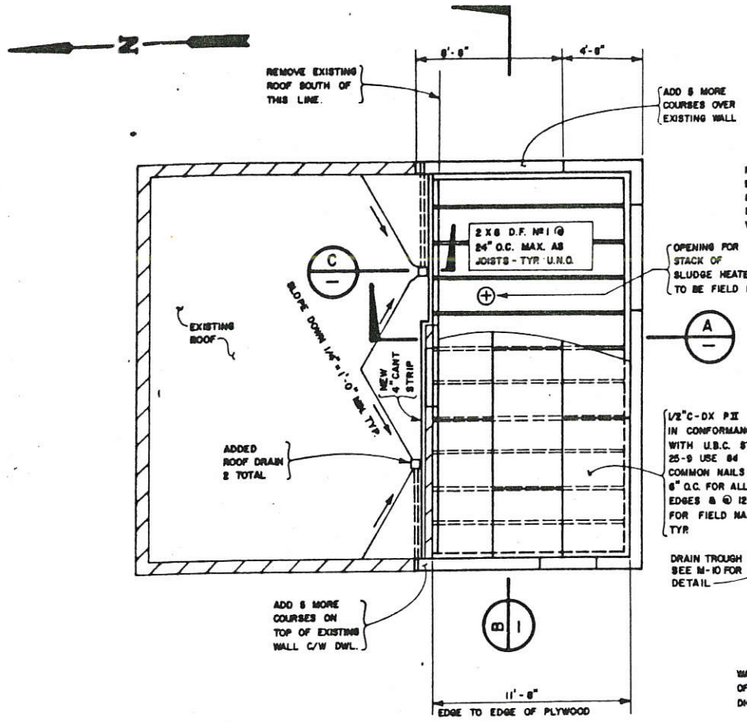
MARK	REVISIONS	APPD	DATE

DESIGNED BY: L.C. DRAWN BY: L.W CHECKED BY: L.C



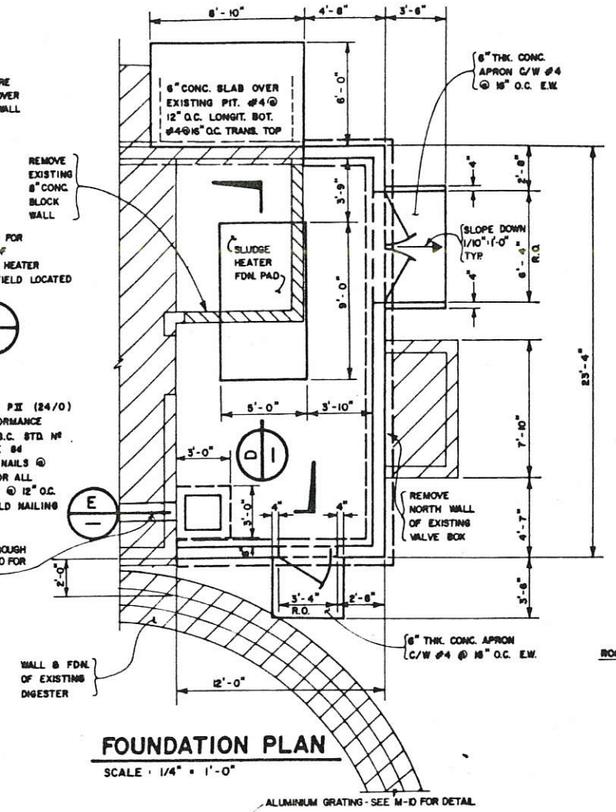
REVISIONS / DESIGNED BY L.C. / DRAWN BY K.C. / CHECKED BY L.C.	PREPARED UNDER THE SUPERVISION OF: Vincent M. Jones 8-20-85 REGISTERED CIVIL ENGINEER NO. 12977 DATE 8/27/85 APPROVED BY: Charles W. Nelson R.C.E. 29725 CITY ENGINEER CITY OF BANNING DATE 10/27/85	J.F. DAVIDSON ASSOCIATES CIVIL ENGINEERS • SURVEYORS • PLANNERS P.O. BOX 493 RIVERSIDE, CA 92502 (714) 686-0844 • 11200 SO. MT. VERNON AVE., #D COLTON, CA 92324 (714) 825-1082 • 73-080 EL PASEO ST. #28 PALM DESERT, CA 92260 (619) 346-5691 • P.O. BOX 157 TEMECULA, CA 92390 (714) 676-5336 SCALE AS NOTED DATE MAY, 1985 BENCH MARK: CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2 ELEV. = 2114.67
IN THE COUNTY OF RIVERSIDE CALIFORNIA CITY OF BANNING WASTEWATER TREATMENT PLANT EXPANSION **TRICKLING FILTER ACCESS** FOR CITY OF BANNING	S-9 OF ___ SHEETS W.O. F.B. FILE NO. 84-8186

1675



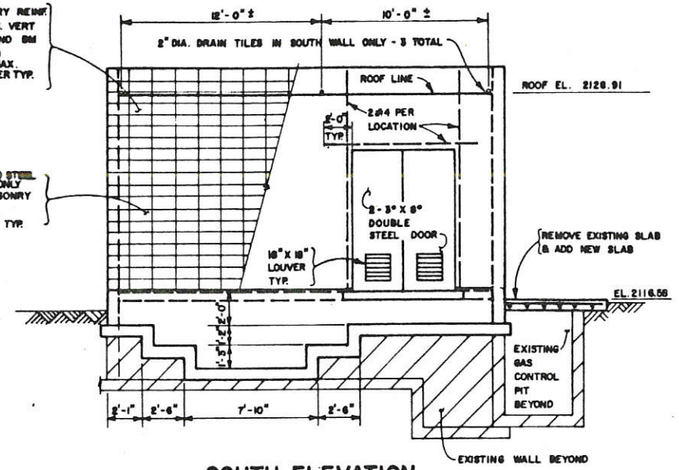
ROOF PLAN

SCALE : 1/4" = 1'-0"



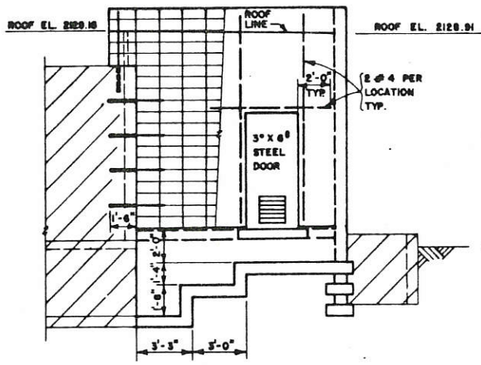
FOUNDATION PLAN

SCALE : 1/4" = 1'-0"



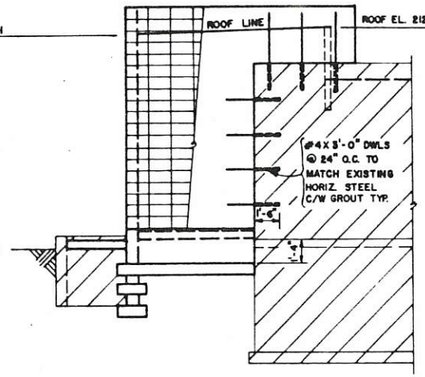
SOUTH ELEVATION

SCALE : 1/4" = 1'-0"



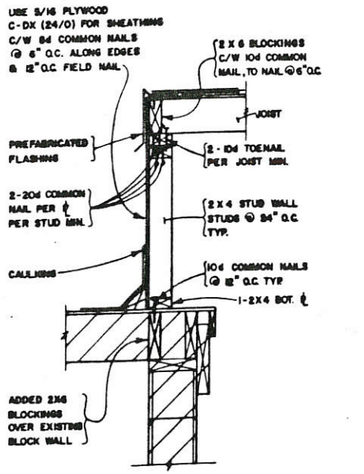
WEST ELEVATION

SCALE : 1/4" = 1'-0"



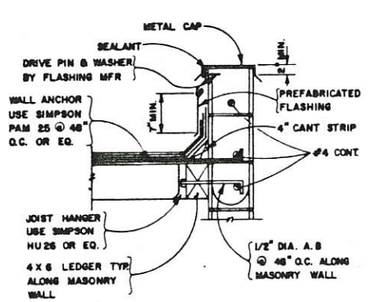
EAST ELEVATION

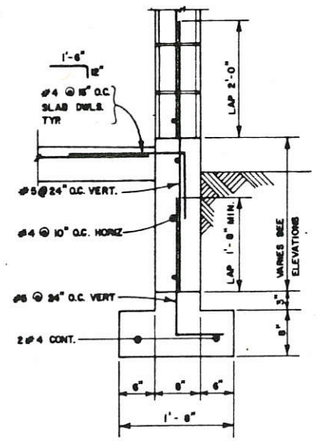
SCALE : 1/4" = 1'-0"

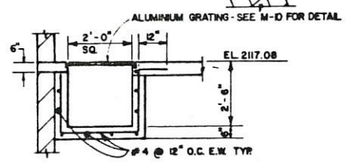


A SECTION

SCALE : 1" = 1'-0"

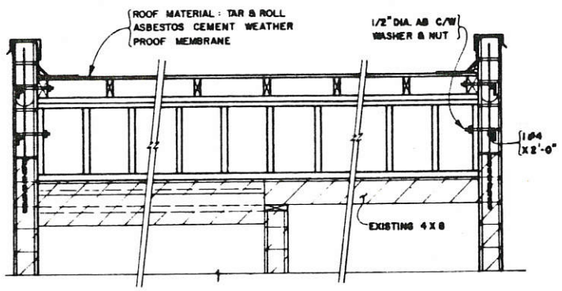






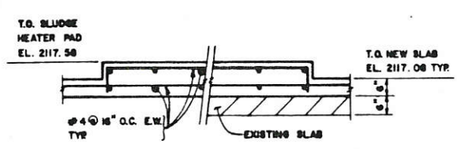
E SECTION

N.T.S



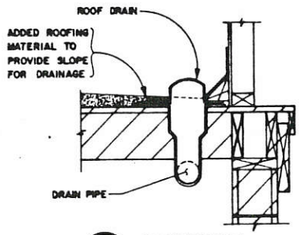
B SECTION

SCALE : 1/2" = 1'-0"



D SECTION

SCALE : 1/2" = 1'-0"



C SECTION

SCALE : 1" = 1'-0"

NOTE : /// INDICATES EXISTING

REDUCED
NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:
REGISTERED CIVIL ENGINEER NO. 18977
DATE 7/14/85

APPROVED BY:
CITY ENGINEER
CITY OF BANNING
R.C.E. 29725
DATE 7/12/85

J.F. DAVIDSON ASSOCIATES
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11200 SO. MT. VERNON AVE., #D, COLTON, CA 92324 (714) 825-1082
73-080 EL PASEO, ST. 108, PALM DESERT, CA 92260 (619) 346-5691
P.O. BOX 157, TEMECULA, CA 92390 (714) 676-5336

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

DIGESTER CONTROL HOUSE - EXPANSION

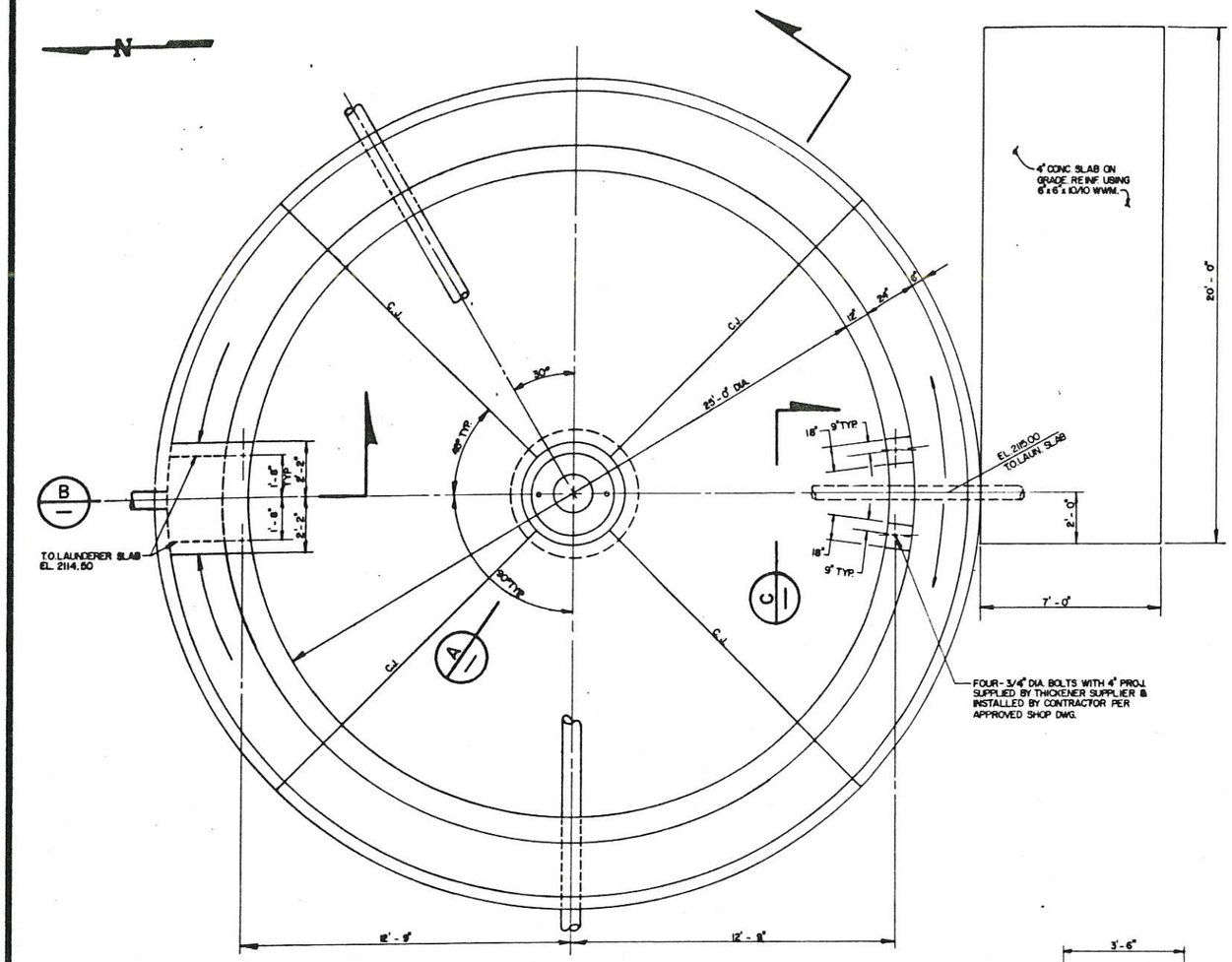
S-10
OF ___ SHEETS

SCALE: AS NOTED
DATE: JULY, 1985
BENCH MARK: CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2 ELEV. = 2114.67

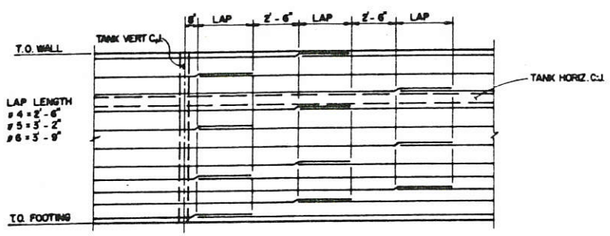
FOR: CITY OF BANNING
W.O. FILE NO. 84-8186

DESIGNED BY
DRAWN BY K.Charbonneau
CHECKED BY
MARK REVISIONS APPD DATE

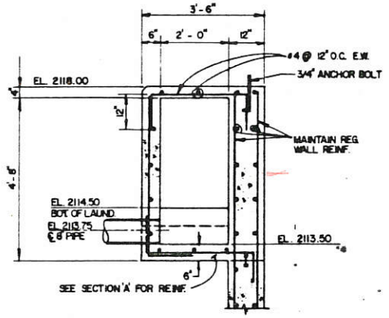
1676



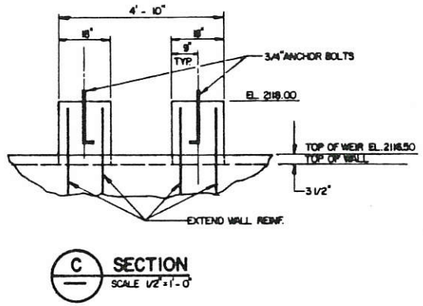
PLAN
SCALE 3/8" = 1'-0"



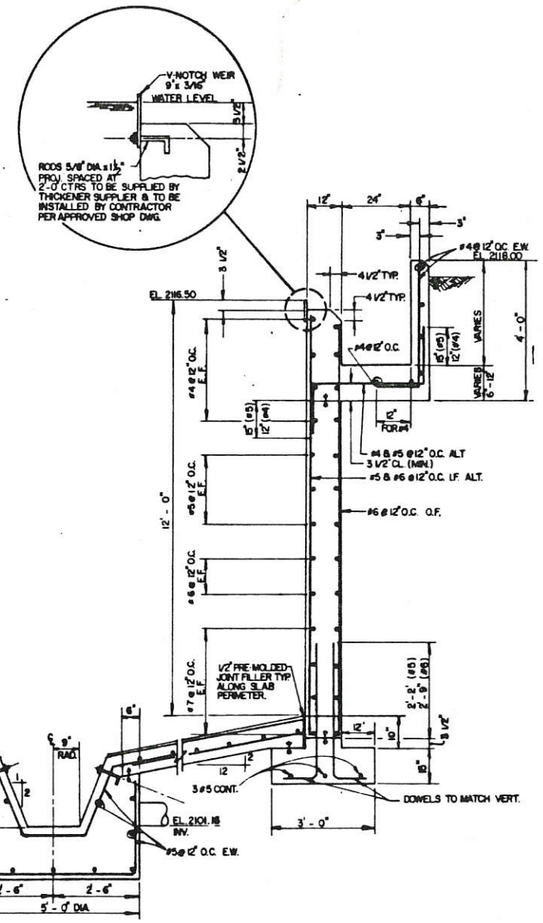
TYP. LAP FOR TANK WALL HORIZ. REINF.
NO SCALE



B SECTION
SCALE 1/2" = 1'-0"



C SECTION
SCALE 1/2" = 1'-0"



A SECTION
SCALE 1/2" = 1'-0"

REDUCED
NOT TO SCALE

PREPARED UNDER THE SUPERVISION:
REGISTERED CIVIL ENGINEER NO. 18977 — DATE: 10/27/86 — Exp 3/89

APPROVED BY: CITY OF BANNING — R.C.E. 37413 — DATE: 10-27-86 — Exp 6-30-86

J.F. DAVIDSON ASSOCIATES
CIVIL ENGINEERS • SURVEYORS • PLANNERS
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74-075 EL PASEO, #A-12, PALM DESERT, CA 92260, (619) 346-5691
P.O. BOX 157, TEMECULA, CA 92390, (714) 676-5335

SCALE: AS NOTED
DATE: APRIL, 1986
BENCH MARK: CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER No. 2 ELEV. 2114.67

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

SLUDGE THICKENER

S-11
OF ___ SHEETS

FOR CITY OF BANNING
W.O. F.B. FILE NO. 84 - 0186

MARK	REVISIONS	APPD	DATE

DESIGNED BY J.W — DRAWN BY J.S. — CHECKED BY J.W.

1677

PIPE MATERIAL SCHEDULE ②③

PIPE DESIGNATION	PIPE DUTY	ACCEPTABLE PIPE SCHEDULE				PRESSURE RATING	
		UNDERGROUND ①	UNDERSLAB	EXPOSED INTERIOR	EXPOSED EXTERIOR	PSI	SCHED
CLP	CHLORINE SYSTEM WATER SUPPLY			14	14		80
CLV	VACUUM TUBE CONDUIT	14	14	14	14		80
CS	CHLORINE SOLUTION	14	14	14	14		80
DRN	DRAIN	1, 15	14(SCH.80)				
HPE	HIGH PRESSURE EFFLUENT	12, 15	12	12	12	80	40
MPF	MAIN PLANT FLOW (GRAVITY)	3	5	5	5	150	
MPF	MAIN PLANT FLOW (PRESSURE)	2, 9	5	5	5	150	
RC	RECIRCULATION			5	5		
SL	SLUDGE	5	5				
F	FUTURE	5					
TSL	THICKENED SLUDGE	20, 11	20	20	20		
SN	SUPERNATE	16	14(SCH.80)				40
TOF	THICKENER OVERFLOW	3,5	5				
DS	DIGESTED SLUDGE	5, 14	5				

GENERAL NOTES:

1. (#) DESIGNATES A DIMENSION, SIZE OR CONFIGURATION, ETC. WHICH SHALL BE VERIFIED BY THE MANUFACTURER OF THE ACTUAL EQUIPMENT FURNISHED.
2. EXACT LOCATION OF EQUIPMENT, PIPING AND ELECTRICAL EQUIPMENT TO BE VERIFIED BY MANUFACTURER'S APPROVED DRAWINGS PRIOR TO CONSTRUCTION. EQUIPMENT SHALL BE LOCATED FOR EASY MAINTENANCE AND REPAIR.
3. ANCHOR BOLTS, BOLTS, FLAT & LOCK WASHERS AND NUTS WHICH SHALL BE UTILIZED FOR ADJUSTABLE WEIRS SHALL BE STAINLESS STEEL. ALL OTHER ANCHOR BOLTS SHALL BE GALVANIZED.
4. ALL EQUIPMENT FLOOR MOUNTED SHALL BE INSTALLED PER DETAILS ON SHEET M-9
5. REFER TO SHEET 9# FOR PIPE THROUGH WALL DETAIL. PIPE SLEEVE TYPE REQUIRED ONLY WHERE INDICATED.
6. THE LOCATION OF ELECTRICAL SERVICE JUNCTION BOX SHALL BE LOCATED NEAR EQUIPMENT MOTOR TERMINAL BOXES. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY WITH MANUFACTURER.
7. MINIMUM PIPE COVER SHALL BE 3' - 0" UNLESS SPECIFICALLY INDICATED OTHERWISE.
8. THRUST BLOCKS SHALL BE PROVIDED PER STANDARD DRAWING FOR ALL PIPE BENDS GREATER THAN V32 BEND.
9. WEEP RING SHALL BE PROVIDED AT ALL PIPING THROUGH WATER CONTAINING STRUCTURE WALLS. ALL PIPE INLET/OUTLET SHALL HAVE ROUND EDGE PER DETAIL ON SHEET S-2.
10. ALL HANDRAILS SHALL BE 1-1/2" DIAMETER PIPE AND SHALL BE POST SLEEVE MOUNTED PER DETAIL M-9
11. ALL METAL SURFACE TO BE BOLTED TO CONCRETE SHALL RECEIVE COATING PER SPECIFICATION SECTION 4.10 PRIOR TO INSTALLATION. ALL METAL TO BE CAST-IN-CONCRETE SHALL BE GALVANIZED UNLESS SPECIFICALLY INDICATED.
12. ALL VALVES SHALL BE PROVIDED WITH AN INDEXING TAG PER STANDARD DRAWING VALVES AS LISTED SHALL BE REVISED BY THE CONTRACTOR TO REFLECT EXACT AS INSTALLED CONDITIONS. THE CONTRACTOR SHALL LIST AND INDEX ALL VALVES INCLUDING THOSE VALVES NOT LISTED HEREON.
13. GATE VALVES SHALL BE AWWA TYPE UNLESS INDICATED ON THE VALVE SCHEDULE AS LOW PRESSURE TYPE (GATE L.P.)
14. PLUG VALVES SHALL BE NON-LUBRICATED TYPE UNLESS OTHERWISE INDICATED ON THE VALVE SCHEDULE.
15. BURIED VALVES SHALL BE DESIGNED SPECIALLY FOR BURIED SERVICE AND PROVIDED WITH STEM EXTENSION, VALVE BOX, AND COVER. GEAR OPERATORS SHALL BE PROVIDED AS REQUIRED. TWO TEE HANDLES SHALL BE FURNISHED. REFER TO STANDARD DRAWING FOR VALVE BOXES.

DESIGN CRITERIA

FLOW	
EXISTING	
AVERAGE, MGD	1.80
PEAK 24 HOUR, MGD	3.60
EXPANDED	
AVERAGE, MGD	2.40
PEAK 24 HOUR, MGD	4.40
ULTIMATE	
AVERAGE, MGD	5.40
PEAK 24 HOUR, MGD	8.40
SEWAGE STRENGTH	
BOD CONCENTRATION, MG/L	270
TOTAL SUSPENDED SOLIDS CONCENTRATION, MG/L	175
TRICKLING FILTER	
EXISTING	1
DIAMETER, FT	110
MEDIA DEPTH, FT	4
MEDIA TYPE	ROCK
CAPACITY, MGD (AVERAGE)	0.90
EXPANDED	1
DIAMETER, FT	110
MEDIA DEPTH, FT	8
MEDIA TYPE	PVC MODULES
CAPACITY, MGD (AVERAGE)	1.80

SECONDARY CLARIFIERS	
EXISTING, NO.	1
EXPANDED, NO.	1
DIAMETER, FT	65
SIDEWATER DEPTH, FT	9
SURFACE OVERFLOW RATE PEAK, GPD/SF	600
CHLORINE CONTACT TANK	
CAPACITY, MGD (AVERAGE)	3.60
EXPANDABLE TO 6.00 MGD FUTURE	
LENGTH, FT	82
WIDTH, FT	21
SIDEWATER DEPTH, FT	12
CONTACT TIME, MIN.	60
CHLORINATION EQUIPMENT	
NUMBER OF TON CYLINDERS (2 ON-LINE, 2 STORAGE)	4
CAPACITY, LB/DAY	500
NORMAL DOSAGE, MG/L	10-15

PRIMARY EFFLUENT PUMPS	
NUMBER	3
(2 EXISTING, 1 ADDITION)	
CAPACITY, GPM	2000
SPEED CONTROLED BY VARIABLE FREQUENCY DRIVE SYSTEM	
RECIRCULATION PUMPS	
NUMBER	2
CAPACITY, GPM	450
NUMBER (FUTURE)	3
SLUDGE THICKENER	
NUMBER	1
DIAMETER, FT.	25
SLUDGE PUMP	
NUMBER	1
CAPACITY, GPM	50

PIPE MATERIAL DESIGNATION

MATERIAL NUMBER	ABBREVIATION	PIPE MATERIAL
1	ABS	ABS PLASTIC
2	AC-P	ASBESTOS CEMENT-PRESSURE
3	AC-S	ASBESTOS CEMENT-SEWER
4	BP	BRASS
5	CI	DUCTILE CAST IRON-CEMENT LINED
6	CMLC	STEEL PIPE (CEMENT MORTAR LINED & COATED)
7	CML	STEEL PIPE(CEMENT MORTAR-LINED&PAINT'D EXT)
8	CCP	CONCRETE CULVERT
9	CP	COPPER
10	CMP	CORRUGATED METAL
11	FRP	FIBERGLASS REINFORCED PIPE
12	GIP	GALVANIZED IRON
13	GSM	GALVANIZED SHEET METAL
14	PVC	POLYVINYL CHLORIDE-PRESSURE PIPE
15	PVCI	PVC IRRIGATION PIPE-CLASS 80PSI PIPE
16	RCP	REINFORCED CONCRETE
17	RIG	RIGID STEEL CONDUIT
18	RPM	REINFORCED PLASTIC MORTAR
19	VCP	VITRIFIED CLAY
20	CI-G	DUCTILE IRON-GLASS LINED

LOCATION DESIGNATION

ABBREVIATION	DEFINITION
CEB	CHLORINE EQUIPMENT BUILDING
CLC	CHLORINE CONTACT TANK
OJS	OUTFALL JUNCTION STRUCTURE
PEP	PRIMARY EFFLUENT PUMP STATION
PG	PIPE GALLERY
PRP	PERCULATION PONDS
RC	RECIRCULATING PUMP STATION
SCL	SECONDARY CLARIFIER
TF	TRICKLING FILTER
DOH	DIGESTER CONTROL HOUSE
ST	SLUDGE THICKENER

MISC. DESIGNAT'N & ABBREV.

PS	PIPE SUPPORT
SV	SAMPLE VALVE

FOOTNOTES:

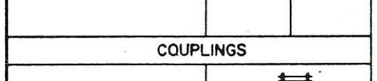
1. INCLUDE PIPING INTO TANK WALL AND UP TO FLEXIBLE COUPLING, UNLESS OTHERWISE SHOWN ON THE PLANS.
2. WHERE MORE THAN ONE MATERIAL IS INDICATED, THE CONTRACTOR MAY SELECT ONE TYPE.
3. SEE PIPE MATERIAL DESIGNATION FOR PIPE MATERIAL NUMBER. PIPE MATERIAL AND RATING SHOWN IN TABLE TO UTILIZED UNLESS OTHERWISE SHOWN ON THE PLANS.
4. GROOVED FITTINGS MAY BE UTILIZED IN LIEU OF FLANGED. WHERE SPECIFICALLY SHOWN, GROOVED SHALL BE PROVIDED.
5. REFER TO SHEET M-3 FOR LISTING.

REDUCED
NOT TO SCALE

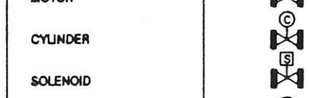
PIPING LEGEND

IN - LINE DESIGNATIONS

PIPE



VALVES ⑥



SYMBOLS

FITTINGS ④

TYPE	FLANGED	SCREWED
ELBOW		
ELBOW (TURNED DOWN)		
ELBOW (TURNED UP)		
BASE ELBOW		
ELBOW (W/SIDE OUTLET)		
TEE		
CROSS		
REDUCER (CONCENTRIC)		
REDUCER (ECCENTRIC)		
BLIND FLANGE		
LATERAL (STRAINER)		
CAP		

COUPLINGS

FLEXIBLE COUPLING (ADAPTER COUPLING FOR PIPE SIZE CHANGES)	

VALVES

TYPE	FLANGED	SCREWED
PLUG VALVE		
GATE VALVE		
CHECK VALVE		
BUTTERFLY VALVE		
GLOBE VALVE		
YARD HYDRANT		
HOSE VALVE (ANGLE)		
HOSE VALVE (GATE)		
HOSE VALVE (GLOBE)		
BLAST GATE VALVE		
SAFETY VALVE		
WAFER BUTTERFLY		
AIR CHECK VALVE		

VALVE OPERATORS

MOTOR	M
CYLINDER	C
SOLENOID	S
DIAPHRAGM	

MISCELLANEOUS

HANDRAIL	PRESSURE GAUGE WITH ISOLATING GLOBAL VALVE
PIPE SUPPORT NO. 1 (P.S)	
PIPE EXPANSION JOINT	CLEANOUT (GRAVITY TYPE/ PRESSURE TYPE) C.O. OR P.C.O.
OPEN GRATING	
CHECKERED PLATE	FIRE HYDRANT
VIBRATION CONNECTOR	BACK FLOW PREVENTER
FLOW METER(TRANSIT TIME TYPE)	ORIFICE METER
LINE SHUT-OFF VALVE (YARD PIPING)	

⚠ REVISED PER 1986 GRANT	APR.'86	PREPARED UNDER THE SUPERVISION OF: Vincent W. Davidson 6/27/85	J.F. DAVIDSON ASSOCIATES CIVIL ENGINEERS • SURVEYORS • PLANNERS
MARK REVISIONS	APP'D DATE	REGISTERED CIVIL ENGINEER NO. 12977 DATE 6/27/85	○ P.O. BOX 493, RIVERSIDE, CA 92502 (714) 686-0844 ○ 11200 SO. MT. VERNON AVE., #D, COLTON, CA 92324 (714) 825-1082 ○ 73-080 EL PASEO ST. #28, PALM DESERT, CA 92260 (619) 346-5691 ○ P.O. BOX 157, TEMECULA, CA 92390 (714) 676-5335
DESIGNED BY JW	DRAWN BY JS/LW CHECKED BY JW	APPROVED BY: Charles W. Stevens R.C.E. 29725 CITY ENGINEER CITY OF BANNING DATE 6/27/85	SCALE N/A DATE MAY, 1985 BENCH MARK: CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2 ELEV. = 2114.67

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

LEGEND & PIPE MATERIAL SCHEDULE

M-1 OF ___ SHEETS

FOR CITY OF BANNING — W.O. F.B. FILE NO. 84-8188

TO PERCOLATOR PONDS 7,8,9,10
SEE SHEET C-6 FOR CONTINUATION

TRICKLING FILTER NO. 2

SECONDARY CLARIFIER NO. 2

EXISTING PRIMARY CLARIFIER NO. 1

CHLORINE CONTACT TANK

CHLORINE EQUIPMENT BLDG.

EXIST. FLOW SPLITTER

EXIST. POWER LINES

EXIST. RP

EXIST. 18" BYPASS

PIPE GALLERY RECIRC. PUMP STATION

EXISTING TRICKLING FILTER NO. 1

EXISTING SECONDARY CLARIFIER NO. 1

EXISTING WEIR BOX

EXISTING PRIMARY EFFLUENT PUMP STATION

EXISTING PRIMARY CLARIFIER NO. 2

EXISTING PRIMARY DIGESTER

EXIST. DIGESTER CONTROL HOUSE

ADDITION

EXISTING SECONDARY DIGESTER

SLUDGE THICKENER

EXIST. CONTROL OFFICE BLDG.

EXIST. STORAGE SHED

EXIST. GRIT CHAMBER

EXISTING 8" RETURN

CONNECT TO EXIST SL-101-SCL

CONNECT TO EXISTING SL-102-SCL

SL-103-SCL

EXIST. 18" SEWER

EXIST. ASPHALT ROAD

EXIST. FENCE

30" SEWER

TO BE REMOVED

EXIST TO BE REMOVED

EXIST. 18"

EXIST. 24" PLANT EFFLUENT TO BE ABANDONED

TO EXISTING EFFLUENT OUTFALL TANK TO BE ABANDONED.

TO O.J.S. NOS. 1 & 2 SEE SHEET M-8

TO BE PLUGGED

EXIST MANHOLE

EXIST 18 MPF

FROM EXIST. EFFLUENT OUTFALL TANK

N

SCALE: 1" = 20'

1 PIPING DETAIL
N.T.S.

NOTE:
@ TO BE REMOVED

NO.	BEARING	DISTANCE
T 1	N90 00 00W	5.00
T 3	N00 00 00E	12.57
T 8	N60 00 00E	7.00
T 9	N75 00 00W	4.31
T11	N32 52 15W	5.00
T12	N32 52 15W	7.33
T13	N57 07 45E	14.50
T14	N57 07 45E	14.70
T15	N32 52 15W	5.00
T16	N57 07 45E	3.87
T17	N90 00 00E	2.96
T18	N00 00 00E	4.00
T24	N90 00 00E	5.07
T28	N72 07 00W	5.95
T43	N90 00 00W	14.93
T44	N00 00 00W	15.00
T46	N90 00 00W	7.34
T48	N45 00 00E	5.49
T49	N45 00 00W	4.02
T50	N00 00 00E	21.01
T54	N22 50 00W	9.25
T55	N44 43 14W	8.03
T57	N45 00 00E	15.00
T93	N45 00 00W	15.00

CONTROL POINT COORDINATES		
PT.	NORTHING	EASTING
(1)	10,000.00000	10,000.00000
(2)	10,515.98000	10,000.00000

REDUCED
NOT TO SCALE

⚠ REVISED PER 1986 GRANT			
MARK	REVISIONS	APPD	DATE
DESIGNED BY: T.W.	DRAWN BY: L.W.	CHECKED BY: J.W.	

PREPARED UNDER THE SUPERVISION OF:
REGISTERED CIVIL ENGINEER NO. 12977 DATE 6/27/85

APPROVED BY:
CITY ENGINEER, CITY OF BANNING R.C.E. 29725 DATE: 6/27/85

J.F. DAVIDSON ASSOCIATES
CIVIL ENGINEERS • SURVEYORS • PLANNERS
P.O. BOX 493, RIVERSIDE, CA 92502, (714) 686-0844
11200 SO. MT. VERNON AVE., P.O. 1173-080 EL PASEO ST. 108, COLTON, CA 92324, (714) 825-1082
P.O. BOX 1673, PALM DESERT, CA 92260, (619) 346-5691
P.O. BOX 157, TEMECULA, CA 92390, (714) 676-5336

SCALE: 1" = 20'
DATE: MAY, 1985

BENCH MARK:
CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2
ELEV. = 2114.67

IN THE COUNTY OF RIVERSIDE, CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

SITE PIPING PLAN

M-2 OF ___ SHEETS

FOR CITY OF BANNING
W.O. F.B. FILE NO. 84-8186

VALVE DESIGNATION	LOCATION	DUTY	TYPE	SIZE	OPERATOR
RC-100-PG	PIPE GALLERY	REC. PUMP NO. 1 C.V.	PLUG	6	MANUAL
RC-101-PG	PIPE GALLERY	REC. BYPASS VALVE	PLUG	6	MANUAL
RC-102-PG	PIPE GALLERY	REC. PUMP NO. 2 C.V.	PLUG	6	MANUAL
RC-103-PG	PIPE GALLERY	REC. PUMP NO.1 BACKFLOW PREVENTION	SWING CK.	6	
RC-104-PG	PIPE GALLERY	REC. PUMP NO. 2 BACKFLOW PREVENTION	SWING. CK.	6	
MPF-100-PEP	PRIMARY EFFLUENT PUMP	P.E. PUMP NO. 3 BACKFLOW PREVENTION	SWING CK.	12	
MPF-101-PEP	PRIMARY EFFLUENT PUMP	P. E. PUMP NO. 3 C. V.	PLUG	12	MANUAL
MPF-102-PG	PIPE GALLERY	TF NO. 1 C. V.	PLUG	16	MANUAL
MPF-103-PG	PIPE GALLERY	TF NO. 2 C. V.	PLUG	16	MANUAL
MPF-104-PG	PIPE GALLERY	FUTURE TF NO. 3 C. V.	PLUG	16	MANUAL
SL-100-SCL	SECONDARY CLARIFIER	SLUDGE CONTROL	TELESCP.	8	MANUAL
HPE-100-CC	CHLORINE CONTACT TANK	BACKFLOW PREVENTION	SWING CK.	2	
HPE-101-CC	CHLORINE CONTACT TANK	SAMPLE VALVE	PER SPECS	3/4	MANUAL
HPE-102-CC	CHLORINE CONTACT TANK	CONTROL VALVE	GATE	2	MANUAL
HPE-103-CEB	CHLORINE EQUIP. BLDG.	RES. ANALYZER WATER SUPPLY C.V.	PLUG	2	MANUAL
HPE-104-CEB	CHLORINE EQUIP. BLDG.	CHLORINATOR WATER SUPPLY C.V.	PLUG	2	MANUAL
HPE-105-CEB	CHLORINE EQUIP. BLDG.	PRESS. RELIEF VALVE	SAFETY V.	2	
CS-100-CEB	CHLORINE EQUIP. BLDG.	BACKFLOW PREVENTION	SWING CK.	1	
CS-101-CEB	CHLORINE EQUIP. BLDG.	CHLORINE SOLUTION BYPASS	GATE	2	MANUAL
CS-102-CEB	CHLORINE EQUIP. BLDG.	CHLORINE SOLUTION C.V.	GATE	1	MANUAL
CS-101-CC	CHLORINE CONTACT TANK	DIFFUSER INLET	CORP STOP	1	MANUAL
TSL-100-ST	SLUDGE THICKENER	SLUDGE BYPASS VALVE	PLUG	6	MANUAL
TSL-101-ST	SLUDGE THICKENER	SLUDGE CONTROL	PLUG	6	MANUAL
TSL-102-ST	SLUDGE THICKENER	SLUDGE CONTROL	PLUG	6	MANUAL
TSL-100-DCH	DIGESTER CONTROL HSE.	CONTROL VALVE	PLUG	6	MANUAL
TSL-101-DCH	DIGESTER CONTROL HSE.	BYPASS VALVE	PLUG	6	MANUAL
TSL-102-DCH	DIGESTER CONTROL HSE	BACKFLOW PREVENTION	RUBBER CK.	4	
SL-101-DCH	DIGESTER CONTROL HSE.	CONTROL VALVE	PLUG	6	MANUAL
SL-101-SCL	SECONDARY CLAR.(EXIST.)	CONTROL VALVE	TELESCP.	8	MANUAL
SN-100-DCH	DIGESTER CONTROL HSE.	BACKFLOW PREVENTION	SWING CK.	4	
SN-101-DCH	DIGESTER CONTROL HSE.	CONTROL VALVE	PLUG	4	MANUAL
SN-102-DCH	DIGESTER CONTROL HSE.	CONTROL VALVE	PLUG	4	MANUAL
DS-100-SDB THRU DS-111-SDB	SLUDGE DRYING BEDS	CONTROL VALVES	PLUG	8	MANUAL
SL-102-SCL	SECONDARY CLARIFIER	CONTROL VALVE	GATE	8	MANUAL
SL-103-SCL	SECONDARY CLARIFIER	CONTROL VALVE	GATE	8	MANUAL

VALVE DESIGNATION	LOCATION	DUTY	TYPE	SIZE	OPERATOR
MPF-100-ED THRU MPF-103-ED	EFFLU. DISPOSAL PONDS	CONTROL VALVES	B.F. VALVE	16	
MPF-104-CC	CHLOR. CONTACT TANK	BACKFLOW PREVENT.	SW.CHECK	12	
MPF-105-CC	CHLOR. CONTACT TANK	VERT PUMP # 1 C.V.	B.F.VALVE	12	MANUAL
MPF-106-CC	CHLOR. CONTACT TANK	BACKFLOW PREVENT.	SW.CHECK	12	
MPF-107-CC	CHLOR. CONTACT TANK	VERT PUMP # 2 C.V.	B.F.VALVE	12	MANUAL

SLIDE GATE DESIGNATION	LOCATION	DUTY	TYPE	SIZE (IN)	OPERATOR
①	RECIRCULATION PUMP STATION	SCL - 2 SHUT-OFF	FLUSH INVT.	18 X 18	MANUAL
②	RECIRCULATION PUMP STATION	SCL - 1 SHUT-OFF	FLUSH INVT.	18 X 18	MANUAL
③	CHLORINE CONTACT TANK	PRP 5&6 CONTROL GATE	FLUSH INVT.	18 X 18	MANUAL
④	CHLORINE CONTACT TANK	PRP 1-4 & OUTFALL CONTROL	FLUSH INVT.	18 X 18	MANUAL
⑤	OUTFALL JUNCT. STRUCT.	DIRECT DISCHARGE CONTROL GATE	FLUSH INVT.	18 X 18	MANUAL
⑥ THRU ⑦	SLUDGE DRYING BEDS	DECANT VALVE DOWNWARD OPENING	FLUSH INVT	12 X 12	MANUAL

REDUCED
NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:
Ronald W. Tipton 6-27-85
REGISTERED CIVIL ENGINEER NO. 12977
DATE: 6/27/85

APPROVED BY:
Edward W. Stevens R.C.E. 29725
CITY ENGINEER
CITY OF BANNING
DATE: 6/27/85

J.F. DAVIDSON ASSOCIATES
CIVIL ENGINEERS • SURVEYORS • PLANNERS
P.O. BOX 493, RIVERSIDE, CA 92502 • (714) 686-0844
11200 SO. MT. VERNON AVE. #D, COLTON, CA 92324 • (714) 825-1082
73-080 EL PASEO ST.108, PALM DESERT, CA 92260 • (619) 346-5691
P.O. BOX 157, TEMECULA, CA 92390 • (714) 676-5335

IN THE COUNTY OF RIVERSIDE, CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

M-3

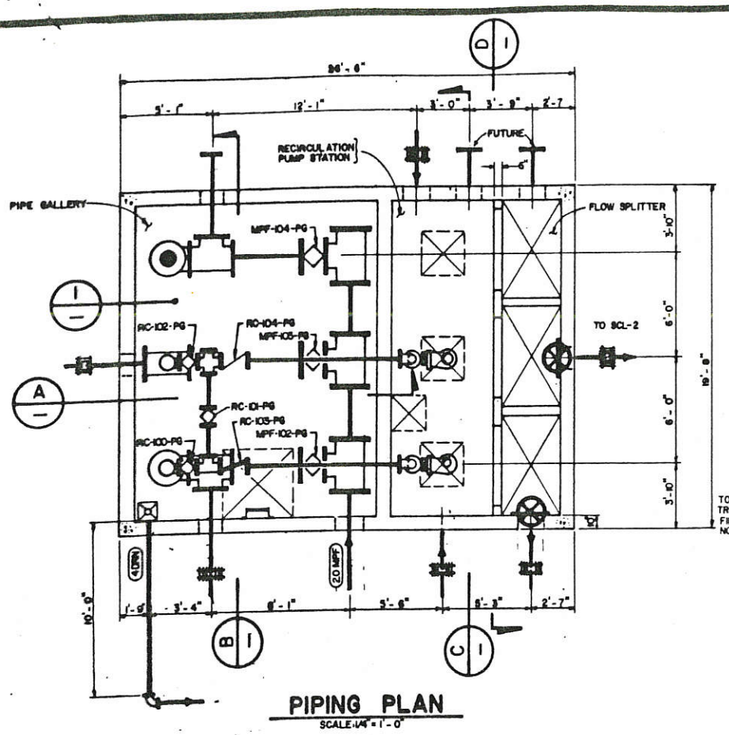
VALVE & SLIDE GATE SCHEDULE

OF ___ SHEETS

SCALE: N/A
DATE: MAY, 1985
BENCH MARK: N/A
FOR: CITY OF BANNING
W.O. FILE NO. 84-0186

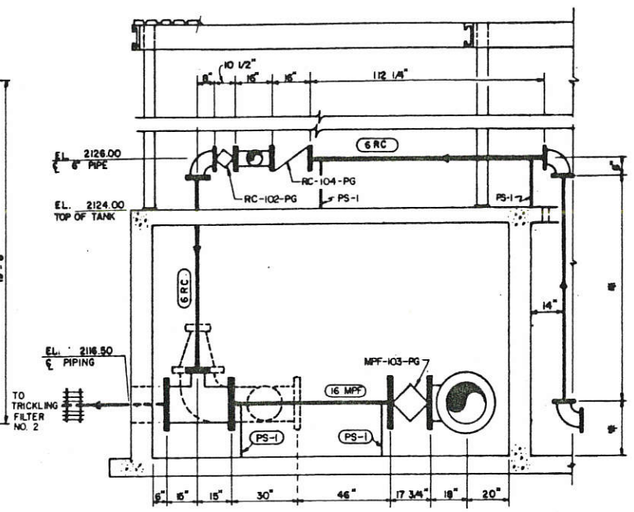
DESIGNED BY J.W. DRAWN BY J.S./C.W. CHECKED BY J.W.

1680



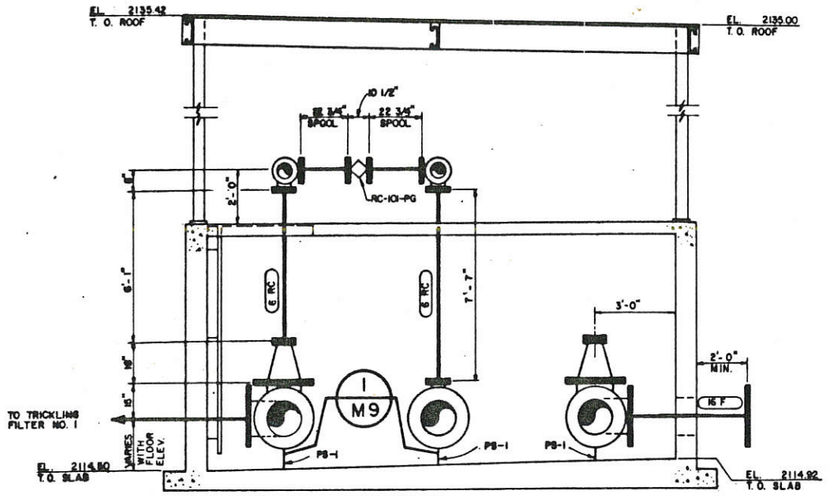
PIPING PLAN

SCALE: 1/4" = 1'-0"



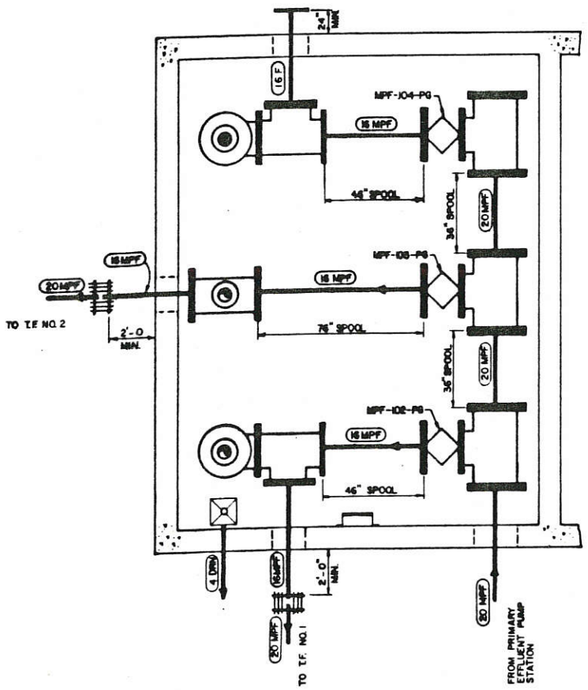
A SECTION

SCALE: 3/8" = 1'-0"



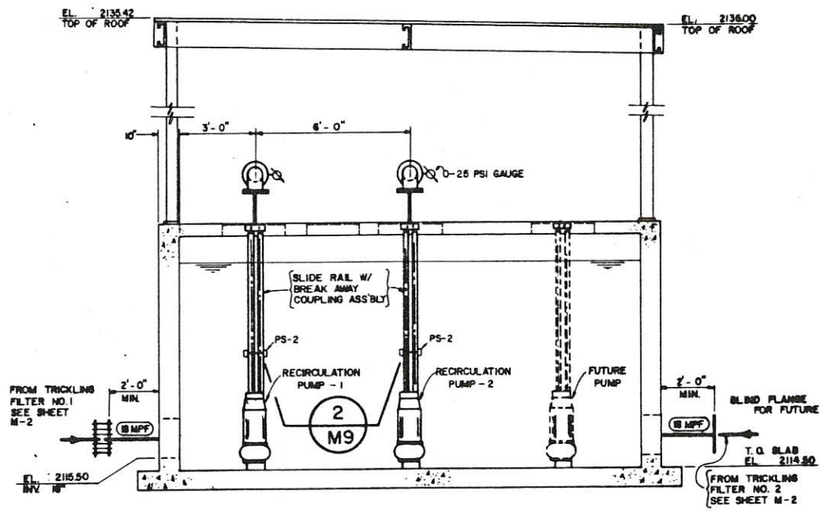
B SECTION

SCALE: 3/8" = 1'-0"



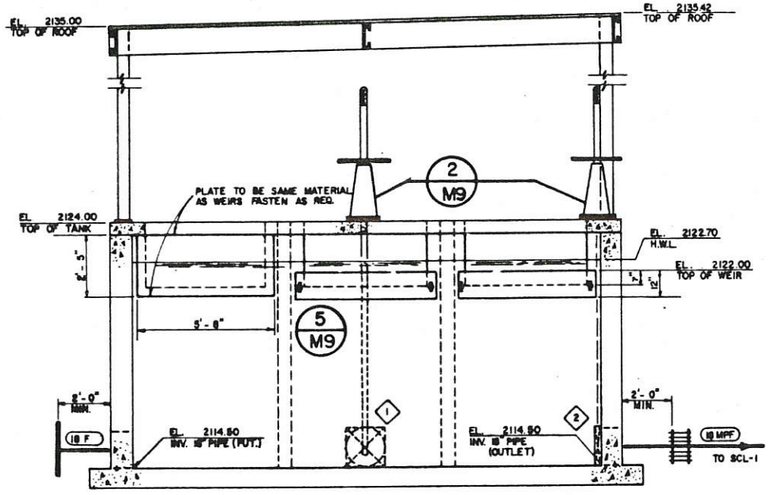
PIPE GALLERY

SCALE: 3/8" = 1'-0"



C SECTION

SCALE: 3/8" = 1'-0"



D SECTION

SCALE 3/8" = 1'-0"

REDUCED
NOT TO SCALE

MARK	REVISIONS	APPD	DATE
DESIGNED BY J.W./J.S.	DRAWN BY J.S.	CHECKED BY J.W.	

PREPARED UNDER THE SUPERVISION OF:
Vincent M. Fazio Exp. 3/89
REGISTERED CIVIL ENGINEER NO. 12977
DATE 6/17/85

APPROVED BY:
Charles N. Stevens R.C.E. 29728
CITY ENGINEER
CITY OF BANNING
DATE 6/27/85

J.F. DAVIDSON ASSOCIATES
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P.O. BOX 493, RIVERSIDE, CA 92502, (714) 686-0844
11200 SO. MT. VERNON AVE., #D, COLTON, CA 92324, (714) 825-1082
73-080 EL PASEO, ST. 108, PALM DESERT, CA 92260, (619) 346-5691
P.O. BOX 157, TEMECULA, CA 92390, (714) 676-5335

SCALE: AS SHOWN
DATE: MAY, 1985

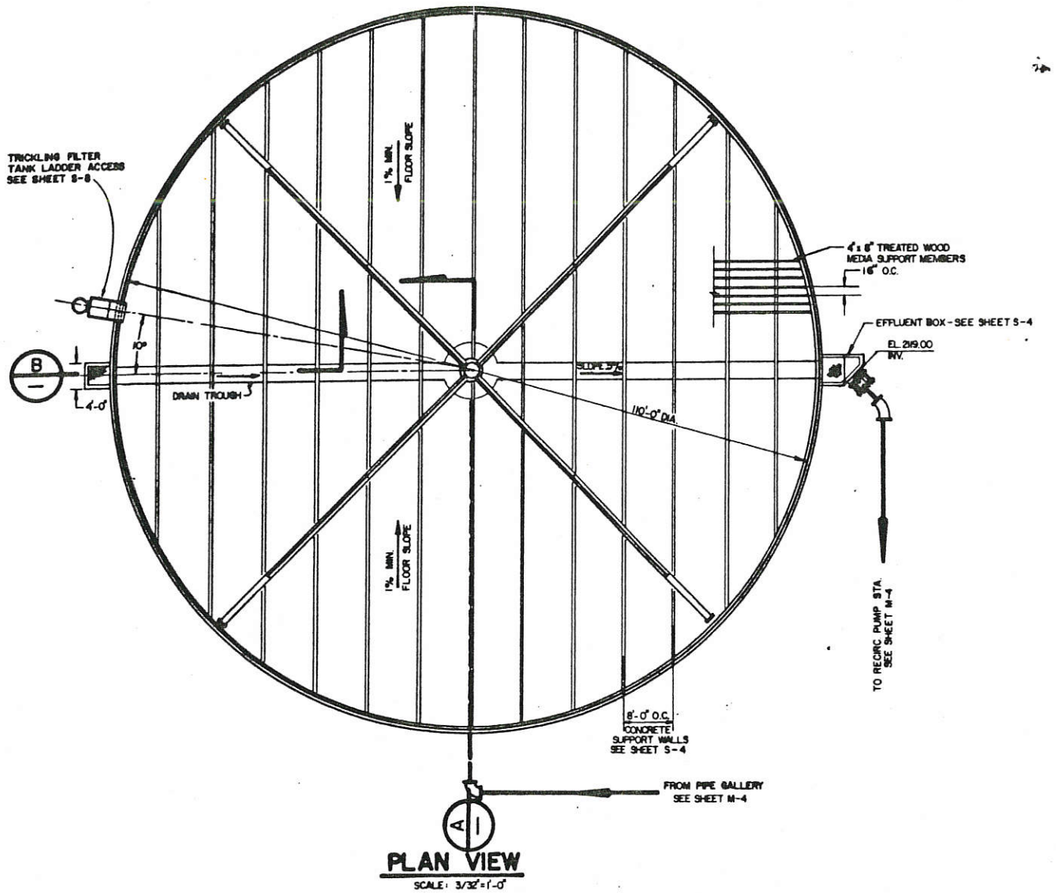
BENCH MARK:
CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2
ELEV. = 2114.67

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

RECIRCULATION PUMP STA. PIPE GALLERY

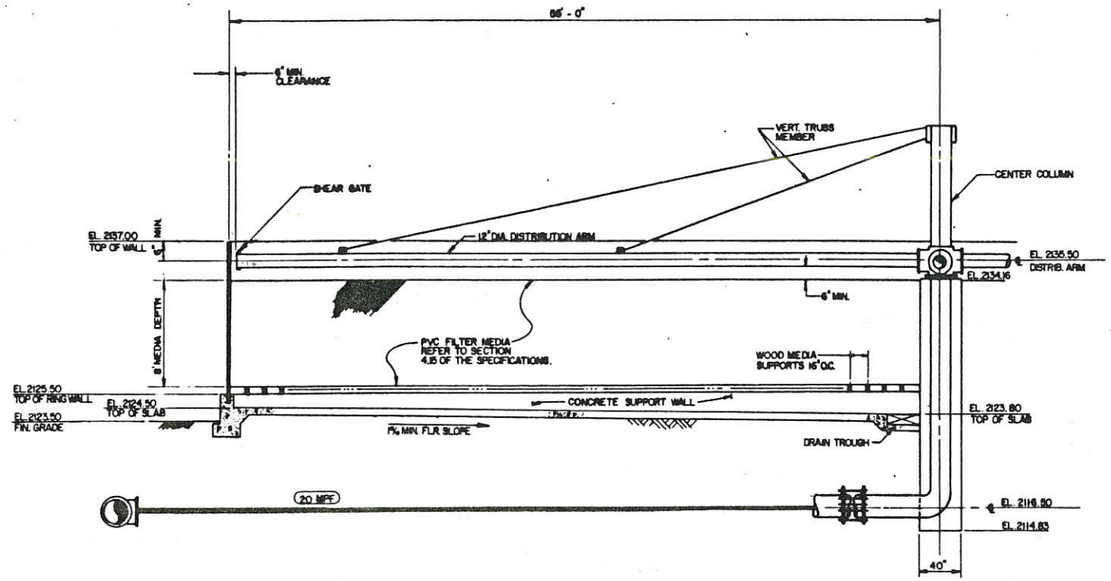
M-4
OF ___ SHEETS

FOR CITY OF BANNING
W.O. F.B. FILE NO. 84-8186



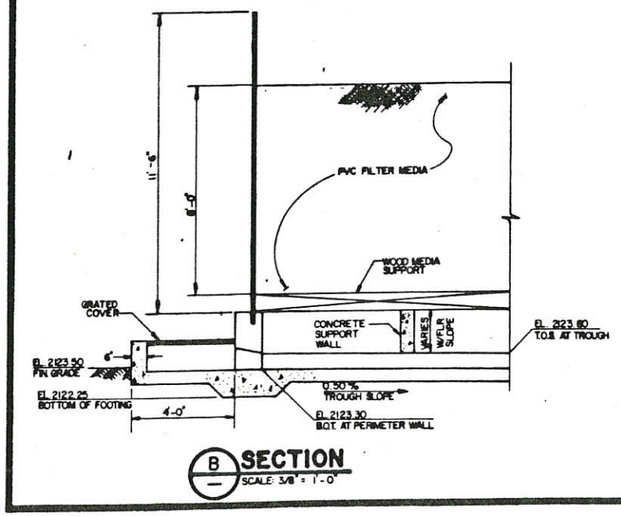
A/1 **PLAN VIEW**

SCALE: 3/32" = 1'-0"



A **SECTION**

SCALE: 3/16" = 1'-0"



B **SECTION**

SCALE: 3/8" = 1'-0"

NOTES:

1. ROTARY DISTRIBUTOR DIMENSIONS, MOUNTING REQUIREMENTS AND DETAILS PER MANUFACTURER'S DRAWINGS.
2. METAL RINGWALL DETAILS PER MANUFACTURER'S DRAWINGS.
3. FILTER MEDIA TO BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

REDUCED
NOT TO SCALE

MARK	REVISIONS	APPD	DATE
DESIGNED BY J.W.	DRAWN BY J.S./L.W.	CHECKED BY J.W.	

PREPARED UNDER THE SUPERVISION OF:
REGISTERED CIVIL ENGINEER NO. 12977
DATE 6/27/85

APPROVED BY:
CITY ENGINEER
CITY OF BANNING
R.C.E. 29726
DATE 6/27/85

J.F. DAVIDSON ASSOCIATES
CIVIL ENGINEERS • SURVEYORS • PLANNERS
P.O. BOX 493, RIVERSIDE, CA 92502 (714) 686-0844
11200 SO. MT. VERNON AVE., #D, COLTON, CA 92324 (714) 825-1082
73-080 EL PASEO, ST. 108, PALM DESERT, CA 92260 (619) 346-5691
P.O. BOX 167, TEMECULA, CA 92390 (714) 676-5335

SCALE: AS NOTED

DATE: MAY, 1985

BENCH MARK:
CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2
ELEV. = 2114.67

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

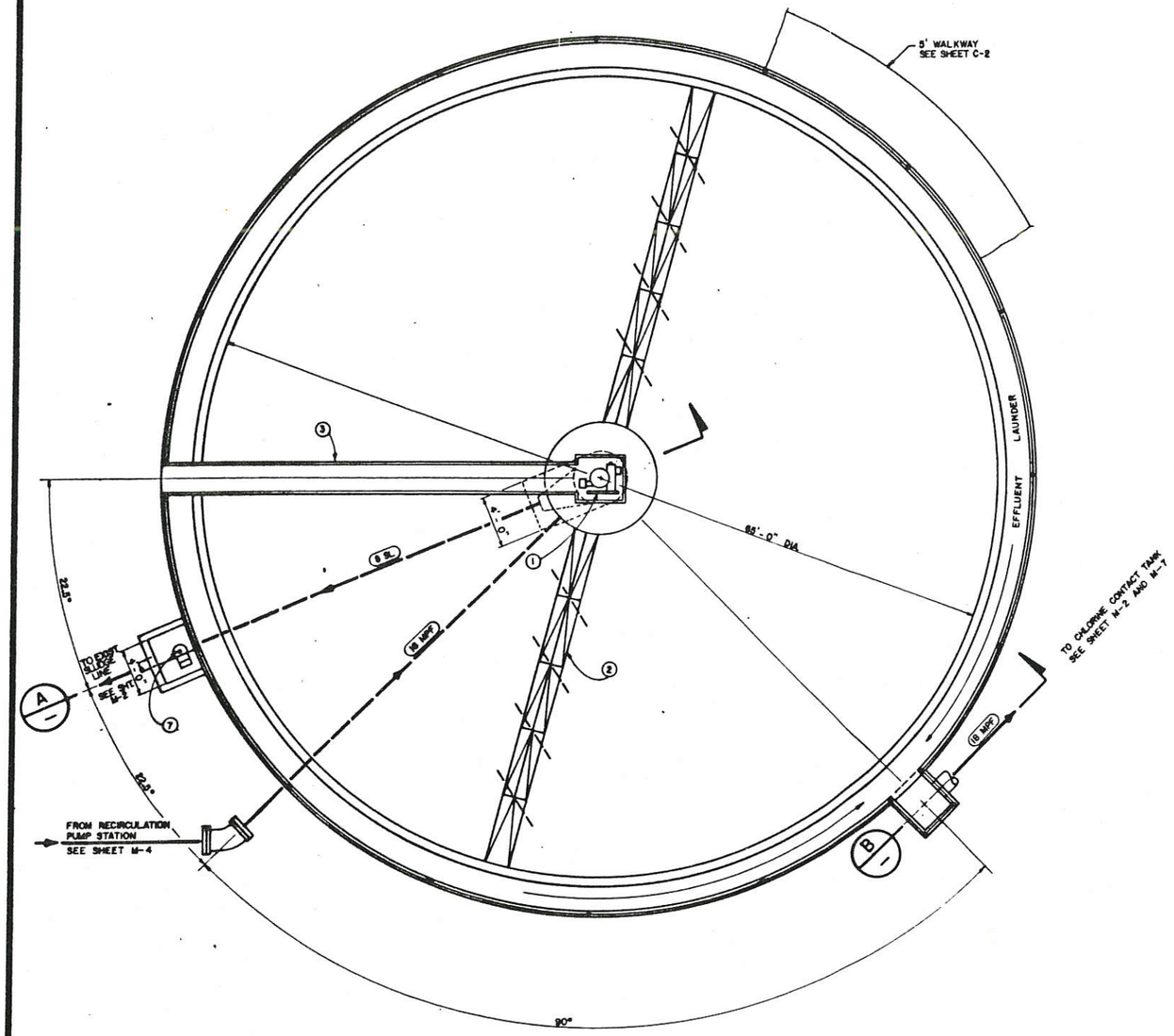
M-5

TRICKLING FILTER

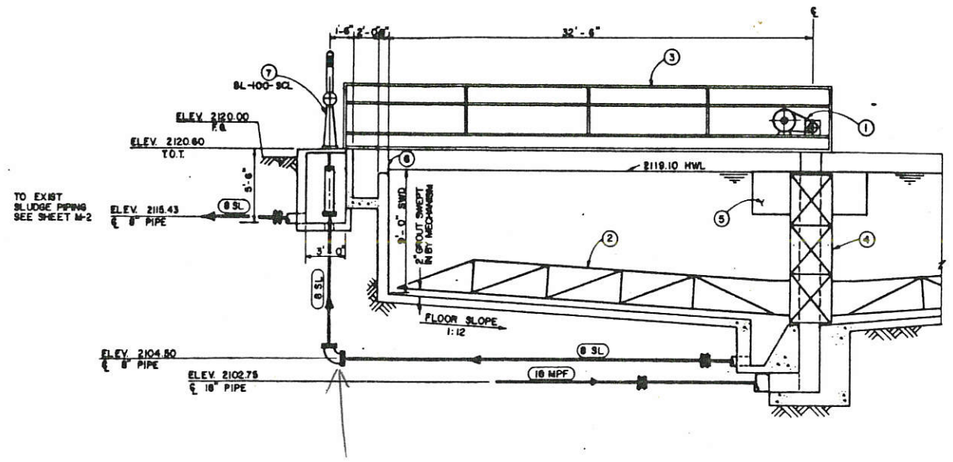
OF ___ SHEETS

FOR CITY OF BANNING

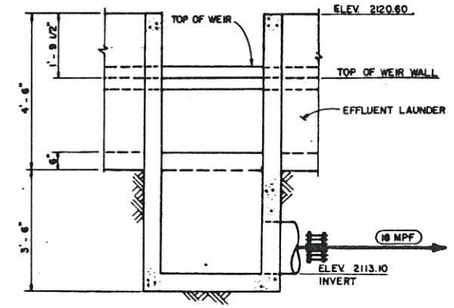
W.O. F.B. FILE NO. 84-8186



PLAN
SCALE: 3/16" = 1'-0"



A SECTION
SCALE: 3/16" = 1'-0"



B SECTION
SCALE: 1/2" = 1'-0"

MATERIAL SCHEDULE	
	DESCRIPTION
1	DRIVE HEAD ASSEMBLY
2	TRUSS ARMS W/SCRAPER BLADES
3	BRIDGE W/HANDRAIL
4	CENTER COLUMN W/TORQUE CAGE
5	INFLUENT BAFFLE
6	V-NOTCH WEIR
7	TELESCOPIC VALVE

NOTES:
1. TANKAGE LAYOUT PER FMC TYPE RB-C CLARIFIER
2. MOUNT TELESCOPIC VALVE PER MANUFACTURER'S RECOMMENDATION

REDUCED
NOT TO SCALE

MARK | REVISIONS | APPD | DATE
DESIGNED BY J.W. DRAWN BY L.W. CHECKED BY J.W.

PREPARED UNDER THE SUPERVISION OF:
REGISTERED CIVIL ENGINEER NO. 12977 DATE 6/27/85

APPROVED BY:
CITY ENGINEER R.C.E. 29728
CITY OF BANNING DATE 6/27/85

J.F. DAVIDSON ASSOCIATES
CIVIL ENGINEERS • SURVEYORS • PLANNERS
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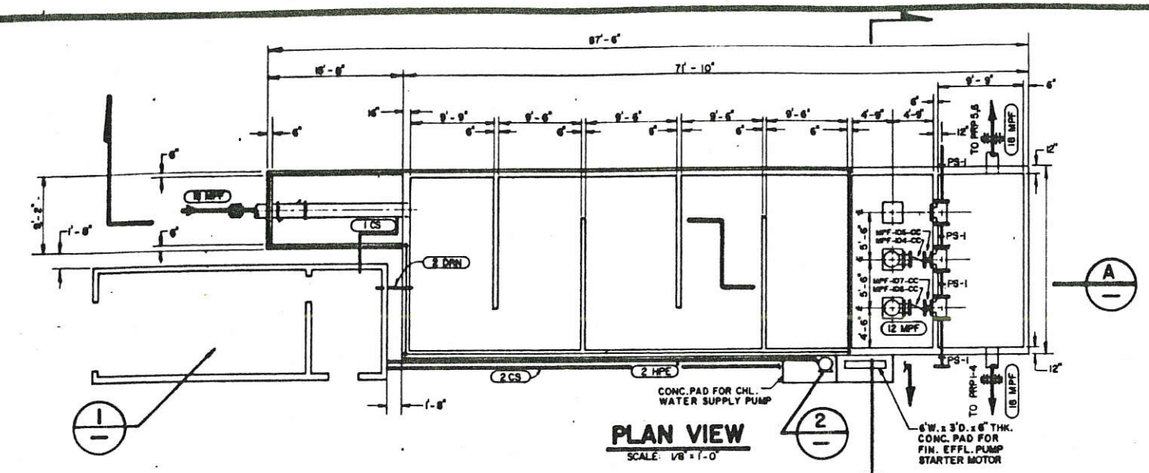
P.O. BOX 157, TEMECULA, CA 92390, (714) 676-5336

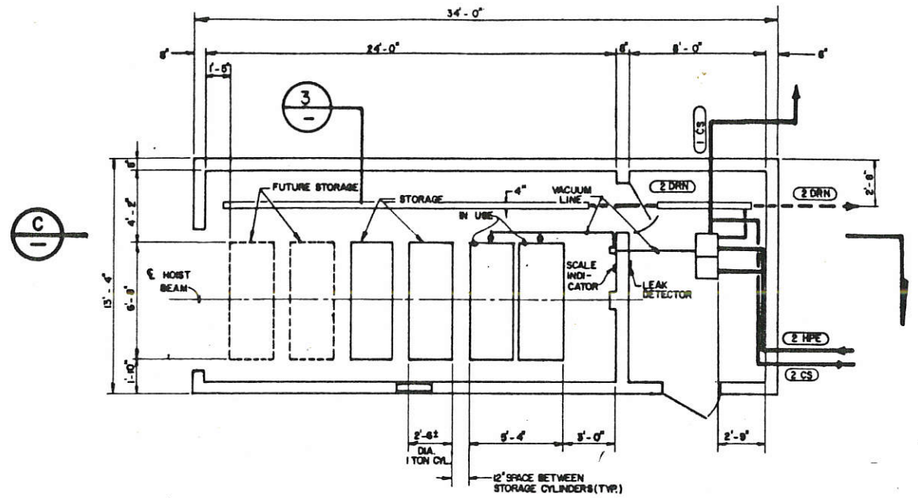
SCALE: AS NOTED
DATE: MAY, 1985
BENCH MARK: CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2 ELEV. = 2114.67

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION
M-6
SECONDARY CLARIFIER
OF ___ SHEETS
FOR CITY OF BANNING
W.O. F.B. FILE NO. 84-8186



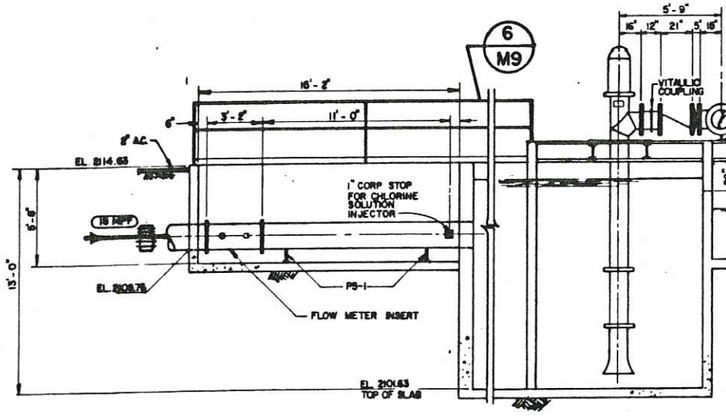
PLAN VIEW

SCALE: 1/8" = 1'-0"



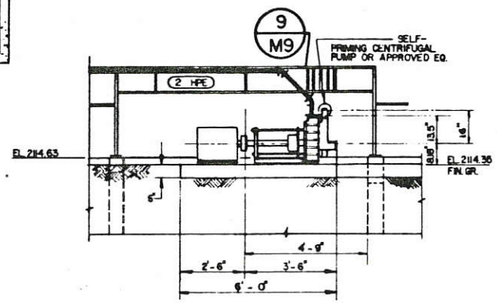
CHLORINE EQUIPMENT SHELTER

SCALE: 1/4" = 1'-0"



A SECTION

SCALE: 1/4" = 1'-0"

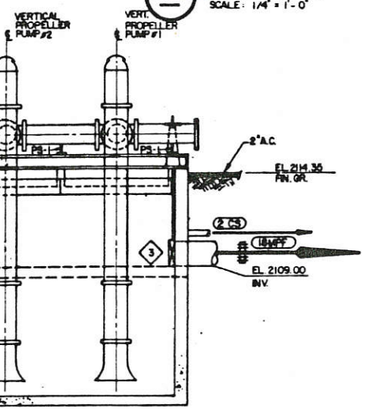


2 CENTRIFUGAL PUMP

SCALE: 3/8" = 1'-0"

C SECTION

SCALE: 3/8" = 1'-0"



B SECTION

SCALE: 1/4" = 1'-0"

3 DRAIN TROUGH

N.T.S.

CHLORINE SYSTEM SCHEMATIC

REDUCED
NOT TO SCALE

REVISED PER 1986 GRANT	APR. 86	
DESIGNED BY J.W.	DRAWN BY J.W.	CHECKED BY J.W.

PREPARED UNDER THE SUPERVISION OF:
REGISTERED CIVIL ENGINEER NO. 12977
DATE 6/27/86

APPROVED BY:
CITY ENGINEER
CITY OF BANNING
R.C.E. 29725
DATE 6/27/86

SCALE: AS SHOWN
DATE: MAY, 1985

J.F. DAVIDSON ASSOCIATES
CIVIL ENGINEERS • SURVEYORS • PLANNERS
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11200 SO. MT. VERNON AVE., P.O. BOX 1058, COLTON, CA 92324 • (714) 825-1082
73-080 EL PASEO ST. 108, PALM DESERT, CA 92260 • (619) 340-5091
P.O. BOX 157, TEMECULA, CA 92390 • (714) 676-5335

BENCH MARK:
CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2
ELEV. = 2114.67

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

CHLORINE CONTACT TANK/ CHLORINE EQUIPMENT BLDG.

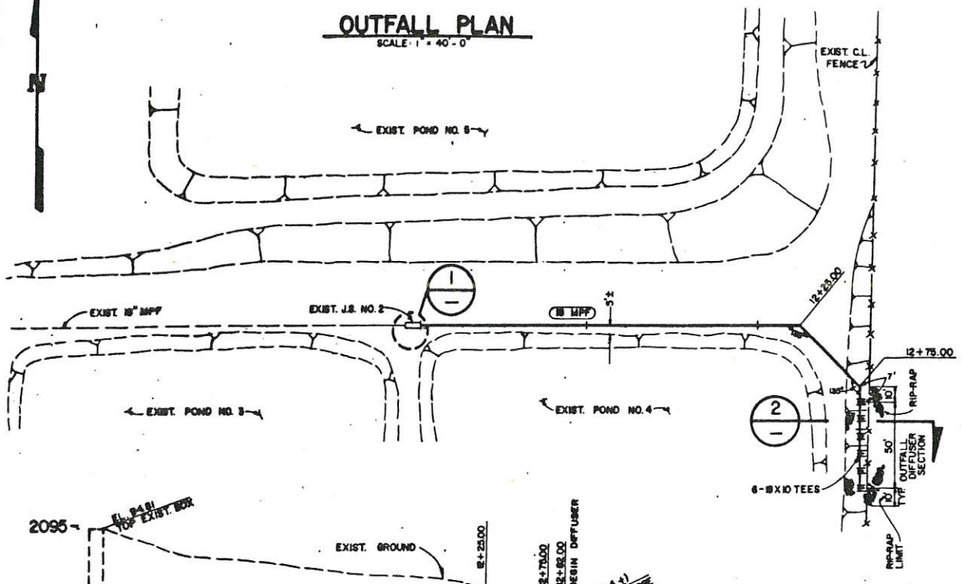
M-7 OF ___ SHEETS

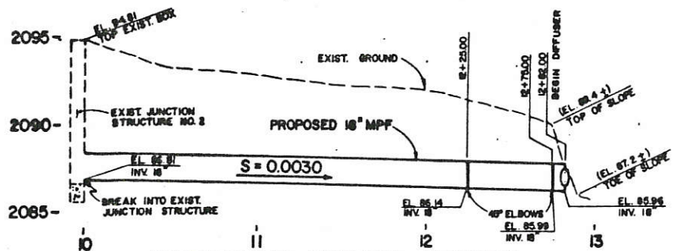
FOR CITY OF BANNING
W.O. FILE NO. 84-8186

1684

OUTFALL PLAN

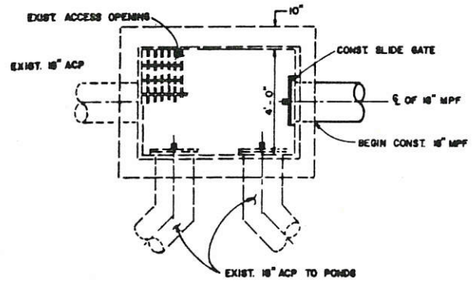
SCALE: 1" = 40'-0"

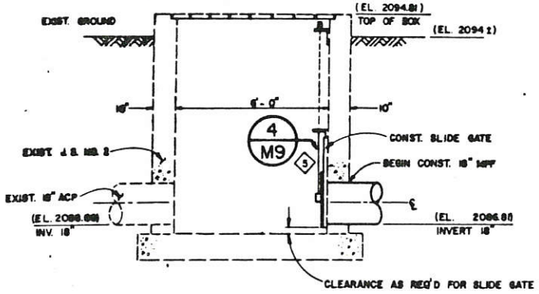




EMERGENCY OUTFALL SECTION

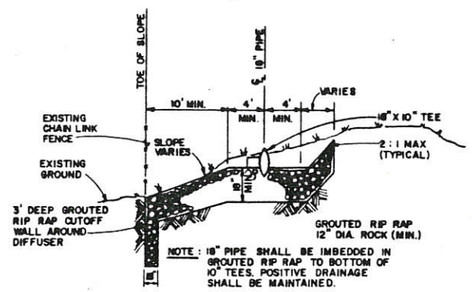
SCALE: HORIZ. 1" = 40'-0"
VERT. 1" = 4'-0"





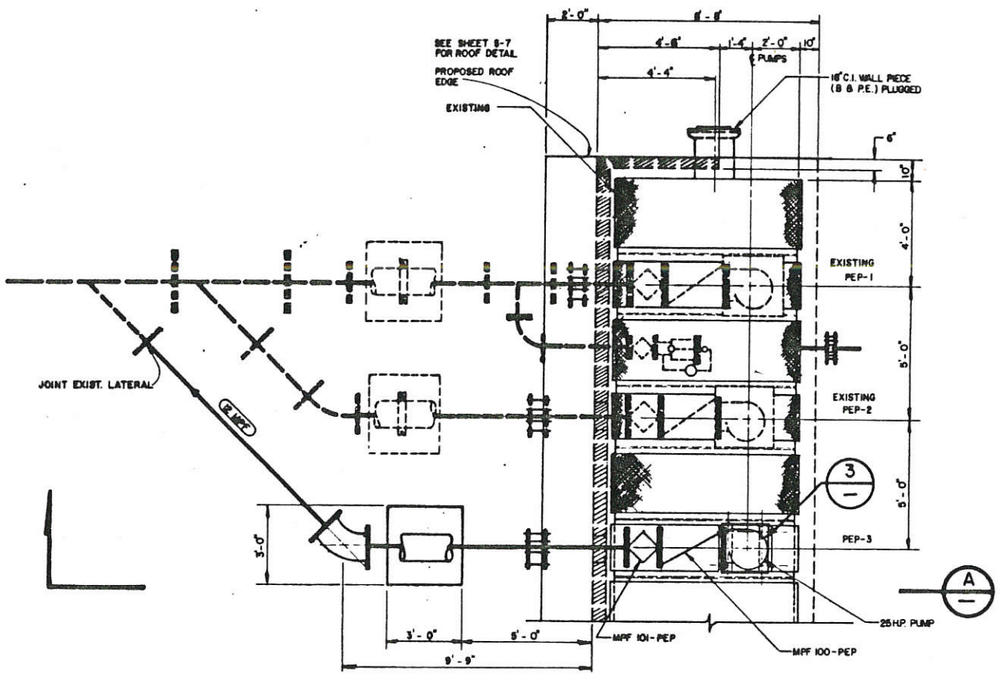
JUNCTION STRUCT. NO. 2 IMPROVEMENTS

SCALE: 3/8" = 1'-0"



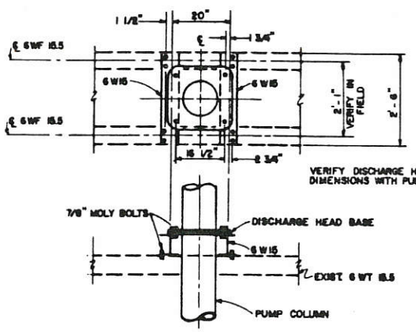
DIFFUSER DETAIL

NO SCALE



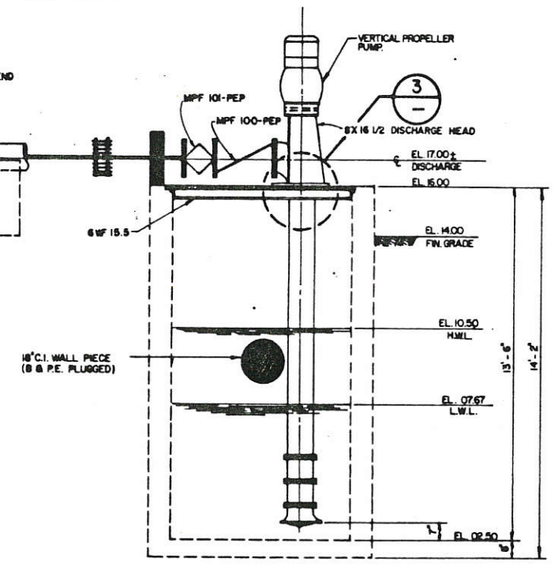
PRIMARY EFFLUENT PUMPING STATION

SCALE: 3/8" = 1'-0"



3 PUMP MOUNTING

SCALE: 1/2" = 1'-0"



A SECTION

SCALE: 3/8" = 1'-0"

REDUCED
NOT TO SCALE

MARK	REVISIONS	APP'D	DATE

DESIGNED BY: J.W./C.W. DRAWN BY: C.W. CHECKED BY: J.W.

PREPARED UNDER THE SUPERVISION OF:
Vincent M. Bono Exp. 3/89
REGISTERED CIVIL ENGINEER NO. 12977 DATE: 6/27/85

APPROVED BY:
Charles M. Stevens R.C.E. 29725
CITY ENGINEER
CITY OF BANNING DATE 6/27/85

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11200 SO. MT. VERNON AVE. #D, COLTON, CA 92324 • (714) 825-1082
73-080 EL PASEO, ST. 108, PALM DESERT, CA 92260 • (619) 346-5691
P.O. BOX 157, TEMECULA, CA 92390 • (714) 676-5335

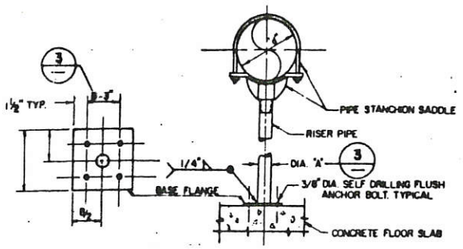
SCALE: AS NOTED
DATE: MAY, 1985
BENCH MARK: CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2 ELEV. = 2114.67

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

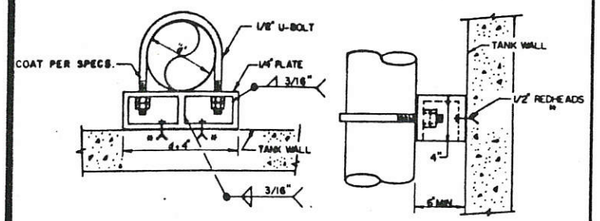
PLANT OUTFALL/PRIMARY EFFLUENT PUMP STA. EXP.

M-8
OF ___ SHEETS

FOR CITY OF BANNING
W.O. F.B. FILE NO. 84-8186



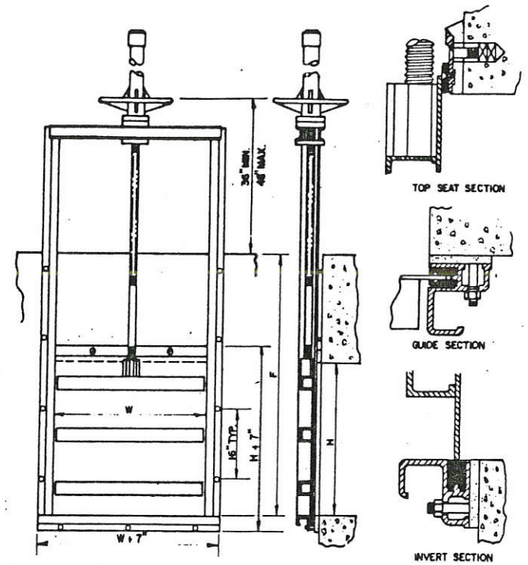
1 PIPE SUPPORT - 1



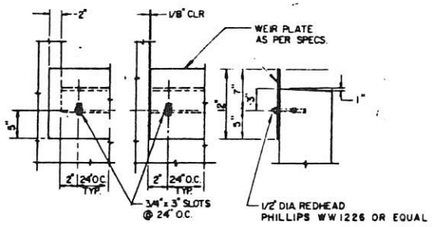
2 PIPE SUPPORT - 2

d	A	B	C	MAX. SPACING
3" OR LESS	—	—	3/8"	8'
4"	3"	9"	5/8"	10'
6"	3"	9"	3/4"	10'
8", 10", 12"	3"	9"	7/8"	10'
14", 16"	4"	11"	1"	10'
18"	4"	11"	1 1/8"	10'
20", 24", 30"	6"	13 1/2"	1 1/4"	10'

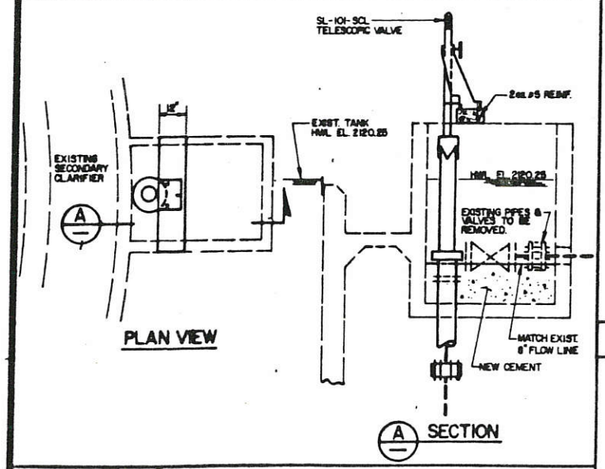
3 PIPE SUPPORT DIMENSION TABLE



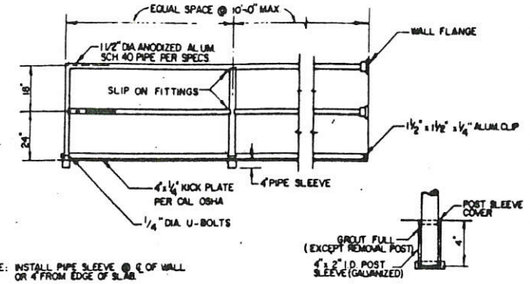
4 SLIDE GATE DETAIL



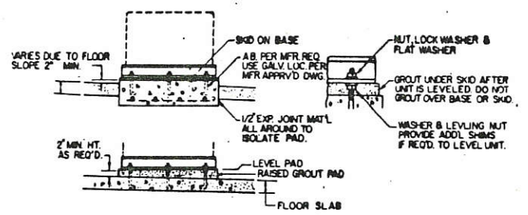
5 RECTANGULAR WEIR



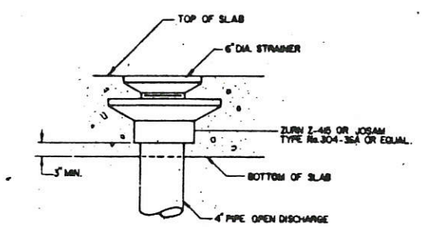
12 TELESCOPIC VALVE DETAIL



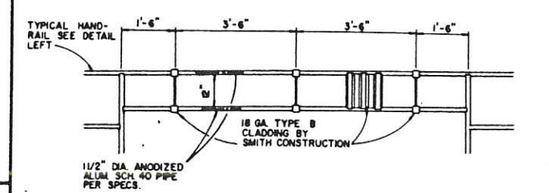
6 HANDRAIL DETAIL

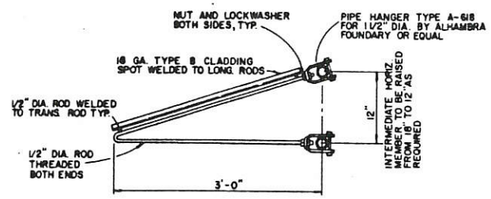


7 EQUIPMENT PAD DETAIL

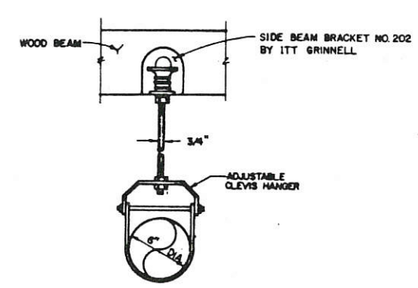


8 DRAIN DETAIL





9 PUMP COVER DETAIL



10 PIPE SUPPORT - 3

REDUCED
NOT TO SCALE

⚠ REVISED PER 1986 GRANT	DESIGNED BY J.S./L.W.	DRAWN BY J.S./L.W.
MARK REVISIONS APP'D DATE	CHECKED BY J.W.	

PREPARED UNDER THE SUPERVISION OF:
REGISTERED CIVIL ENGINEER NO. 12977 DATE 6/27/85

APPROVED BY:
CITY ENGINEER, CITY OF BANNING R.C.E. 29728 DATE 6/27/85

J.F. DAVIDSON ASSOCIATES
CIVIL ENGINEERS • SURVEYORS • PLANNERS
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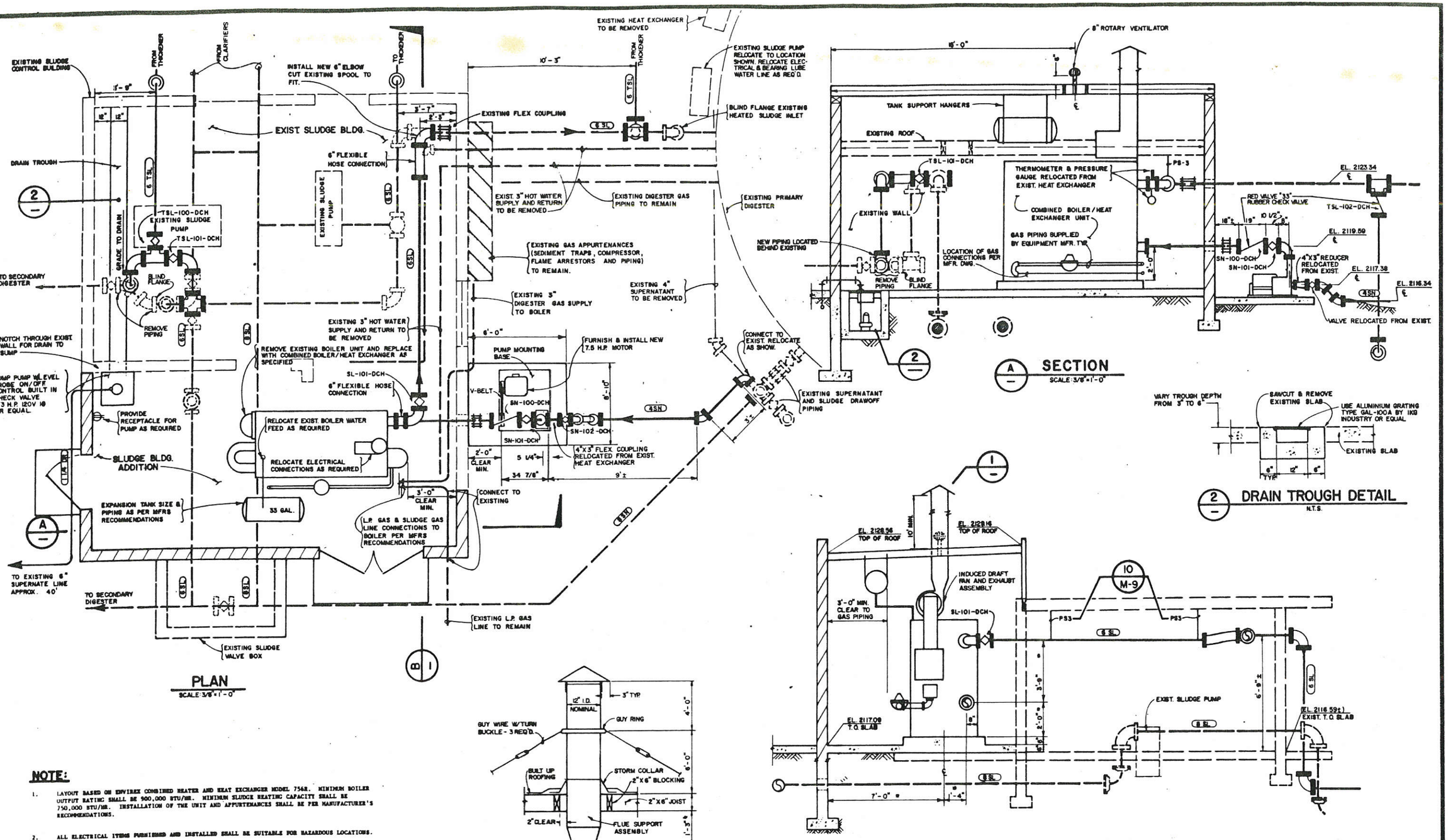
11200 SO. MT. VERNON AVE., #D, COLTON, CA 92324 (714) 825-1082
73-080 EL PASEO, ST. 108, • PALM DESERT, CA 92260 (619) 346-5691
P.O. BOX 157, TEMECULA, CA 92390 (714) 676-5335

SCALE: NONE
DATE: MAY, 1985
BENCH MARK: CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2 ELEV. = 2114.67

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION
M-9
MECHANICAL DETAILS
OF — SHEETS
FOR CITY OF BANNING
W.O. F.B. FILE NO. 84-8186



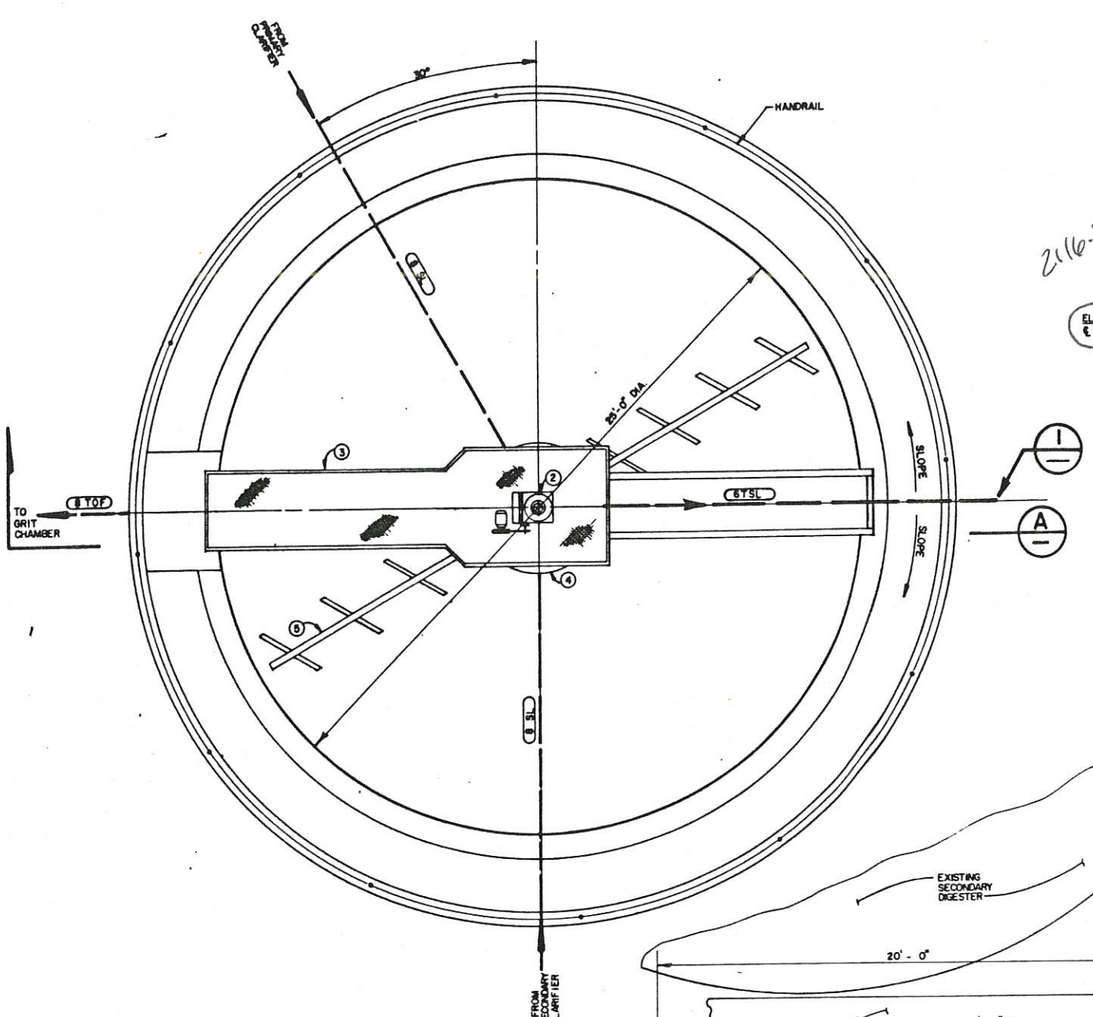
NOTE:

1. LAYOUT BASED ON ENVIREX COMBINED HEATER AND HEAT EXCHANGER MODEL 756R. MINIMUM BOILER OUTPUT RATING SHALL BE 900,000 BTU/HR. MINIMUM SLUDGE HEATING CAPACITY SHALL BE 750,000 BTU/HR. INSTALLATION OF THE UNIT AND APPURTENANCES SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
2. ALL ELECTRICAL ITEMS FURNISHED AND INSTALLED SHALL BE SUITABLE FOR HAZARDOUS LOCATIONS.
3. EXISTING PIPING AND APPURTENANCES HAVE BEEN LOCATED BY UTILIZING PREVIOUS CONSTRUCTION DRAWINGS. MISCELLANEOUS VALVES AND FITTINGS HAVE NOT BEEN SHOWN. CONTRACTOR SHALL VERIFY PIPING LOCATIONS IN THE FIELD.
4. CONTRACTOR SHALL VERIFY THE ADEQUACY OF THE EXISTING ELECTRICAL SYSTEM AND FURNISH AND INSTALL THE NECESSARY ITEMS FOR THE PROPER OPERATION OF THE RELOCATED SLUDGE PUMP, OPERATION AND CONTROL OF THE BOILER UNIT AND THE SUMP PUMP.
5. ALL GAS PIPING SHALL BE SCHEDULE 80, PVC PIPE.
6. ALL LIQUID PIPING SHALL BE AS LISTED ON SHEET M-1.
7. 'W'. DIMENSIONS WILL VARY DEPENDING ON ACTUAL HEATER UNIT SUPPLIED. MINIMUM 3 FEET CLEARANCE SHALL BE MAINTAINED BETWEEN OBSTRUCTIONS AND GAS PIPING, CONTROLS, VIEWPORTS AND MAINTENANCE ACCESS OF THE UNIT.

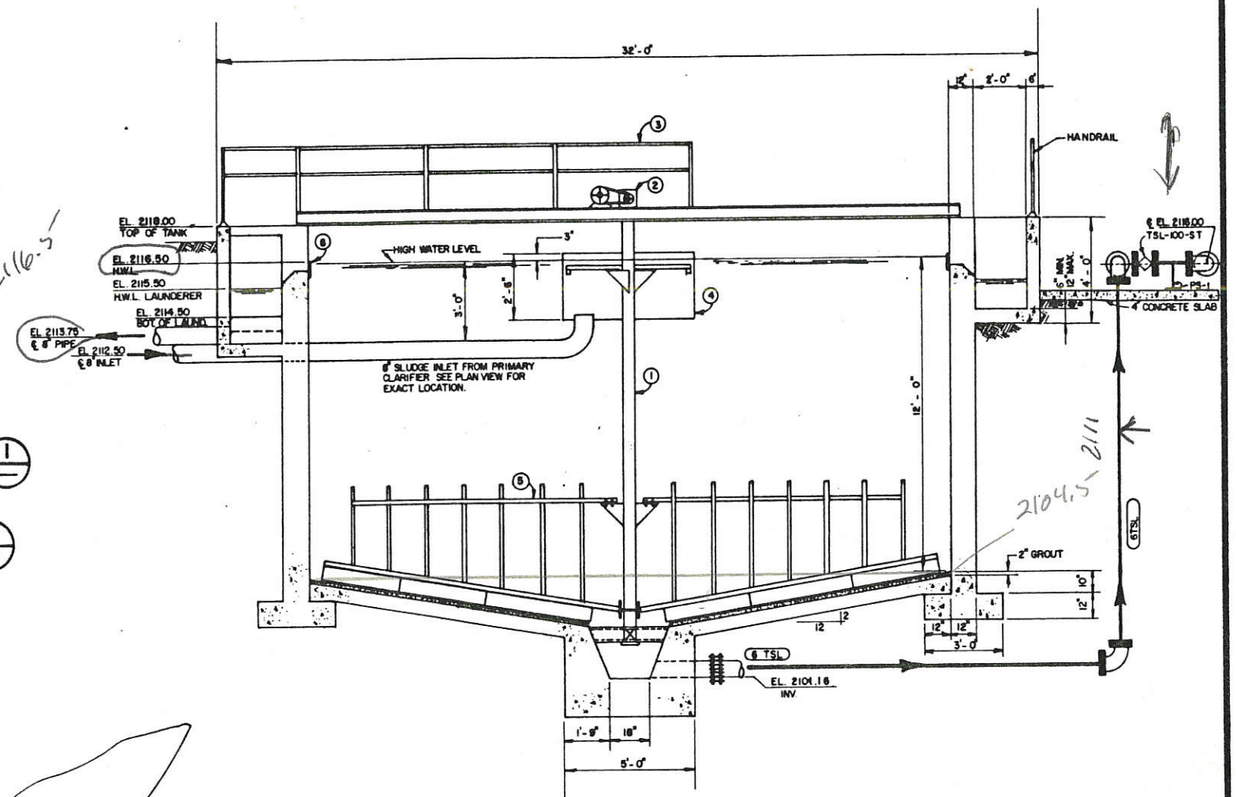
NOTE: INDICATES BLOCKWALL

REDUCED NOT TO SCALE

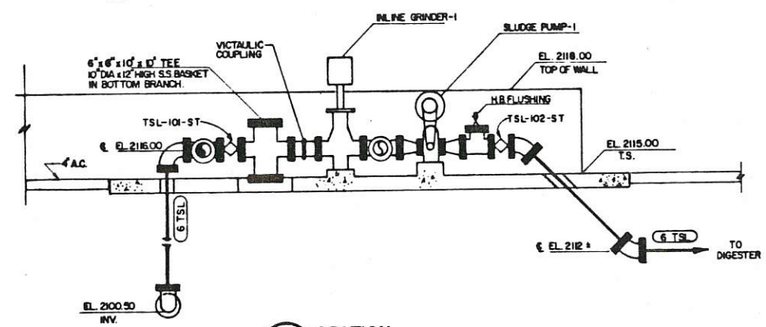
A REVISED PER 1986 GRANT	APR. '86	PREPARED UNDER THE SUPERVISION OF: Ernest W. Lee 6-20-86	J.F. DAVIDSON ASSOCIATES CIVIL ENGINEERS • SURVEYORS • PLANNERS
		REGISTERED CIVIL ENGINEER NO. 12977 DATE 7/15/86	P.O. BOX 493 RIVERSIDE, CA 92502 (714) 686-0844 • 11200 SO. MT. VERNON AVE. #D COLTON, CA 92324 (714) 825-1082 • 73-080 EL PASEO ST. #28 PALM DESERT, CA 92260 (619) 346-5691 • P.O. BOX 157 TEMECULA, CA 92390 (714) 676-5335
		APPROVED BY: Charles W. Stevens R.C.E. 29725 CITY ENGINEER CITY OF BANNING DATE 7/18/86	SCALE AS NOTED DATE JULY, 1986 BENCH MARK CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2 ELEV. = 2114.67
DESIGNED BY	DRAWN BY	CHECKED BY	IN THE COUNTY OF RIVERSIDE CALIFORNIA CITY OF BANNING WASTEWATER TREATMENT PLANT EXPANSION — SLUDGE HEATER — M-10 OF — SHEETS — FOR CITY OF BANNING — W.O. F.B. FILE NO. 84-8186



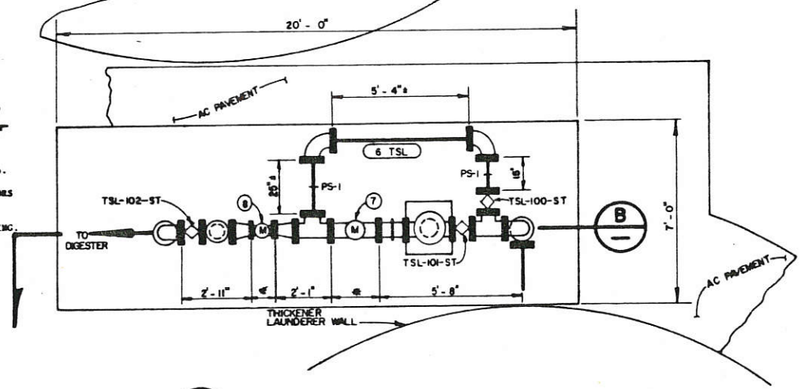
PLAN VIEW
SCALE 3/8" = 1'-0"



A SECTION
SCALE 3/8" = 1'-0"



B SECTION
SCALE 3/8" = 1'-0"



1 SLUDGE PUMPING DETAIL
SCALE 3/8" = 1'-0"

NOTES:

1. THICKER LAYOUT BASED ON FMC RSD GRAVITY TYPE.
2. IN-LINE GRINDER DIMENSIONS BASED ON DISPOSABLE WASTE SYSTEMS "MUFFIN MONSTER" MODEL 30000-12-6.
3. SLUDGE PUMP TO BE POSITIVE DISPLACEMENT, NON-MESHING LOBE TYPE , RUBBER COATED ROTORS 50 GPM REQUIRED FLOW.
4. PUMP MOTOR SHALL BE MOUNTED "PIGGYBACK" OVER SLUDGE PUMP. SUBMIT FABRICATION DRAWINGS DETAILING.

MATERIAL SCHEDULE	
	DESCRIPTION
1	CENTER SHAFT ASSEMBLY
2	DRIVE UNIT
3	BRIDGE WALKWAY
4	INFLUENT BAFFLE
5	SCRAPER ARMS W/PICKETS & SCRAPER BLADES
6	EFFLUENT WEIR
7	IN LINE GRINDER
8	SLUDGE PUMP

REDUCED
NOT TO SCALE

MARK	REVISIONS	APPR	DATE

DESIGNED BY J.W. DRAWN BY J.S. CHECKED BY

PREPARED UNDER THE SUPERVISION OF:
REGISTERED CIVIL ENGINEER NO. 22 977 DATE 10/27/86

APPROVED BY:
CITY OF BANNING DATE 10-27-86 R.C.E. 37413 Exp 6-30-88

J.F. DAVIDSON ASSOCIATES
CIVIL ENGINEERS • SURVEYORS • PLANNERS
P.O. BOX 493, RIVERSIDE, CA 92502 • (714) 686-0844
11200 SO. MT. VERNON AVE. #D, COLTON, CA 92324 • (714) 825-1082
34-075 EL PASEO, #A-12, PALM DESERT, CA 92260 • (619) 346-5691
P.O. BOX 157, TEMECULA, CA 92390 • (714) 676-5335

SCALE AS NOTED
DATE APRIL, 1986
BENCH MARK: CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER No. 2 ELEV. 2114.67

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

SLUDGE THICKENER

M-11
OF ___ SHEETS

FOR CITY OF BANNING
W.O. F.B. FILE NO. 84-8186

1688

EQUIPMENT ..... MECHANICAL , ELECTRICAL AND CONTROL CHARACTERISTICS

EQUIPMENT NUMBER	EQUIPMENT	EQUIPMENT LOCATION	SPEC.	ELECTRICAL													REMARKS
				VOLTAGE	PHASE	H.P.	K.W.	M.C.C. UNIT	M.C.C. STARTER NEMA SIZE	M.C.C. STARTER NEMA ENCL.	M.C.C. STARTER ETM	L.P. UNIT	CONTROL AT MOTOR	CONTROL AT M.C.C. CONTROL SECTION	CONTROL M.C.P.	EMERG. POWER	
PEP - 1	PRIMARY EFFLUENT PUMP (EXISTING)	PRIMARY EFFLUENT PUMP STA.		480	3	25		VFD	2	3R	VFD			HOA,RF,LLS	HOA,RF	NO	VARIABLE FREQUENCY DRIVE SPEED CONTROL
PEP - 2	PRIMARY EFFLUENT PUMP (EXISTING)	PRIMARY EFFLUENT PUMP STA.		480	3	25		VFD	2	3R	VFD			HOA,RF,LLS	HOA,RF	NO	VARIABLE FREQUENCY DRIVE SPEED CONTROL
PEP - 3	PRIMARY EFFLUENT PUMP	PRIMARY EFFLUENT PUMP STA.	4.13	480	3	25		VFD	2	3R	VFD			HOA,RF,LLS	HOA,RF	NO	VARIABLE FREQUENCY DRIVE SPEED CONTROL
PEP - 4	PRIMARY EFFLUENT PUMP (FUTURE)	PRIMARY EFFLUENT PUMP STA.		480	3	25		VFD	FUT	3R	FUT.			HOA,RF,LLS	FUTURE	NO	VARIABLE FREQUENCY DRIVE SPEED CONTROL
RC - 11	RECIRCULATION PUMP	RECIRCULATION PUMP STATION	4.13	480	3	5			1	1	MCC		DISC.	OF,RF	OF,RF		
RC - 2	RECIRCULATION PUMP	RECIRCULATION PUMP STATION	4.13	480	3	5			1	1	MCC		DISC.	OF,RF	OF,RF		
TF - 2	TRICKLING FILTER NO. 2	FILTER	4.15														PLASTIC FILTER MEDIA
SCL - 2	SECONDARY CLARIFER NO. 2	CLARIFIER	4.15	480	3	3/4		SCL-2	1	1	MCC		DISC,AA	OF, A	OF,RF		OVERLOAD ALARM AND SHUTOFF
CHL - 1	CHLORINATOR	CHLORINE EQUIPMENT BUILDING	4.15	120	1							CE				YES	
ANAL - 1	CHLORINE RESIDUAL ANALYZER	CHLORINE EQUIPMENT BUILDING	4.15	120	1							CR				NO	
CLP - 1	CHLORINE SYSTEM WATER SUPPLY PUMP	CHLORINE EQUIPMENT BUILDING	4.15	480	3	3		CLP-1					OF		RF	YES	
CLLK - 1	CHLORINE LEAK DETECTOR	CHLORINE EQUIPMENT BUILDING	4.13	120	1							CE				YES	
FMT - 1	FLOWMETER	CHLORINE EQUIPMENT BUILDING	4.11									CR				NO	FULL PIPE FLOW METER - RECORDER TO BE LOCATED AT CONTROL BUILDING
HOIST - 1	CHLORINE TANK HOIST	CHLORINE EQUIPMENT BUILDING	4.15	480	3	2											HOIST CONTROL BY M.F.
CVF - 1	CHLORINE GAS VENTILATION FAN NO.1	CHLORINE EQUIPMENT BUILDING	4.17				.11					CE	HOA			YES	CONTROLED BY CHLORINE LEAK DETECTOR
CVF - 2	CHLORINE GAS VENTILATION FAN NO.2	CHLORINE EQUIPMENT BUILDING	4.17				.11					CE	HOA			YES	CONTROLED BY CHLORINE LEAK DETECTOR
VF - 1	VENTILATION FAN NO.1	CHLORINE EQUIPMENT BUILDING	4.17				.06					CR	OF			NO	
VF - 2	VENTILATION FAN NO.2	CHLORINE EQUIPMENT BUILDING	4.17				.06					CR	OF			NO	
VF - 3	VENTILATION FAN NO.3	CHLORINE EQUIPMENT BUILDING	4.17				.06					CR	OF			NO	
ST - 1	SLUDGE THICKENER NO. 1	THICKENER	4.15	480	3	1/2		MCC-6	1	3R	MCC		DISC,AA	OF, A		NO	
SGR-1	SLUDGE GRINDER NO. 1	THICKENER	4.15	480	3	7.5		MCC-6	1	3R	MCC		DISC	HOA,RF,AA		NO	CONTROLS FURNISHED BY EQUIPMENT SUPPLIER
SLP-1	SLUDGE PUMP NO. 1	THICKENER	4.15	480	3	5		MCC-6	1	3R	MCC		DISC	HOA,RF,AA		NO	
FEP-1	FINAL EFFLUENT PUMP NO. 1	CHLORINE CONTACT TANK	4.13	480	3	15		MCC	3	3R	MCC		DISC	OF		NO	
FEP-2	FINAL EFFLUENT PUMP NO. 2	CHLORINE CONTACT TANK	4.13	480	3	15		MCC	3	3R	MCC		DISC	OF		NO	

LEGEND FOR SELECTOR SWITCHES

HOA	HAND-OFF-AUTO
OF	ON-OFF
DISC	DISCONNECT
SS	START STOP PUSH BUTTON
LLS	LEAD LAG STANDBY
OA	OFF AUTO

LEGEND FOR INDICATING LIGHTS

RF	RUN FAIL
A	ALARM
AA	ALARM LIGHT & AUDIBLE

GENERAL NOTES

1. STATUS LIGHTS, SELECTOR & PUSHBUTTON SWITCHES, WHERE SPECIFIED FOR EACH MOTOR ARE LOCATED IN THE MOTOR CONTROL HOUSE LAB.
2. RELAYS, TIME CLOCKS, STARTERS, AND ON-OFF ARE TO BE LOCATED IN THE MOTOR STARTER COMPARTMENT OF THE MCC AT THE SWITCHBOARD ROOM OF THE CONTROL HOUSE.
3. ALL HORSEPOWERS AND LOADS SHOWN ARE APPROXIMATE AND ARE SUBJECT TO CHANGE DEPENDING ON EXACT EQUIPMENT FURNISHED.

FOOTNOTES

1. ALL MOTOR CONTROLS ARE LOCATED AT THE CONTROL HOUSE, UNLESS OTHERWISE NOTED.
2. PEP VFD AND CONTROL SECTION TO BE LOCATED REMOTE FROM THE CONTROL HOUSE.
3. ETM-ELAPSED TIME METER

ABBREVIATIONS:

PB	PULLBOX
VFD	VARIABLE FREQUENCY DRIVE
MCC	MOTOR CONTROL CENTER
(E)	EXISTING EQUIPMENT OR MATERIAL
(NEW)	NEW EQUIPMENT OR MATERIAL TO BE PROVIDED PER THIS CONTRACT

1	REVISED PER 1986 GRANT	APP'D	DATE
MARK	REVISIONS	APP'D	DATE

DESIGNED BY J.W. DRAWN BY L.W. CHECKED BY J.W.

PREPARED UNDER THE SUPERVISION OF:
Kenneth W. Jones 6/20 3/89
REGISTERED CIVIL ENGINEER NO. 12977
DATE: 6/20/85

APPROVED BY:
Charles W. Hemmer R.C.E. 29725
CITY ENGINEER
CITY OF BANNING
DATE: 6/27/85

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P.O. BOX 157, TEMECULA, CA 92390 • (714) 676-5335

SCALE: N.A.
DATE: MAY, 1985
BENCH MARK: N/A

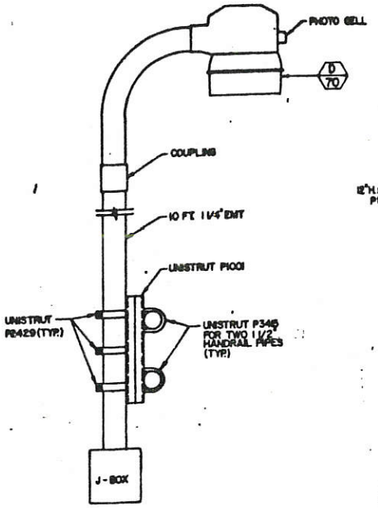
IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

EQUIPMENT CHARACTERISTICS

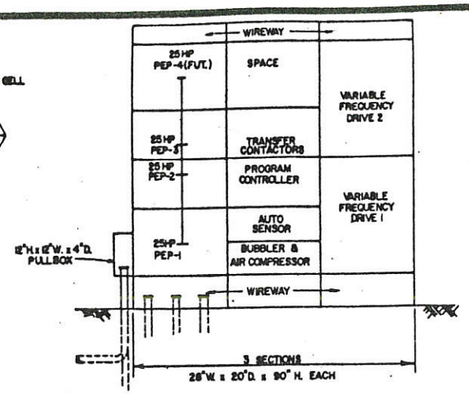
E-1
OF ___ SHEETS

FOR CITY OF BANNING
W.O. F.B. FILE NO. 84-8186

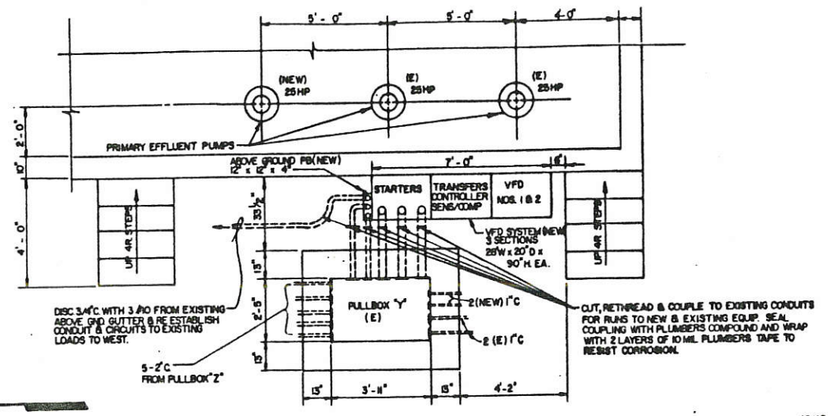
1689



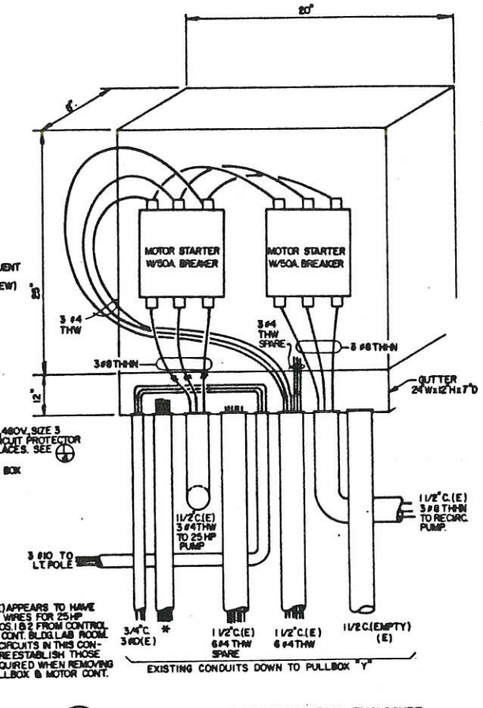
4 LIGHT POLE & FIXTURE AT SECONDARY CLARIFIER BRIDGE
NTS



2 FRONT EL. VIEW-VARIABLE FREQ. DRIVE
(LOOKING NORTH)
NTS



3 TYPICAL LAYOUT OF VARIABLE FREQUENCY DRIVE SYSTEM FOR PRIMARY EFFLUENT PUMPS
NTS



* 1 1/4"C(E) APPEARS TO HAVE CONTROL WIRES FOR 25 HP PUMPS NOS. 1 & 2 FROM CONTROL PANEL IN CONT. BLDG. LAB ROOM. VERIFY CIRCUITS IN THIS CONDUIT & RE ESTABLISH THOSE STILL REQUIRED WHEN REMOVING THIS PULLBOX & MOTOR CONT. PANEL.

1 EXISTING PULLBOX & MOTOR CONTROL ENCLOSURE
TO BE REMOVED, RETIRED & REPLACED WITH THE VARIABLE DRIVE SYSTEM. DELIVER REMOVED MOTOR CONTROL EQUIPMENT TO CITY OF BANNING TREATMENT PLANT REPRESENTATIVE.
NTS

SYMBOL LIST

SYMBOL	DESCRIPTION
	1/2" conduit run with 2 #12 conductors unless shown otherwise.
	1/2" conduit underground with 2 #12 conductors unless shown otherwise.
C.O.	Conduit run only, no wires within.
#10	Cross lines on conduit runs indicate number of #12 awg wires contained therein. 2 #12 are to be ran when cross lines are not shown. Numeral beside cross lines indicate size other than #12. Longer cross lines indicate neutral wire.
CE2	Conduit run to panelboard "CE", circuit no. 2.
C.O.	Conduit only.
	Fluorescent light fixture.
	Pole or wall mounted light fixture.
	Motor running light indication in control panel.
B DO	Lighting fixture identification symbol. Letter indicates type of fixture; numeral in lower half of hexagon indicates lamp wattage; excluding ballast where applicable.
PB	Pullbox.
	Branch circuit panel.
S	Single pole light switch.
J	Junction box.
W.P.	Weatherproof
+6'-6"	Indicates equipment mounting height above finished floor, grade, stairs, or platform unless otherwise noted.
(2)	Integral or fractional horsepower motor, numeral indicates horsepower rating.
150A, 2P	Molded case circuit breaker, ampere trip rating of poles as indicated.
	Transformer, description as noted.
2	Combination magnetic motor starter with molded case circuit breaker. Numeral indicates size.
	Ground
G	Generator
	Conductors connected.
U.G.	Underground
A.I.C.	Ampere interrupting capacity, symmetrical.
F	Disconnect switch, F indicates fused.
M	Circuit number in Control House switchgear room distribution equipment.
	Transfer switch.
M	Electricmeter
	Duplex grounding type receptacle (mount at +12" unless otherwise noted)

REDUCED
NOT TO SCALE

HILLER ELECTRICAL ENGINEERING
1123 DEVONSHIRE
SAN BERNARDINO, CA 92404
TEL. (714) 883-1115
APPROVED, BY: Irving Hiller
5/17/85 EB222
DATE

REVISIONS	APPR.	DATE
REVISED PER 1986 GRANT		APR '86

DESIGNED BY E.H. DRAWN BY J.S. CHECKED BY E.H.

PREPARED UNDER THE SUPERVISION OF:
REGISTERED CIVIL ENGINEER NO. 12977 DATE 6/27/85

APPROVED BY:
CITY ENGINEER RCE 29725
CITY OF BANNING DATE 6/27/85

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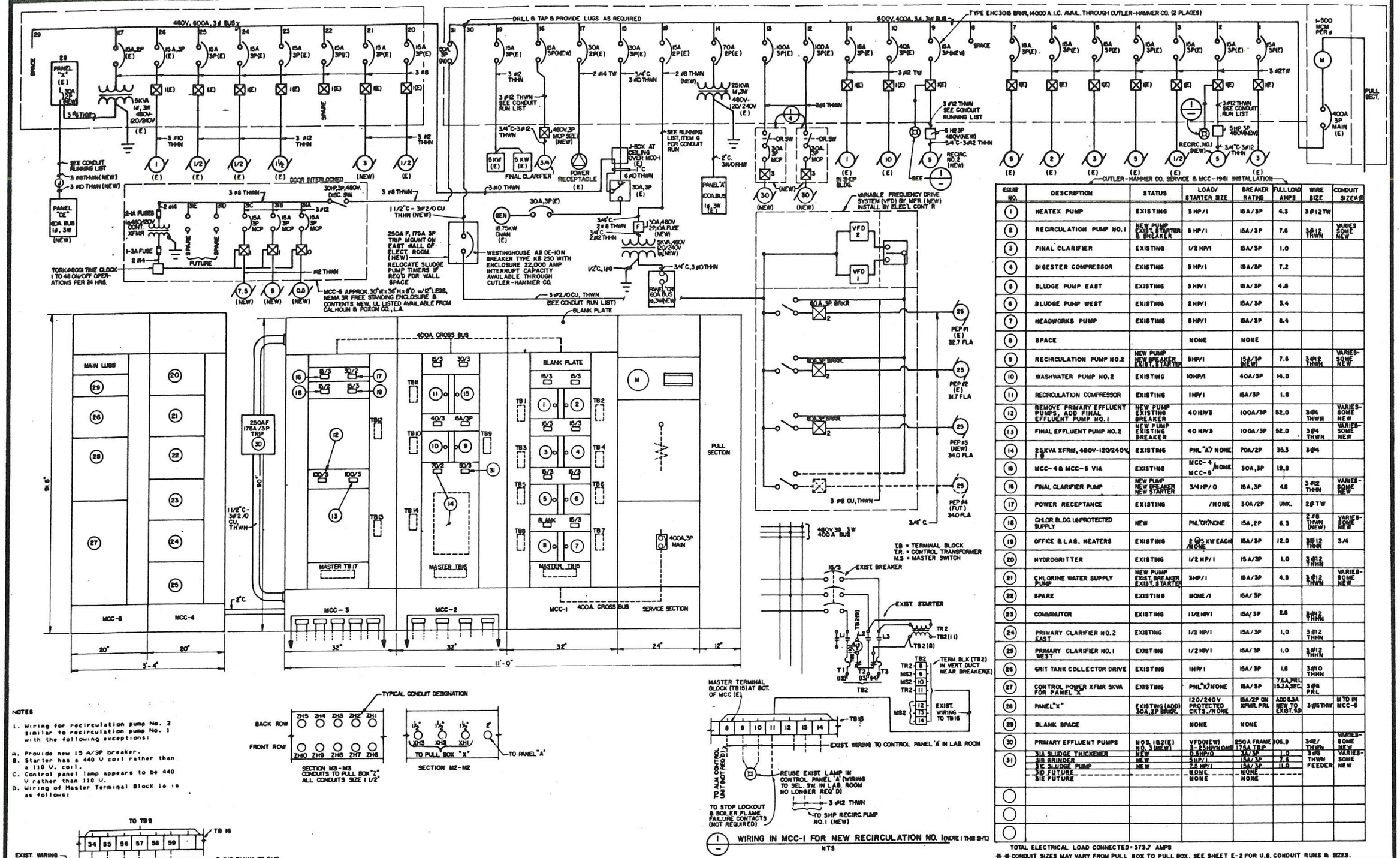
P.O. BOX 157, TEMECULA, CA 92390 (714) 676-5336

SCALE 1" = 20'-0"
DATE MAY, 1985
BENCH MARK: CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2 ELEV. = 2114.67

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION
E-2
ELECTRICAL SITE PLAN
OF ___ SHEETS
FOR CITY OF BANNING
W.O. F.B. FILE NO. 84-8186

1690



EQUIP NO.	DESCRIPTION	STATUS	LOAD/ STARTER SIZE	BREAKER RATING	FULL LOAD AMPS	WIRE SIZE	CONDUIT SIZE*
(1)	HEATEX PUMP	EXISTING	3 HP/1	15A/3P	4.3	3#12TW	
(2)	RECIRCULATION PUMP NO.1	NEW PUMP EXIST. STARTER & BREAKER	5 HP/1	15A/3P	7.6	3#12 THWN	VARIES SOME NEW
(3)	FINAL CLARIFIER	EXISTING	1/2 HP/1	15A/3P	1.0		
(4)	DIGESTER COMPRESSOR	EXISTING	5 HP/1	15A/3P	7.2		
(5)	SLUDGE PUMP EAST	EXISTING	3 HP/1	15A/3P	4.8		
(6)	SLUDGE PUMP WEST	EXISTING	2 HP/1	15A/3P	3.4		
(7)	HEADWORKS PUMP	EXISTING	5 HP/1	15A/3P	8.4		
(8)	SPACE		NONE	NONE			
(9)	RECIRCULATION PUMP NO.2	NEW PUMP NEW BREAKER EXIST. STARTER	5 HP/1	15A/3P (NEW)	7.6	3#12 THWN	VARIES SOME NEW
(10)	WASHWATER PUMP NO.2	EXISTING	10 HP/1	40A/3P	14.0		
(11)	RECIRCULATION COMPRESSOR	EXISTING	1 HP/1	15A/3P	1.8		
(12)	REMOVE PRIMARY EFFLUENT PUMPS, ADD FINAL EFFLUENT PUMP NO.1	NEW PUMP EXISTING BREAKER	40 HP/3	100A/3P	52.0	3#4 THWN	VARIES SOME NEW
(13)	FINAL EFFLUENT PUMP NO.2	NEW PUMP EXISTING BREAKER	40 HP/3	100A/3P	52.0	3#4 THWN	VARIES SOME NEW
(14)	25 KVA XFMR, 480V-120/240V, 1Φ	EXISTING	PNL "A7" NONE	70A/2P	36.3	3#4	
(15)	MCC-4 & MCC-6 VIA	EXISTING	MCC-4 MCC-6 NONE	30A, 3P	19.8		
(16)	FINAL CLARIFIER PUMP	NEW PUMP NEW BREAKER NEW STARTER	3/4 HP/0	15A, 3P	4.8	3#12 THWN	VARIES SOME NEW
(17)	POWER RECEPTANCE	EXISTING	/NONE	30A/2P	UNK.	2#8 TW	
(18)	CHLOR. BLDG. UNPROTECTED SUPPLY	NEW	PNL "C" NONE	15A, 2P	6.3	2#8 THWN (NEW)	VARIES SOME NEW
(19)	OFFICE & LAB. HEATERS	EXISTING	2 @ 5 KW EACH /NONE	15A/3P	12.0	3#12 THWN	3/4
(20)	HYDROGRITTER	EXISTING	1/2 HP/1	15A/3P	1.0	3#12 THWN	
(21)	CHLORINE WATER SUPPLY PUMP	NEW PUMP EXIST. BREAKER EXIST. STARTER	3 HP/1	15A/3P	4.8	3#12 THWN	VARIES SOME NEW
(22)	SPARE	EXISTING	NONE /1	15A/3P			
(23)	COMMUTATOR	EXISTING	1 1/2 HP/1	15A/3P	2.6	3#12 THWN	
(24)	PRIMARY CLARIFIER NO.2 EAST	EXISTING	1/3 HP/1	15A/3P	1.0	3#12 THWN	
(25)	PRIMARY CLARIFIER NO.1 WEST	EXISTING	1/2 HP/1	15A/3P	1.0	3#12 THWN	
(26)	GRIT TANK COLLECTOR DRIVE	EXISTING	1 HP/1	15A/3P	1.8	3#10 THWN	
(27)	CONTROL POWER XFMR 5KVA FOR PANEL "X"	EXISTING	PNL "D" NONE	15A/3P	7.5A PRI 15.2A SEC	3#6 PRI.	
(28)	PANEL "X"	EXISTING (ADD) 30A, 2P BRKR.	120/240V PROTECTED CKTS. /NONE	15A/2P ON XFMR. PRI.	ADD 6.3A NEW TO EXIST. 6.5	3#6 THWN	MTD IN MCC-6
(29)	BLANK SPACE		NONE	NONE			
(30)	PRIMARY EFFLUENT PUMPS	MOS. 1&2(E) NO. 3 (NEW)	VFD (NEW) 3-25 HP/1 NONE	250A FRAME 175A TRIP	105.8	3#2/ THWN	VARIES SOME NEW
(31)	31A SLUDGE THICKENER	NEW	0.1 HP/0	30/3P	1.0	3 #8 THWN FEEDER	VARIES SOME NEW
	31B GRINDER	NEW	5 HP/1	15A/3P	7.6		
	31C SLUDGE PUMP	NEW	7.5 HP/1	15A/3P	11.0		
	31D FUTURE		NONE	NONE			
	31E FUTURE		NONE	NONE			
○							
○							
○							

TOTAL ELECTRICAL LOAD CONNECTED = 379.7 AMPS

* #-CONDUIT SIZES MAY VARY FROM PULL BOX TO PULL BOX, SEE SHEET E-2 FOR U.G. CONDUIT RUNS & SIZES.

NOTES

1. Wiring for recirculation pump No. 2 similar to recirculation pump No. 1 with the following exceptions:
   A. Provide new 15 A/3P breaker.
   B. Starter has a 440 V coil rather than a 110 V. coil.
   C. Control panel lamp appears to be 440 V rather than 110 V.
   D. Wiring of Master Terminal Block 16 is as follows:

REDUCED NOT TO SCALE

HILLER ELECTRICAL ENGINEERING
1123 DEVONSHIRE
SAN BERNARDINO, CA 92404
TEL. (714) 883-1115
APPROVED BY: Irving Hiller
DATE: 5/17/85 E 8222

⚠ REVISED PER 1996 GRANT — APR '86
MARK REVISIONS APP'D DATE
DESIGNED BY E.N. DRAWN BY J.S. CHECKED BY E.N.

PREPARED UNDER THE SUPERVISION OF: Vincent M. Brown Exp 3/89
REGISTERED CIVIL ENGINEER NO. 12977 DATE 6/27/85
APPROVED BY: Charles R. Stevens R.C.E. 29728
CITY ENGINEER CITY OF BANNING DATE 6/27/85

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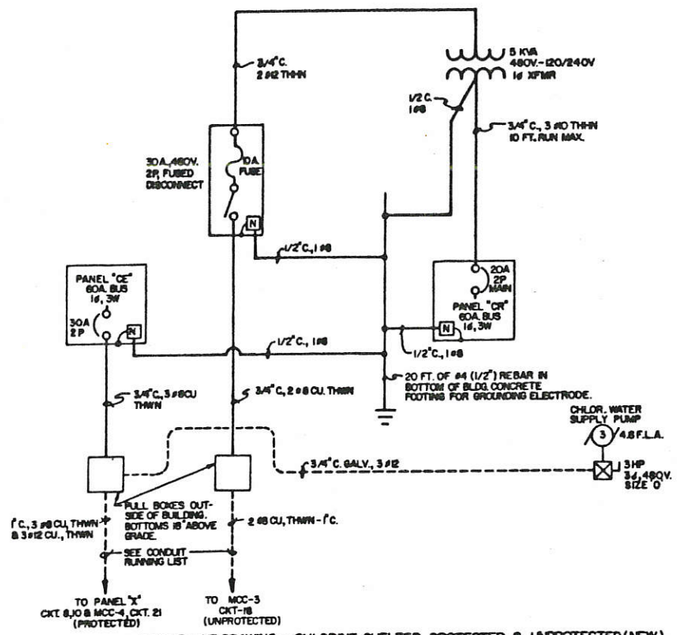
SCALE N/A
DATE MAY, 1985
BENCH MARK: CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2 ELEV. = 2114.67

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

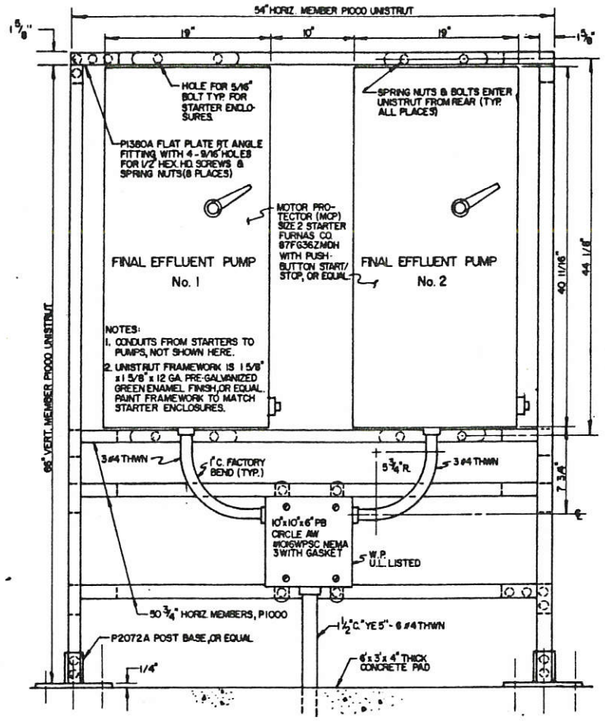
SINGLE LINE DRAWING & SWITCHGEAR ELEVATIONS

E-3 OF ___ SHEETS

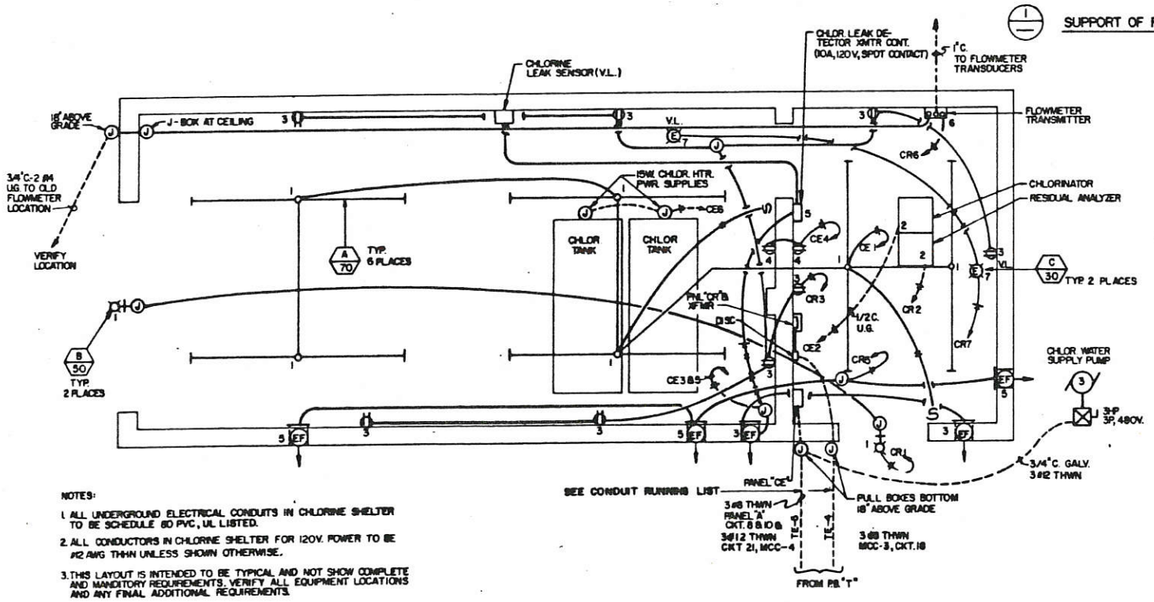
FOR CITY OF BANNING
W.O. F.B. FILE NO. 84-8186



SINGLE LINE DRAWING - CHLORINE SHELTER PROTECTED & UNPROTECTED (NEW)



SUPPORT OF FINAL EFFLUENT PUMP STARTERS



NOTES:

1. ALL UNDERGROUND ELECTRICAL CONDUITS IN CHLORINE SHELTER TO BE SCHEDULE 80 PVC, UL LISTED.
2. ALL CONDUCTORS IN CHLORINE SHELTER FOR 120V. POWER TO BE #12 AWG THHN UNLESS SHOWN OTHERWISE.
3. THIS LAYOUT IS INTENDED TO BE TYPICAL AND NOT SHOW COMPLETE AND MANDITORY REQUIREMENTS. VERIFY ALL EQUIPMENT LOCATIONS AND ANY FINAL ADDITIONAL REQUIREMENTS.

CHLORINE EQUIPMENT SHELTER - ELECTRICAL PLAN (NEW)
N.T.S.

PANEL "CE" Surface Mtd. (new) FEEDER 3 #10cu, THWN ; 30 AMP. MAIN 2P
LOCATION Chlorine Shelter ; 60 AMP BUS; 120 / 240 VOLTS; 1 PHASE; 3 WIRE

CIRC	POLE	AMP	LOCATION	LTS	RECPTS	LI	L2	LI	LE	LI	L2	SPARE	RECPTS	LOCATION	AMP	POLE	CIRC
1	1	15	Lights	6			450		4		60		1	Chl. Proportioner	15	1	2
3	1	15	Chl. exhaust fans			2		224		4		360		2 Receptacles	15		4
5	1	15	Leak detector			1	10		4		30		2	Chl. Tank Heaters	15	1	6
7	1	15	Spare Breaker						4					Spare Breaker	15	1	8
COLUMN TOTALS							460	224			90	360					

PANEL TOTAL = 1134 WATTS
LONG CONT. LOAD x .25 = 112 WATTS
LARGEST MOTOR x .25 = 28 WATTS
TOTAL PANEL LOAD = 1275 WATTS
TOTAL PANEL LOAD AMPS 5.3

PANEL "CR" Surface Mtd. (new) FEEDER 3 # 10 THHN ; 20 AMP. MAIN 2P
LOCATION Chlorine Shelter ; 60 AMP BUS; 120 / 240 VOLTS; 1 PHASE; 3 WIRE

CIRC	POLE	AMP	LOCATION	LTS	RECPTS	LI	L2	LI	LE	LI	L2	SPARE	RECPTS	LOCATION	AMP	POLE	CIRC
1	1	15	Outside Lights	2			124		4		90		1	Chl. Resid. Analy.	15	1	2
3	1	15	Receptacles		8			1440		4				Spare Breaker	15	1	4
5	1	15	Cooling Fan, Fans			3	243		4		50		1	Flowmeter Xmtr	15	1	6
7	1	15	Emergency Lights	2				60		4				Spare Breaker	15	1	8
COLUMN TOTALS							367	1500			140						

PANEL TOTAL = 2007 WATTS
LONG CONT. LOAD x .25 = 46 WATTS
LARGEST MOTOR x .25 = 20 WATTS
TOTAL PANEL LOAD = 2073 WATTS
TOTAL PANEL LOAD AMPS 12.5

LIGHTING FIXTURE SCHEDULE

FIXT. TYPE	FIXT. WATTS	* DESCRIPTION OR EQUIV.	LAMP QUAN / TYPE	LAMP WATTS	REMARKS
A 70	75	Single strip, 96", stem supported, damp location, 120V, bottom 8'6" above fin. flr. gasketed lens	1 GE Co. Watt Miser II F40T12/RS/ WM II	35	GE Co. Maximiser II blst. "P" Type, "A" or "H" Sound 50" start.
B 50	62	ITT Co. 84-50 sidelite II cast alum 6 3/4"Wx11" Hx5½"D MTD to 3" or 4" box, 120V, with photocell	1 Sylvania LU-50-B17 HPS Med base, clear	50	Mount on wall approx 12" ABV door opening
C 30	30	Lithonia ELU-4, 1½ Hr. Reserve, Test switch, ready light, 120V	2 # 4064 FAR-36	12	Emergency Light
D 70	80	Hubbell Ca Nite-To-Lite NRG-707-PC, Photo control, 120V, Lamp & Hardware included.	1 Clear HPS Medium base	90	Have mounts to liEMT. Install at final clarifier loc.

* Includes loss in ballast where applicable.

REDUCED
NOT TO SCALE

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TEL. (714) 883 - 1115
Irving Heller
APPROVED BY: 5/17/85 E 8222
DATE:

MARK	REVISIONS	APP'D	DATE
1	REVISED PER 1986 GRANT		APR '86

DESIGNED BY E.N. DRAWN BY J.S. CHECKED BY E.N.

PREPARED UNDER THE SUPERVISION OF:
REGISTERED CIVIL ENGINEER NO. 12977 DATE 6/27/85

APPROVED BY:
CITY ENGINEER
CITY OF BANNING
R.C.E. 29725
DATE 6/27/85

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SCALE N/A
DATE MAY, 1985

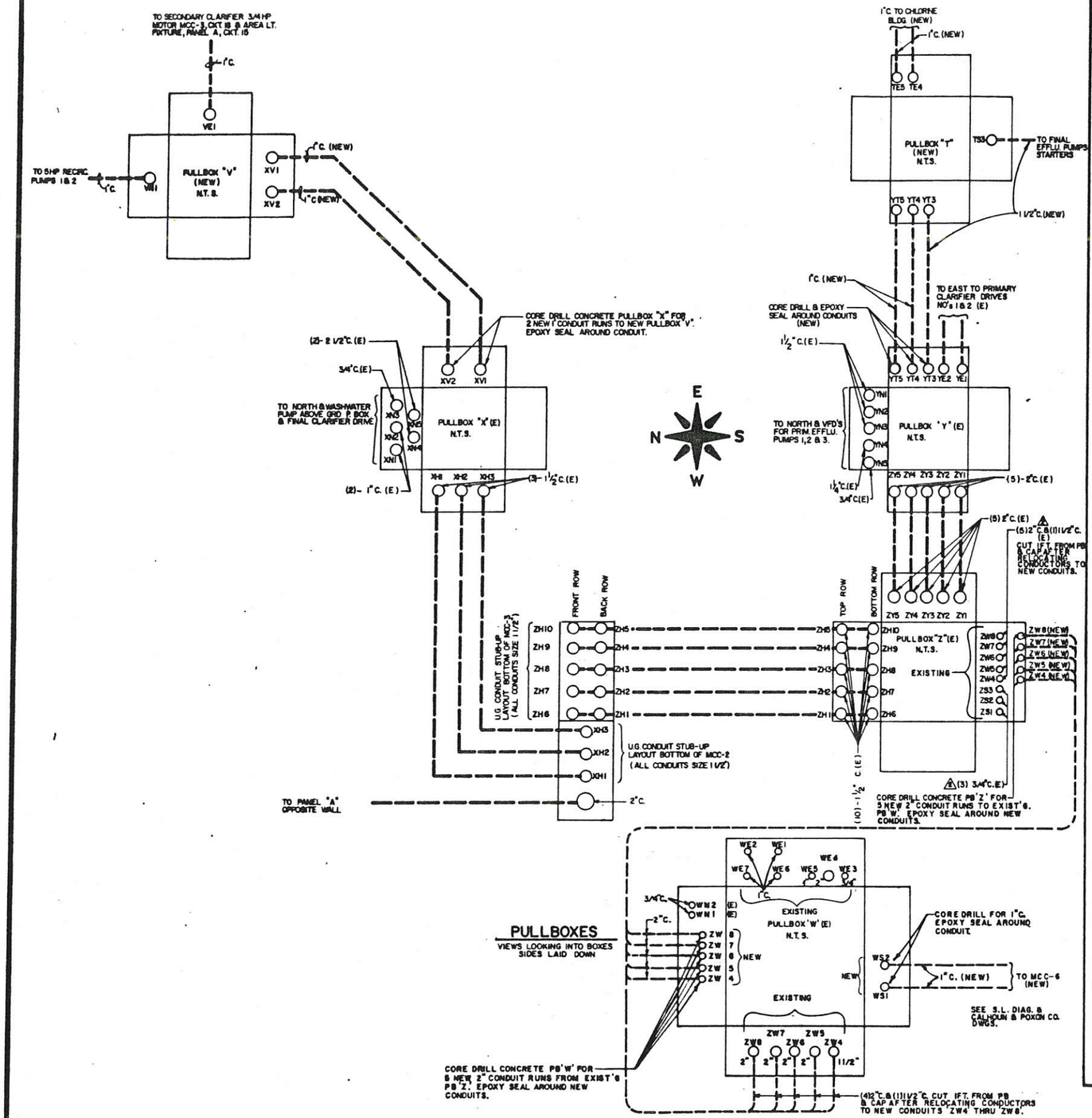
BENCH MARK:
CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2
ELEV. = 2114.67

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

PANEL SCHEDULES/
CHLORINE EQUIPMENT BLDG.

E-4
OF ___ SHEETS

FOR CITY OF BANNING
W.O. FILE NO. 84 - 8186



PULLBOXES

VIEWS LOOKING INTO BOXES SIDES LAID DOWN

EQUIPMENT REQUIREMENTS & WIRE AND CONDUIT RUNNING LIST FOR PULL BOX WORK

WORK ITEM	ACTION REQUIRED	DESCRIPTION	FROM	VIA	TO	REMARKS
A.	REMOVE	8 #4 SPARE CONDUCTORS	ELECT. ROOM CKT 13, MCC-3	1 1/2" C 'ZH1 0" TO PB'Z' & THEN 2" C 'ZY4' TO PB'Y' & THEN 1 1/2" C 'YN3'	ABOVE GROUND 24"W X 12"H X 7"D PULLBOX AT PRIMARY EFFLUENT LOCATION	THESE CONDUITS TO BE REUSED FOR FEEDER TO NEW VARIABLE FREQUENCY DRIVE SYSTEM. REPLACE 100A BREAKER MCC-3, CKT 13 WITH 250 AF, 175A TRIP WALL MOUNTED BREAKER.
B.	REMOVE	3 #4 SPARE CONDUCTORS	PB'Y'	2" C 'YN2'	ABOVE GROUND 24"W X 12"H X 7"D PULLBOX AT PRIMARY EFFLUENT LOCATION	THIS ITEM CAN BE PERFORMED CONCURRENTLY WITH ITEM C.
C.	REMOVE PULL BACK-DO NOT CUT)	3 #4 WORKING CONDUCTORS	PB'Y'	2" C 'YN2'	PRIMARY EFFLUENT MOTOR STARTERS NOS. 1 & 2 IN 20"W X 26"H X 8"D ENCLOSURE FOR PRI. EFFL. PUMPS NOS. 1 & 2	RELOCATE CONTROL PANEL TO A CONVENIENT NEARBY LOCATION AND TEMPORARILY RESTORE PUMPS TO OPERATION WITH THIS FEEDER UNTIL CUTOVER TO THE NEW VFD SYSTEM. REWORK LOAD ENDS OF CONDUITS 'YN2' AND 'YN3' AS REQUIRED TO TERMINATE THEM IN VFD EQUIPMENT.
D.	ADD	3 #2/0 CU, THWN (NEW) FOR VFD SYSTEM (NEW)	CKT 30, ELECT. ROOM	1 1/2" C 'ZH1 0" TO PB'Z' & THEN 2" C 'ZY4' TO PB'Y' & THEN 1 1/2" C 'YN3'	VARIABLE FREQUENCY DRIVE SYSTEM MAIN BUS	BOND ALL CONDUITS IN PULLBOXES FOR THIS CIRCUIT WITH A #6 CU. CONDUCTOR PER NEC. TABLE 250-95.
E.	ADD	3 SETS-3 #8 CU, THWN (NEW) FOR PEP #1 & 2 (E) PEP #3 (NEW)	VARIA. FREQ. DRIVE SYSTEM	3 - 3/4" C	PRIMARY EFFLUENT PUMPS NOS. 1,2 & 3	PUMPS 1 & 2 ARE EXISTING. PUMP NO. 3 IS NEW. THIS WORK ITEM DISCONTINUES THE OPERATION OF THE PRIMARY EFFLUENT PUMPS ON A TEMPORARY BASIS PER ITEM C.
F.	REMOVE	6 #4 SPARE CONDUCTORS (3 SPARE & 3 NOW DISCONNECTED FROM PRI. EFFL. PUMPS 1 & 2 STARTERS)	ELECT. ROOM MCC-3, 3 #4, CKT 12& 3&4 SPARE	1 1/2" C 'ZH6' TO PB'Z' & THEN 2" C 'ZY5' TO PB'Y' & THEN 1" C 'YT4' TO PB 'T' & THEN 'TE4'	TEMPORARY SET-UP OF PRIMARY EFFLUENT PUMPS 1 & 2 PER. ITEM C.	REUSE THIS CONDUIT PATH FOR ITEM G BELOW.
G.	ADD	2 #8 THWN & 15 AMP, 2P BREAKER (NEW) FOR CHLOR. BLDG. UNPROTECTED SUPPLY (NEW)	ELECT. ROOM MCC-3, CKT 18	1 1/2" C 'ZH6' TO PB'Z' & THEN 2" C 'ZY5' TO PB'Y' & THEN 1" C 'YT4' TO PB 'T' & THEN 'TE4'	J - BOX OUTSIDE CHLORINE EQUIPMENT BUILDING	BOND CONDUITS IN PULLBOXES. THIS CKT IS FOR CHLORINE BUILDING UNPROTECTED SUPPLY. SEE CHLORINE EQUIP 'T' BUILDING - SHEET E-4. PULL IN THESE CONDUCTORS THRU 'ZH5' AT THE SAME TIME WITH CONDUCTORS ADDED IN ITEMS H, M & N BELOW. PULL IN THESE CONDUCTORS THRU 'ZY5' AT THE SAME TIME WITH CONDUCTORS ADDED IN ITEM M BELOW.
H.	ADD	3 #8 THWN & 30 AMP, 2P BREAKER (NEW) FOR CHLORINE BLDG. PROTECTED SUPPLY (NEW)	ELECT. ROOM PANEL A CKT 8, 10	1 1/2" C 'ZH6' TO PB'Z' & THEN 2" C 'ZY1' TO PB'Y' & THEN 1" C 'YT5' TO PB 'T' & THEN 'TE5'	J - BOX OUTSIDE CHLORINE EQUIPMENT BUILDING	THIS CKT FOR CHLORINE BUILDING PROTECTED SUPPLY. BOND CONDUITS IN PULLBOXES. PULL IN THESE CONDUCTORS THRU 'ZH5' AT THE SAME TIME WITH CONDUCTORS ADDED IN ITEMS G, M & N. PULL IN THESE CONDUCTORS THRU 'ZY1' AT THE SAME TIME WITH CONDUCTORS ADDED IN ITEM N.
L	ADD	6 #12 THWN FOR 5 HP RECIRCULATION PUMPS NOS. 1 & 2 (NEW)	ELECT. ROOM CKT 2, MCC-1 & CKT 9, MCC-2 USE ONE SPARE & ONE NEW BREAKER, TWO SPR. STARTERS	1 1/2" C 'XH1' TO PB'X' & THEN 1" C 'XV1' TO PB'V' & THEN 1" C 'VN1'	5HP, 480V, 3P DISCONNECTS IN SIGHT OF RECIRCULATION PUMPS NOS. 1 & 2	1 1/2" CONDUIT 'XH2' NOW OCCUPIED BY CONDUCTORS FOR 10 HP WASHWATER PUMP NO. 2 & UNUSED CONDUCTORS FOR ABANDONED WASHWATER PUMP NO. 1 & THESE CONDUCTORS TO REMAIN IN CONDUIT 'XH2' SEE ITEM J BELOW. BOND CONDUITS IN PULLBOXES.
J.	ADD	3 #12 THWN FOR 3/4 HP FINAL CLARIFIER PUMP (NEW)	ELECT. ROOM CKT 16 & MCC-3 (ADD NEW 15A, 3P BREAKER)	1 1/2" C 'XH3' TO PB'X' & THEN 1" C 'XV1' TO PB'V' & THEN 1" C 'VE1'	COMBINATION STARTER, SIZE 0, 3P, 480V, IN SIGHT OF FINAL CLARIFIER DRIVE	PULL IN THESE CONDUCTORS SIMULTANEOUSLY WITH CONDUCTORS BEING ADDED IN ITEM I ABOVE.
K.	ADD	2 #12 THWN & 1 #12 GRD (NEW) FOR AREA LT. FIXT. (NEW)	ELECT. ROOM PANEL 'A', CKT 15	1 1/2" C 'ZH5' TO PB'X' & THEN 1" C 'XV1' TO PB'V' & THEN 1" C 'VE1'	AREA LIGHT FIXTURE AT FINAL CLARIFIER BRIDGE.	PULL IN THESE CONDUCTORS SIMULTANEOUSLY WITH CONDUCTORS BEING ADDED IN ITEMS I & J ABOVE.
L	ADD	1" CONDUIT ONLY DESIGNATED 'XV1' (NEW)	PB'X'	PARALLEL TO 1" C 'XV1'	PB'V'	FOR FUTURE
M.	ADD	6 #4 THWN (NEW) FOR FINAL EFFLUENT PUMPS (NEW)	ELECT. RM. CKT 3 12 & 15 MCC-3, 100A. BRKRS	1 1/2"C. 'ZH5' TO PB'Z' & THEN 2"C 'ZY5' TO PB'Y' & THEN 1 1/2"C. 'YT5' TO PB 'T' & THEN 1 1/2"C. 'TE3'	PULLBOX BELOW FINAL EFFLUENT PUMP STARTERS	PULL IN THESE CONDUCTORS THRU CONDUIT 'ZH5' AT THE SAME TIME WITH CONDUCTORS ADDED IN ITEMS G, H & N. PULL IN THESE CONDUCTORS THRU CONDUIT 'ZY5' AT THE SAME TIME WITH CONDUCTORS ADDED IN ITEM G ABOVE.
N.	ADD	3 #12 THWN (NEW) FOR CHLOR. WATER SUPPLY PUMP (NEW)	ELECT. RM. CKT. 21, MCC-4	1 1/2"C. 'ZH5' TO PB'Z' & THEN 2"C 'ZY1' TO PB 'Y' & THEN 1"C. 'YT3' TO PB 'T' & THEN 'TE5'	J-BOX OUTSIDE CHLORINE EQUIPMENT BUILDING	PULL IN THESE CONDUCTORS THRU CONDUIT 'ZH5' AT THE SAME TIME WITH CONDUCTORS ADDED IN ITEMS G, H & M ABOVE. PULL IN THESE CONDUCTORS THRU CONDUIT 'ZY1, YT5' & 'TE5' WITH ITEM H ABOVE.
P.	ADD	3 #6 THWN (NEW) FOR MCC-6 PANEL (NEW)	ELECT. RM. CKT. 31, MCC-2	1 1/2"C. 'ZH1' TO PB'Z' & THEN 1 1/2"C. 'ZW4' TO PB'W' & THEN 'WS1'	MOTOR CONTROL PNL MCC-6 FOR SLUDGE PUMP, GRINDER & THICKENER.	NOTE THAT ALL CONDUITS BETWEEN PB'Z' & PB'W' ARE TO BE REMOVED & NEW CONDUITS REROUTED TO ALLOW INSTALLATION OF A NEW SLUDGE THICKENER STRUCTURE. SEE SITE PLAN & PULL BOX VIEWS ON THIS SHEET. CONDUITS 'ZH1' & 'ZW4' ARE NOW OCCUPIED BY 9 #10 CONDUCTORS (6 WORKING & 3 SPARE). PULL BACK THESE CONDUCTORS & RETURN THEM WITH THE 3 #8'S FOR THIS CIRCUIT.
Q	ADD	1" CONDUIT ONLY, DESIGNATED 'WE2'	PB'W'	PARALLEL TO 1" C. 'WS1'	MCC-6	FOR FUTURE

NOTES:
1. UNPROTECTED CIRCUITS SUPPLIED FROM PRIME SOURCE ONLY.
2. PROTECTED CIRCUITS SUPPLIED FROM PRIME AND STANDBY SOURCES.

REDUCED
NOT TO SCALE

HILLER ELECTRICAL ENGINEERING
1123 DEVONSHIRE
SAN BERNARDINO, CA 92404
TEL. (714) 883-1115
APPROVED BY: Irving Hiller 5/17/85 E8222
DATE

2	CORRECTED CONDUITS SO WALL OF PB. # 2	LH	7/28/86
1	REVISED PER 1985 GRANT	LH	APR '86
MARK	REVISIONS	BY	DATE

DESIGNED BY LH DRAWN BY JG CHECKED BY LH

PREPARED UNDER THE SUPERVISION OF: Vincent W. Evans Exp 3/89
REGISTERED CIVIL ENGINEER NO. 12977
DATE 6/27/85

APPROVED BY: Charles W. Stevens R.C.E. 29725
CITY ENGINEER
CITY OF BANNING
DATE 6/27/85

J.F. DAVIDSON ASSOCIATES
CIVIL ENGINEERS • SURVEYORS • PLANNERS
P.O. BOX 493, RIVERSIDE, CA 92502 (714) 686-0844
11200 SO. MT. VERNON AVE. #D, COLTON, CA 92324 (714) 825-1082
73-080 EL PASEO ST. 108, PALM DESERT, CA 92260 (619) 346-5691
P.O. BOX 157, TEMECULA, CA 92390 (714) 676-5336

SCALE N/A
DATE MAY, 1985
BENCH MARK: CITY OF BANNING WASTEWATER TREATMENT PLANT PRIMARY CLARIFIER NO. 2 ELEV. = 2114.67

IN THE COUNTY OF RIVERSIDE CALIFORNIA
CITY OF BANNING
WASTEWATER TREATMENT PLANT EXPANSION

PULLBOX DIAGRAMS / WORK SCHEDULE

E-5 OF ___ SHEETS

FOR CITY OF BANNING
WO F & P REQ NO. 84-8126

Exhibit E

Design-Builder's Proposal

PROPOSAL

Design and Construction of the City of Banning Wastewater Treatment Plant and Recycled Water Project



Prepared by:
AECOM/W. M. LYLES CO.,
A Joint Venture

AECOM W.M. LYLES CO.
a joint venture

Submitted:
October 11, 2024
Attention: Barbara Mason



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Part V: Phase 1 Cost Proposal (under separate submittal)

Part VI: Required Forms (uploaded into OpenGov)

Appendix A: Preliminary Drawings and Schedule

Appendix B: Resumes

Please note that forms, insurance letters, surety letters and any other required documents have been uploaded separately to your OpenGov procurement site per the RFP instructions.



PART I

Transmittal Letter, Team Administrative, and Financial Capability

AECOM W.M. LYLES CO.
a joint venture

October 11, 2024

Barbara Mason, Purchasing Manager
City of Banning - Purchasing Division
99 E. Ramsey Street
Banning, CA 92220

Proposal for Progressive Design-Build Services for the City of Banning Wastewater Treatment Plant and Recycled Water Upgrades Project - RFP-24-074

We are excited by the opportunity to become a trusted partner of the City in developing the most cost-effective solution for your wastewater treatment plant upgrades that will minimize impacts to your rate payers while at the same time, provide a long-term solution to support community growth. Our team has worked hard to find **design-to-budget ideas for your project and we are confident that the solutions we present in our proposal can save the City$10M+** compared to the original concept. Highlights of our proposal include:

- **Experts skilled in progressive design-build and MBR systems.** AECOM/Lyles have worked together on numerous progressive design-build treatment plant upgrade projects totaling over $1B, as well as many MBR systems. These past experiences allow us to work together seamlessly to deliver your project and hone in on the biggest cost items, optimizing the budget for the City.
- **Experience with San Gorgonio Pass and desert communities.** From our wealth of experience delivering similar projects in surrounding communities (including Beaumont), we have a strong appreciation for pragmatic solutions that work for you.
- **A proven progressive design-build management approach.** We know how to streamline the crucial Phase 1 activities so that collaboration is fostered while still making timely decisions to maintain the overall project schedule. We are committed to a transparent Guaranteed Maximum Price (GMP) presentation and converting this project from Phase 1 to Phase 2.
- **Design to Budget Ideas that offer real savings.** We have left no stone unturned in looking at ways to save the City money while still achieving your project goals. From optimizing basin sizing, to finding a creative way to forego the reverse osmosis (RO) system, we offer the City ways to lessen the impact to your rate payers, while maintaining the resiliency to accommodate local population growth and future permit expectations.
- **A dedication to a quality project.** Our design to budget ideas do not come at a cost of quality or impacting the City's options in the future. We are committed to using proven vendors and quality suppliers and our design provides for easy future expansion with low capital expenditure.
- **Our corporate commitment to make this a success for the City.** We are committing the team provided herein for the duration of the project. We have learned that team continuity throughout the duration is critical to the overall project success and delivering the lowest total project cost.

Single Point of Contact for AECOM/Lyles – Project Manager Joe Lawrence is the single point of contact for the team, ensuring clear communication and streamlined project management.

Joe Lawrence
Design-Build Project Manager
26501 Madison Avenue
Murrieta, CA 92562
T: 916.644.9487 | E: jlawrence@wmlylesco.com

We appreciate the City using an industry standard template as the basis for the sample agreement, and we are confident that we can negotiate a contract with the City for this project. We also confirm that we have read and understood all elements of the RFP. Furthermore, in our cost proposal, we have provided a detailed scope of work of our services.

Bonding and Sureties – The AECOM/Lyles team confirms we will meet the bonding requirements outlined in the Request for Proposal (RFP). We have included in our proposal a Surety Letter of Intent and the *Proposal Bid Bond* as required in RFP section IV.E.

Financial Capacity – Both AECOM and Lyles confirm there are no changes in our firms' financial capacities and bonding capabilities. The financial statements included in our SOQ are the most current and there are no changes in our standings.

CEQA, Funding, and PLA Compliance – The AECOM/Lyles JV confirms we have reviewed the *CEQA, Funding, and PLA Compliance* requirements, signed and included the form in our proposal uploads in your procurement system, and agree to comply with the terms and conditions.

Per the instructions in the Request for Proposal, our Part V Phase 1 Cost Proposal has been submitted as a separate file. Part VI Required Forms have been completed and uploaded into the OpenGov procurement system.

We have assembled a truly collaborative and integrated team. We look forward to sharing more details on our proposal during the interview. AECOM/Lyles appreciates the time and commitment the City has invested in this procurement process and appreciate you meeting with our team during our proposal development. **Our goal as the City's of Banning's trusted partner is to implement a "no surprises" and "design to budget" commitment throughout the project. This can only happen through effective, open and transparent communication and we look forward to working side-by side with the City in delivering this project.** Thank you for your consideration.

Respectfully submitted,

AECOM/Lyles Joint Venture

Joseph B. Lawrence - Project Manager
SVP, Alternative Delivery Manager
Authorized Signatory
W. M. Lyles Co.
O: 916.375.1833 | M: 559.647.6650
jlawrence@wmlylesco.com

Brian Daly, PE
SVP, Director North America Water Design-Build
Authorized Signatory
AECOM Technical Services, Inc.
O: 978.905.2527 | M: 781.799.1791
brian.daly@aecom.com



PART II

Project Team, Experience, and Approach

The AECOM/Lyles Team presented in our SOQ is 100% committed to the success of the City's WWTP and Recycled Water Upgrade project—from day one to day done.



"I am fully committed to collaborating with the City for the next several years to continue the implementation and construction of Banning's WWTP project, ensuring a safe and sustainable wastewater and recycled water system for decades to come.

– Joe Lawrence
Design-Build Project Manager



"I'm looking forward to this exciting partnership with the City of Banning where we explore cost-effective solutions, keeping the rate payers in mind at every step as we design to budget for this important project.

– Gabriel Perigault
Design Manager



"I pledge to open lines of communication with all stakeholders, including operations staff, to keep construction moving on the project and deliver first-class facilities of the highest quality, on budget and schedule – with no surprises.

– Marcos Reyes
Construction Manager

Key Project Personnel

As presented in our SOQ, the AECOM/Lyles key personnel have delivered together on design-build treatment projects in California with significant upgrade and maintenance of plant operations considerations, bringing demonstrated efficiency and collaboration to the City. Our management team—along with Treatment Process Design Lead Alex Franchi, Preconstruction Manager Vince Guillama, Construction Superintendent Anthony Pilato, Commissioning Lead Vijay Kumar, and other team members—remain fully committed to meeting all of the project objectives detailed in the City's RFP.

Team Enhancement

We are presenting one key team member enhancement in **Joe Lawrence as our Design-Build Project Manager**. Joe has a distinguished career in the water/wastewater industry, with 22 years of experience managing design-build projects for public and private water and wastewater treatment facilities. Throughout his career, Joe has been involved in all aspects of project delivery including project management, preconstruction services, cost control and budgeting, construction implementation, and start-up and commissioning on numerous alternative delivery projects, including design-build and progressive design-build projects. Many of these projects involved collaboration with the same AECOM/Lyles JV team we are proposing for this project.

While we have **NO CHANGE to the rest of our team or any of the key staff presented in our SOQ**, our team will be further enhanced during contracting efforts with disadvantaged subconsultants from our Good Faith Outreach efforts. We pledge to meet any goals required by the City and/or different funding sources and grants.

On the next page is an update to our organizational chart (Figure II-1) highlighting the enhancements to our team. We have also included a brief biography for our project manager Joe Lawrence that summarizes his qualifications. We would be happy to provide resumes for all of our team members at the City's request. **All other components of our team and SOQ remain unchanged.**

Benefits of the AECOM/Lyles Team

- ✓ **Extensive resources** that are fully committed to this project
- ✓ **Simultaneous and direct access to design and construction resources** at all times through our integrated joint venture
- ✓ **A team that has successfully worked together** to deliver other projects in the region
- ✓ **Proven ability to partner with owners through their first progressive design-build and get to Phase 2** without exercising the "off-ramp"
- ✓ **Collaborative design process:** price, constructability, operability are considered holistically
- ✓ **Innovative concepts** to minimize total project cost such as right-sizing tankage
- ✓ **Staff continuity** through all project phases
- ✓ **Maintain ongoing plant operations** with detailed construction sequencing
- ✓ **Comprehensive start-up and commissioning plan** to ensure operations staff is trained to operated the new facility

Enhancing our Team... *"W.M. Lyles Co., led by the exceptional project management of Mr. Joe Lawrence, delivered outstanding quality and expertise on the Galt WWTP Tertiary Filtration, UV Disinfection and Biosolids Improvements Project. Joe's leadership ensured timely completion within the 206-day timeline and minimal change orders. We're eager to collaborate with Joe and the W. M. Lyles Co. team again on future projects."* - James Boarer, P.E., Construction Manager, PSOMAS



Joe Lawrence

Design-Build Project Manager

Joe is a Senior Vice President at W. M. Lyles and Collaborative Delivery Manager with over 22 years of experience in managing and delivering large-scale water and wastewater treatment projects. He has a proven track record in pre-construction planning, project management, pre-construction services, cost control and budgeting, construction implementation, and start-up and commissioning on numerous design-build and progressive design-build projects. Joe is committed to delivering high-quality infrastructure while leading teams and managing complex project requirements.

Why Joe?

- ✓ Involved in every design-build project completed by AECOM WML in the last 15 years
- ✓ Brings expertise in **collaboration** and working with the team to **design to budget** for project success
- ✓ Met multiple times with the City of Banning and **understands the solutions** to upgrading the existing wastewater treatment plant
- ✓ Advanced understanding of various delivery methods, including design-build and progressive design-build
- ✓ Deep technical expertise, particularly in SCADA upgrades, biological treatment, tertiary filtration, and disinfection processes

Highly experienced progressive design-build project manager working on WWTP upgrades similar to the City of Banning

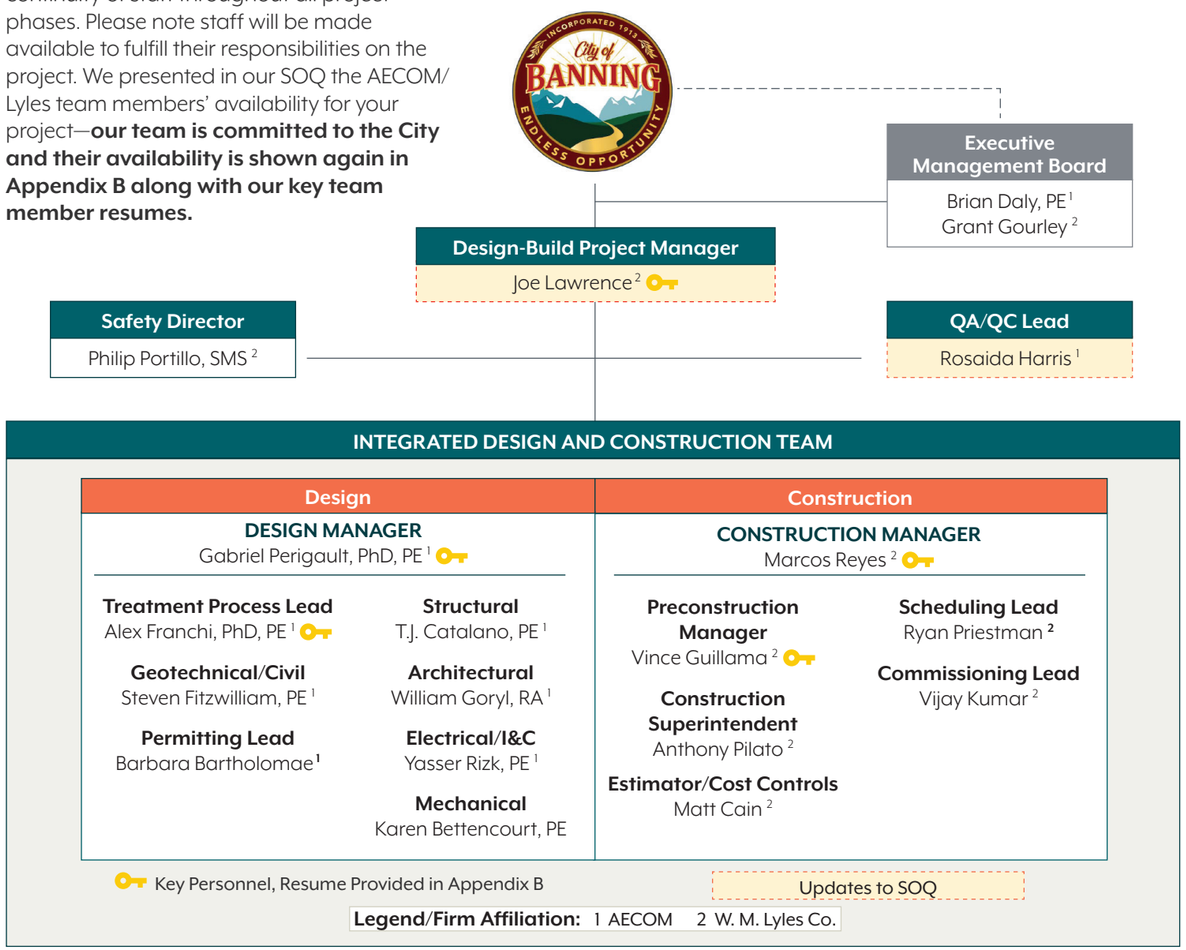
Joe brings 20+ years of experience in managing wastewater treatment plant upgrades with a primary focus on collaborative delivery. He brings detailed preconstruction phase and estimating experience combined with years of heavy civil construction and start-up and commissioning for water/wastewater infrastructure. He understands each step of the project lifecycle and how to lead a high-functioning team. **Joe has been working closely with AECOM for the past 15 years on design-build projects such as:**

- East County Advanced Water Purification (ECAWP) Packages 1 and 3 Progressive Design-Build
- City of Stockton Regional Wastewater Control Facility Progressive Design-Build Upgrades
- City of Davis Wastewater Treatment Plant Secondary and Tertiary Improvements, Design-Build
- City of Santa Cruz Graham Hill Water Treatment Plant Upgrades Progressive Design-Build

AECOM/Lyles project personnel are available to start work immediately and are committed to the City of Banning for the duration of your project

Figure 2-1: Organization Chart

Our combined organization promotes the continuity of staff throughout all project phases. Please note staff will be made available to fulfill their responsibilities on the project. We presented in our SOQ the AECOM/Lyles team members' availability for your project—**our team is committed to the City and their availability is shown again in Appendix B along with our key team member resumes.**



Good Faith Efforts

At AECOM/Lyles, we are dedicated to fostering diversity and inclusion through active engagement with Disadvantaged Business Enterprises (DBEs). Our comprehensive outreach strategy, including advertised public events, ensures economic growth and equal opportunity. We host public outreach events to share information on collaborative projects, maximizing participation from both local and competitive environments. For example, at Hi-Desert Water District, our open house with local unions, businesses, subcontractors, and the public resulted in multiple bids and met all SRF grant requirements. **For this project, we placed legal notice ads announcing the DBE opportunity in the Banning Record Gazette and performed searches on four websites (CA.GOV, DOT.CA, SBA, and CalTrans), resulting in solicitation of 1,223 DBEs. From that outreach effort, 21 DBEs have expressed interest in bidding.**

Team Experience

The AECOM/Lyles team has NO CHANGE to our project experience. The information presented in our Statement of Qualifications (SOQ) demonstrates a long history of working on design-build projects together as well as unmatched local experience working on similar projects for similar clients in Southern California. Table II-1 below summarizes the client reference projects previously presented. **Additional recent successful projects include the CR&R Riverside County Environmental Center in Perris, the Victor Valley Waste to Energy project in Victorville, Morongo WWTP in Cabazon, Beaumont, Hi-Desert, Yucaipa, Palm Springs and Lytle Creek WWTPs, all of which showcase our team's deep-rooted understanding of the local area.**

BEST for **BANNING**

Our team has prioritized this project over other opportunities in the marketplace. We have been tracking this project for 3+ years because the City is the type of client we want to work for—a pragmatic desert community looking to make every dollar count.

Table 2-1. Summary of Project Experience presented in our Statement of Qualifications

Project Name/Location	Scope of Services	Relevance	Self Performance Level	Similar Performance Criteria
East County Advanced Water Purification Progressive Design-Build, Santee, CA AECOM/Lyles JV	Progressive Design-Build for WWTP and AWT	Reuse, RO, New Plant, PDB, T22 compliance	78%	☑
S1 WWTP Improvements Progressive Design-Build Rialto, CA AECOM/Lyles JV	Progressive Design-Build of WWTP improvements	Design to Budget, significant cost savings realized	75%	☑
Regional WPCF Upgrades Progressive Design-Build Stockton, CA AECOM/Lyles JV	Progressive Design-Build of WWTP improvements	Design to Budget, adjusted GMP to meet Client's goals	78%	☑
WWTP Salt Mitigation Upgrade Project Beaumont, CA W. M. Lyles	Construction of treatment plant upgrades including MBR	Neighboring community facing similar challenges	78%	☑
HDWD Wastewater Reclamation Facility Progressive Design-Build Yucca Valley, CA W. M. Lyles	Progressive Design-Build of treatment plant including MBR and UV	Design to Budget, $2M in cost VE cost savings	75%	☑

Imperial Wastewater Treatment Plant Upgrade

Additional Project Experience

This comprehensive project for the City of Imperial, completed in 2021 by Lyles, involved significant upgrades to the existing WWTP:



- Upgrades to the existing influent pump station and the construction of several new facilities
- New facilities included a grit structure, aeration basins, **MBR facility**, and dewatering facility
- Designed to efficiently process an average daily flow of 2.4 million gallons of wastewater
- Initial stages involved demolition of an existing aeration basin, setting up a shoring and dewatering system, and excavating 15,000 cubic yards of earthwork
- The team then installed approximately 5,500 lineal feet of below-grade piping and constructed the aeration basins, membrane bioreactor basins, and the slab for the dewatering facility building
- The final stages involved the completion of the membrane bioreactor facility and installation of the above-grade process mechanical piping and equipment

Approach

Key staff have delivered together on progressive design-build wastewater projects and projects in the San Gorgonio Pass and desert areas, bringing lessons learned and collaboration to the City

Management of the Project Team

The AECOM/Lyles team has no other companies as part of our core team at this time. We have advertised this project for 30 days in the Press Empire and, if selected, we intend to add small business firms, such as surveyors, drillers and geotechnical firms, during Phase One to meet City goals and grant/funding source requirements.

As presented in our SOQ and reaffirmed in the previous subsection, the AECOM/Lyles key personnel have delivered together on design-build treatment projects in California. The team has **successfully employed designing-to-budget** on other projects and will work in close collaboration with City staff and its advisory team to implement this proven approach.

How Key Staff will Interact in a Collaborative Manner

The AECOM/Lyles team will be led by **Design-Build Project Manager Joe Lawrence.** Joe will bring his 22+ years of experience with water/wastewater treatment plant construction in California. Joe will have overall accountability and day to day contact with the City and your advisors through the entire project.

Design Manager Gabriel Perigault will lead the overall design of the project. He will work closely with the preconstruction and construction teams and your staff to deliver a design that meets your budget. He will lead the technical workshops that are associate with our collaborative approach. Gabriel has managed the design for numerous water and wastewater facilities, including the recent Davis, Rialto and Stockton WWTP design-build projects delivered with Lyles. With 30+ years of experience and a leader in innovative treatment technologies including MBR systems, he will guide the team and provide the City with a project that provides reliable performance while optimizing capital and operational expenses.

BEST for **BANNING**

Being a highly experienced, integrated 50/50 JV team functioning as one entity, our business operating culture is truly collaborative with all parties dedicated to the same goal of designing to a budget. This is in stark contrast to other DB entities who will have designers subcontracted to a general contractor.

Treatment Process Lead Alex Franchi will lead the treatment process train scheme and the technical details related to the MBR and disinfection systems. He will coordinate with Gabriel, Vince and the rest of the team to make sure the most cost-effective technical solutions are brought forward and he will be on point for discussions with critical technology vendors to ensure our design and the scope of supply align.

Preconstruction Manager Vince Guillama will work closely with Mike, Gabriel and the City's team to establish the initial project estimate and update it regularly as design decisions are made and the scope is finalized. He will also work closely with Construction Manager Marcos Reyes in developing and maintaining the project schedule. Vince is a proven collaborator in this role, having provided preconstruction services for a multitude of DB projects, notably the City of Davis, City of Santa Cruz, East County AWP (1&3), and City of Stockton Projects, all undertaken as part of the AECOM/Lyles JV.

Construction Manager Marcos Reyes will participate in constructability and VE reviews during Phase One. He will work with Vince in maintaining the project schedule. During Phase Two, he will oversee the construction of the upgrades. Marcos has over 15 years of experience managing construction of wastewater facilities. He is currently serving as WRF Construction Manager for the ECAWP Project, following his successful role as Construction Manager on the $25M Rialto WWTP Project (also operated by Veolia), both in collaboration with AECOM.

Constructability, Operability, Maintainability, Durability, Sustainability, VE, and Efficiency of Design and Construction

Applying the best aspects of progressive design-build. Our approach builds upon the work completed by the City and our concept is a starting point for discussions with the City's team (see Part 3). We applaud the City's approach to use the progressive design-build (PDB) model and we know that collaborative, cost-centric discussions will drive best solutions. We are no strangers to this process with PDB projects completed and underway in Rialto, Stockton, and the ECAWP program in Santee. Phase One management elements will be focused on workshops, design development, price certainty and construction sequencing. Preconstruction Manager Vince Guillama and Construction Manager Marcos Reyes will participate in the VE sessions and constructability reviews to provide their input.

Our JV will use Primavera P6 to track the schedule and adjust as needed. The meetings and workshops schedule will be critical in driving technical decisions to maintain overall project schedule and designing to budget as the primary goal through direct presentation of cost impacts as they relate to specific options. Details on our approach to both Phase One and Two are presented in the following subsections.

Phase One Approach

Our design to budget approach starts with a detailed agreement of the process train and **we will leverage vendor provided designs when they provide capital and operational benefits**.

Our scope and initial estimate will establish the City's the must have scope items. We will also make separate list of wish list items that can be added into the project during Phase One, as the budget allows.

Building on the baseline cost and critical guardrails established from the programming workshop, we will step through the workshop process. The baseline cost model will be used to measure alternatives or modifications against the initial layout to compare costs associated with alternative concepts, equipment or approaches that may be contemplated during the workshop process. Decision Log maintains positive momentum and serves as a go-to reference point so that decisions aren't constantly revisited.

We will use a clear process that documents agreed upon elements in the Decision Log to maintain positive project momentum. Elements that need adjustments or a different alternative will be vetted, refined and brought back to the City at a future meeting. We have learned that having a baseline upon which to compare "real-time" options allows the entire team to make educated, value-based decisions with the total project cost in mind. A critical Lesson Learned by our team is the importance of having sufficient engineering and planning budget. The additional effort placed on Phase 1 will result in significantly lower total project costs through sound decision making and review of total project lifecycle costs

BEST for BANNING

Our proven approach for PDB projects starts with an initial estimate that is based on real numbers from similar projects plus market outreach. The estimate is updated regularly, allowing the City to make value based decisions so there is no surprises at the GMP.

Disciplined cost accounting controls are the essential responsibility of the Project Manager in Phase One as engineering progresses to 100%. Weekly Estimates to Complete (ETC) are tracked by the Project Manager with weekly design cost reporting prepared by the JV controls team. Design to budget efforts is continual with regular construction cost and schedule adjustments reflected in the outcomes of design workshops, equipment/materials market interaction and early subcontractor inclusion.

As described later in this Section under the Collaboration heading, **we envision a workshop process to involve the City and its advisors to make the above decisions. The workshops will also be a key way we obtain operations team input and get feedback when finalizing equipment selection**.

PROVEN INNOVATION TO DRIVE DOWN PROJECT COSTS

Our VE and optioneering efforts on other design-build projects has resulted in an average savings to clients of 21% when comparing our solution to the owner's original concept

BEST for BANNING

OPTIMIZING DESIGN-TO-BUDGET THROUGH CREATIVE CONCEPTS

We recognize that all projects face some level of financial pressure. To this end we have already begun looking at potential alternatives to to meet the City's desired project budget. While these alternative will be developed more comprehensively during the phase 1 activities, we present a number of these in detail in Part III as a sign of commitment to the City that we take this responsibility seriously:

- ✓ **Right-sizing tankage and basins to save cost.** Our modeling and analysis shows that the sizing the aeration and mbr basins can be reduced, saving construction costs, while still providing the appropriate redundancy.
- ✓ **Three tank configuration of bioreactors.** Will provide required redundancy while providing cost savings.
- ✓ **Eliminate the initial need for the RO system and evaporation ponds.** We believe that blending MBR effluent and potable water can meet the nitrogen and TDS limits at a lower cost.
- ✓ **Hydraulics.** Maximize the use of gravity flow through the plant to lower pumping costs
- ✓ **Eliminate the third primary clarifier.** Savings can provided by not constructing the third primary clarifier without impacting the performance of the MBR system
- ✓ **Site layout.** The site's large area with limited interface points allows for spacious logistics, staging, and stormwater management. Early procurement and just-in-time delivery will streamline the project timeline and prevent delays.
- ✓ **Chlorination basin vs. UV disinfection.** Eliminate the construction of a large chlorination basin with a more cost-efficient and environmentally friendly UV disinfection.

Design

During Phase One, as part of the Progress Meetings, we will conduct design reviews on selected topics with the purpose of disseminating information, promoting discussion and obtaining feedback so that City staff understands the design and has enough information to approve the design. More resembling a workshop than a meeting, this approach to review meetings has been developed and honed on similar large and complex projects. We will manage design review meetings using the following best practices:

- ✓ Dedicated leader to facilitate
- ✓ Up-front technical discussion materials
- ✓ Clear agendas that specify: (1) purpose and decisions expected, (2) overview topics and issues, (3) discussion and review, (4) summary decisions made, and (5) approvals
- ✓ Clear, action-oriented minutes
- ✓ Follow-up action items and distribution of issue resolution

Schedule Management and City Reviews. We will use Primavera P6 to track progress and adjust course, as needed. The meetings, submittals, and review schedule will be critical in driving decisions to maintain overall project schedule. As described more fully in Part IV, we will use a cost loaded schedule and provide 3 week look aheads as appropriate.

Our Integrated JV Addresses City Concerns

Providing continuity in leadership between Project phases. A hallmark of how the AECOM/Lyles JV does design-build work is that we promote staff continuity throughout all project phases. This virtually eliminates any risk of discontinuity in leadership and any issues with information transfer. For instance, the project manager will stay engaged for all phases of the project. The design manager and all discipline leads will continue to be involved in the project after the design is complete, providing interpretation and responding to any questions in the field to make sure the design intent is carried out in



We will use 3D models during detailed design. We have experienced the benefits of using this tool in other projects as it provides a better perspective facilitating the understating among the design-build team, City staff, and other stakeholders, and, in the end, the decision-making process. It also helps break down the compartmentalization between design and construction, and avoid clashes between disciplines during construction, to see the project visualized early on.

what is being built. Similarly, the construction manager will engage in the project during phase 1 to understand the design, and provide constructability and VE input.

Compartmentalization between design and construction. As an integrated JV our delivery model breaks down the barriers that could compartmentalize design and construction activities. Our key staff have worked together before on progressive design-build treatment plant projects have a rapport and an efficient communication style that promotes collaboration. For example, our team does page flip reviews at critical milestones to make sure that the design and construction implementation members are all aligned in what is being presented and priced.

Contractor or equipment supplier interests overriding engineering-based decisions. All equipment and materials for the project will be reviewed and approved by the Engineer of Record that designed and specified these items, including any vendor provided designs. For critical equipment, including all mechanical equipment, AECOM/Lyles, in close coordination with the City, will also be in charge of recommending to the City suppliers, selecting the equipment and approving all shop submittals prior to release for fabrication. Alex Franchi will be involved with critical process equipment to make sure vendor supplied equipment align with overall design decisions and anticipated performance requirements. This approach provides an unbiased process that ensures that the City's preferences are considered and the best value with respect to cost, functionality, and durability are part of the selection process.

Phase Two Approach

Experience Developing/Managing the GMP

As an experienced design-builder, AECOM/Lyles has a unique advantage of developing realistic costs during the GMP development phase of the project. Our DB project manager, design and procurement team and subcontractor partners understand technical and quality requirements and are skilled at developing detailed, bottoms up cost estimates. They have long-lasting relationships with reputable equipment suppliers which reduces the risk of scope creep during the design and, ultimately, construction.

Additionally, our team will work closely with the City to implement decisions on equipment, materials of construction, and overall site considerations that will positively impact the GMP. Techniques will include using a decision log to document each decision made along with any associated cost impacts, so that a running tally of the current project cost is maintained and can be easily measured against a baseline. Our team will also make sure that multiple bids are received for not only the equipment but also subcontractors to achieve the lowest project cost possible. Internal contractor prequalification procedures will also verify that vendors and subcontractors selected for the project are financially stable and will provide the workmanship and ethics commensurate with the AECOM/Lyles JV philosophy. Beginning with our rigorous prequalification process, we will communicate with subcontractors the importance of quality, safety and performance, in addition to best value provided.

BEST for BANNING

We design and build to budget on all our design-build projects to ensure client satisfaction: the proof – no client has ever taken the off ramp at the GMP stage on any of our projects.

Our team recommends the GMP process occurs after the 60% design milestone in order to maintain the project schedule.

Estimating and Cost Monitoring

AECOM and Lyles have very successful histories managing costs on both lump sum and progressive design-build projects. Vince and Marcos will provide the City and its advisory team frequent cost estimate updates during design leading not surprise at the GMP. Our partnership with key subconsultants during the design phase will allow our team to further develop a reliable cost estimate for the GMP, that accurately captures the electrical components of this project. Highlights of AECOM/Lyles team estimating, and cost monitoring procedures include:

- ✓ An initial cost estimate will be performed before the kickoff workshop and updated on an ongoing basis.
- ✓ One difference maker for AECOM/Lyles is that we start with a detailed estimate from day one, drawing upon a wealth of similar past construction projects to establish a baseline estimate. We are much more accurate and transparent than our competition.
- ✓ VE and constructibility reviews are performed throughout the design phase.
- ✓ Another difference maker is the flexibility of contractual approach from conversion to a lump sum or cost plus with a GMP with a shared savings, depending on the City's preferences.

Biggest Lessons Learned Developing GMPs

AECOM/Lyles will meet the challenges of establishing the GMP price for the City's project, by staying flexible during the design process and keeping a strong focus on designing to budget. The three key issues we have encountered when designing to the GMP include:

1. **Defining project "must haves" to establish early cost certainty.** AECOM and Lyles use an early partnering approach through common sharing of project budgets, which allows both the owner and design-builder to establish "must-have" items as well as "wish list" items and make value-based decisions against a mutually agreeable baseline.
2. **Clear scope expectations/scope-creep.** Early agreement between the owner and the design-builder regarding the core project design criteria and scope is critical to cost, schedule, and project certainty.
3. **Escalation of materials.** Recent market volatility and global economics have affected material costs and could have a significant impact on overall project costs. Our constant bidding of wastewater projects in California allows us to stay in touch with market pricing and minimizes surprises at the GMP deliverable.

Other Mitigation Measures. AECOM/Lyles suggests holding regular meetings to openly discuss and evaluate engineering options, while providing a continual accurate update of the agreed upon budget and schedule, and jointly maintaining control of detailed scope. This approach has worked well on other projects and will serve as another way to facilitate design to budget.

Approach to Construction

AECOM/Lyles has a proven track record of successfully delivering complex treatment plant projects, particularly with desert communities. We have developed a robust approach to site layout, logistics, and construction sequencing that prioritizes efficiency, safety, and environmental stewardship. Details of construction approach are presented in Part IV of this proposal.

Site Layout and Logistics

We approached the site layout and logistical plan with a focus on maximizing efficiency and minimizing disruption. As part of this analysis we are also focused how decisions we make relative to the layout and logistics of build the new plant and how that could affect the day-to-day operations of your existing plant. Our approach has been developed to have minimal impact to current vehicular and pedestrian access and maintaining as little impact to your current facility.

The project site provides a large area with limited interface and tie-in points for the main portion of the work with the existing facility, affording a spacious area for site logistics, staging, and stormwater management both during and following construction. We understand that this project demands meticulous planning and execution to balance the need for efficient construction

Figure 2-2. Site Plan Logistics



with the necessity of minimizing environmental impacts. The uncomplicated nature of the site enables a straightforward approach to layout, logistics, and resource management, ensuring that all construction activities are confined within the designated boundaries while adhering to strict regulatory requirements. We do not foresee any resource limitations that would affect project progress. With the ability to self-perform 75% of the work, we can control costs, create efficiencies, enhance coordination, mitigate risks, and improve safety while enabling resource flexibility and ensuring quality. Our early procurement strategies and just-in-time delivery streamline project timelines by securing critical materials and equipment in advance, minimizing storage costs, reducing the risk of damage, and preventing delays in construction progress.

Location and Layout of Key Elements. Construction Laydown Areas: Strategically positioned within the site to allow easy access to materials while minimizing the footprint on undisturbed areas.

Laydown and Staging Areas. Located near the main construction zones to facilitate the efficient movement of equipment and materials, reducing downtime and delays. This will be constructed immediately adjacent to the work site to avoid double or triple handling of materials.



Access Roads and Traffic Management will be clear and concise, carefully planned to ensure safe and efficient movement of vehicles and machinery while minimizing impacts on surrounding areas. This will also allow easy access to all the different key element areas and keep truck haul roads away from trailers and parking areas for a straight, easy in and out. Traffic flow will be managed to prevent bottlenecks and maintain site safety. We expect a primary access point off Charles street past the existing entrance of the existing facility.

Parking. Designated parking areas will be established within the site boundaries to prevent off-site disruptions and ensure easy access for workers. Two designated areas will be created: one for CM/Project personnel and another for craft labor and subs.

Site Security Measures. A comprehensive security plan will be implemented, including fencing, surveillance, and controlled access points, to protect the site and ensure compliance with safety protocols. We will include a guard shack at the front gate and a separate entrance to avoid disturbing the existing plant entrance. Site fencing and security gates will be locked after hours. Web-based security cameras will also be installed.

Utilities Placement. Utilities will be strategically placed to support construction activities while minimizing interference with the natural environment and existing infrastructure.

Waste Management Facilities. Designated areas will be established for waste collection and sorting, ensuring that all waste is handled in an environmentally responsible manner. These areas will be strategically positioned near the main construction/staging area, as well as near the trailers and exit, for ease of access.

Containment within Boundaries. All elements, including laydown areas, staging zones, and access roads, will be fully contained within the specified site boundaries and established easements. This ensures that our activities do not encroach on protected areas or disrupt neighboring properties.

Mitigation Measures to Minimize Environmental Impacts. To further minimize environmental impacts, we will implement a range of mitigation measures, including sediment control, dust suppression, and noise reduction strategies. These measures will be continuously monitored and adjusted as needed to ensure compliance with environmental regulations and best practices.

Startup and Commissioning

Our startup and commissioning approach is presented in Part IV of this proposal. We acknowledge the procurement requirements regarding startup and commissioning, including the requirement for 30 days for startup and testing and pre-commissioning meeting to discuss plan with the City 3 to 6 months before startup and testing is scheduled to begin.

Permitting

BEST for BANNING

Our long-term relationships with California permitting agencies and regulators will provide the City with a streamlined process to meet the project schedule.

Anticipated Permits and Schedule. Please see our full project schedule included in Appendix A for a breakdown of the timeframe to apply for and obtain permits. Below is a list of anticipated permits:

City of Banning

- Community Development
- Building Permit
- Public Works Coordination
- Encroachment Permit Coordination

County of Riverside

- Dept. of Environmental Health
- Solid Waste Facility Requirements
- Fire Dept. - Hazardous Materials Div.
- Hazardous Materials Business Plan
- Transportation and Land Mgmt Agency and Planning
- Flood Control and WaterConservation District

CA State Waterboard R7: Colorado River

- Stormwater
- Industrial User Waste Discharge Reqmnts
- SWPPP Updates associated w/Industrial Activities
- Construction General Permit (w/SWPPP by contractor)
- Recycled Water
- Title 22 Eng. Report for Prod., Dist., & Use of Recycled Water

South Coast Air Quality Management District

- Authority to Construct Permit
- Permit to Operate (after Construction)

Understanding of Permit Process and Support for the City. For permitting and governmental approvals we will create a Permit Work Plan that will identify each specific permit required, the permitting agency contacts, submittal requirements, prerequisite conditions, processing times, and schedule for submittals. Key success factors for our plan include:

- ✓ Implementing up-front coordination with the City and permit agencies to facilitate the approval process. This will help minimize the risk of delays.
- ✓ Coordinating design activities with permit submittals
- ✓ Preparing discrete permit submittal packages
- ✓ Follow-up shortly after submittal to confirm information compliance and/or additional information required

Title 22 and RWQCB permits. The AECOM/Lyles Team will provide the necessary technical information to support development of the Title 22 Engineering Report permit approval process. We will provide the elements that are related to our scope of work, i.e., descriptions of the WWTP , pathogenic microorganism control, reliability of features for the new facilities, contingency plan, monitoring system, recycled reverse osmosis performance, advanced oxidation performance, operational optimization plan, and an operations and maintenance readiness plan.

CEQA Compliance. We will review the CEQA documentation and the design team will incorporate the specific requirements into the early design concepts. Specific measures will be taken to ensure applicable mitigation, monitoring and reporting measures will be included on design plans to foster compliance. At the onset of the project, a master list of Mitigation, Monitoring, and Reporting Program (MMRP) requirements that are applicable to each design element will be created and distributed to the project team.

Grant/Loan Compliance. AECOM/Lyles is very comfortable working on projects with SRF and WIFIA requirements; both the ECAWP, Davis and Stockton design-build projects received SRF funding. We will review existing grant and loan requirements, including documentation and reporting requirements, with the City at the onset and incorporate those procedures into our project management and execution plan to ensure schedule and funding compliance. Task and schedule reporting milestones will be added into our master project schedule.

Design Build Quality Control Plan

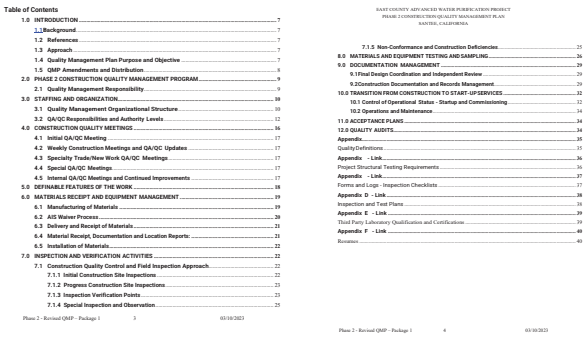
One of the benefits of AECOM/Lyles' extensive history of working together previously on PDB projects is that we have a well-established joined QA/QC program that provides robust oversight at every stage of the project. Building on the successful QA/QC programs we have executed together on the Rialto WWTP, Stockton WWTP, and Santa Cruz WTP PDB projects, we will implement the following program.

Our Certified Quality Management System

AECOM/Lyles will provide the City with a Quality Management Plan (QMP) that will define the procedures and protocols that we will utilize to provide QA/QC throughout the project, from design through construction, start-up and commissioning. The policies

and procedures provided within AECOM's Quality Management System (QMS) will be utilized as AECOM/ Lyles' procedures to execute the QMP. The AECOM Water offices in the U.S. are an ISO 9001:2015 certified organization. ISO 9000 standards are globally recognized as the foundation of establishing quality management systems. Our QMP will include established procedures governing overall quality management and specific procedures for each phase of this project. The QA/QC program is enhanced when the City and the AECOM/Lyles Team works collaboratively on a daily basis to monitor progress. The AECOM/Lyles Team self-performing civil, concrete and mechanical aspects of the work provides optimum control of quality workmanship.

Construction work progress will be monitored and documented using the Site Field Resident's (SFR's) Daily Report which will document the progress of the work by recording the time development of the work, weather conditions, the crew sizes, equipment, etc. The SFR will review the reports to verify their accuracy. Work progress will also be documented in the CPM Schedule. This documentation includes operating logs, source and field testing/sampling log, records of inspections and tests with daily logs and site photographs, written reports and engineering data of material testing, audit reports (from third parties to the JV), certifications, proper equipment installation confirmed by manufacturer representatives, system test results, personnel qualifications and certifications records, procedures and document review records. QA/QC records will be uploaded to the agreed upon project portal on a routine basis for review by the City.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Through our numerous projects done together, we have developed a strong QA/QC program that blends design and construction activities.

Document Control and Records Management

We will launch and maintain an internet-based electronic Document Management System (DMS) to provide efficient loading and retrieval of project-related documents, provide links and search functions indicating where the documents are located within the DMS, and provide training for key City personnel that will have access to the DMS. All documents and records will be uploaded to the City's system on a routine basis to ensure your staff has access to current data at any given time.

The QA/QC staff is empowered to enforce all quality objectives and will maintain all the necessary recorded documents to provide the City with proper implementation of a QA/QC Program.

Key Personnel responsible for QA/QC

QA/QC Lead Rosaida Harris, will have overall responsibility for the Quality Management Plan (QMP). Rosaida is a QA/QC leader for AECOM Water projects. In close coordination with design and construction team,

Table 2-2. Our quality control process provides oversight at every step from concept to completion

Design-Build Quality Management	This plan will outline the quality assurance and quality control requirements for design, permitting, construction, commissioning, and testing phases of the project. The plan will detail procedures that we will apply to ensure that each element of the project is delivered with quality in accordance with the contract documents and industry standards. We will use standardized forms and checklists to document all procedures have been followed according to the plan.
Technical Reviews	Our ISO 9001 standards require review and sign-off by a Technical Quality Advisor for all key disciplines. This offers the project team timely reviews. Each submittal will be reviewed for engineering decisions and correctness of calculations, code compliance, as well as content, clarity and presentation, incorporation of standards, consistency with the City's project budget and schedule. Quality control reviews will be documented through our project website and each corrective action noted in our QA/QC log.
Construction Management and Inspection	The AECOM/Lyles team will provide full-time construction management services reporting directly to City staff to oversee construction activities and coordinate materials testing to confirm compliance with the design and approved shop drawings.
Acceptance Test Plan	This plan will outline the process and procedures for verifying all commissioning activities are coordinated, executed, and documented to demonstrate that the project performs satisfactorily in all manners, and meets all water quality objectives for final effluent reuse and disposal required by the Regional Board, including the Beaumont Basin Plan limits for TN and TDS.

she will be responsible for monitoring the QA/QC aspects of the project, coordinating with the appropriate lead engineers, construction management and site superintendents and technical discipline needs.

AECOM/Lyles Team has extensive QA/QC experience routinely performing full oversight of essentially self-inspection on many public projects. This experience will provide the City with a high level of transparency.

Team Partnership Environment

The AECOM/Lyles JV promotes collaboration across all elements of the project life-cycle and with all stakeholders—it is more than a philosophy, it is a core value. It demands proactive involvement, respectful dialogue, challenges to the status quo, and transparency by all parties. We have used our JV collaboration approach successfully on several of California's largest PDB projects. Internally, our design and construction personnel are fully integrated. This means that our designers are not designing in isolation; rather, they are in constant communication with construction personnel and your team to validate that key design decisions such as the location of construction joints, or the type of pipe restraint is consistent with what has been priced. This focused dialogue allows us to stand behind our commitment of "no surprises" at the GMP or at any interim pricing update. We commit to optimizing the City's goals and vision, and to best assure a successful project journey. This is illustrated on the next page in Figure II-2, which provides a roadmap that shows how we will develop and finalize the design during phase 1, maintaining the schedule while also incorporating crucial feedback from the City.

City Involvement and Communication

Key aspects of our collaborative approach that facilitate City involvement include:

- ✓ **Collaborative, detailed approach to ensure the right data is carried forward as design criteria.** The goal is to get all preferences and constraints on the table so the best options are advanced for implementation in the design.
- ✓ **Engineering meetings that seamlessly coordinate construction and operations elements.** Our design team holds internal weekly progress meetings. Every few weeks, production drawings are uploaded to MS Teams so that the estimating and construction teams can review. Joe, Gabe and Vince will efficiently manage constructability challenges to confirm the design drawings reflect the most cost-efficient approach to construct the project. As VE ideas arise they will evaluate the cost and schedule impacts and provide an overview to facilitate proactive dialogue with the City's project team. We will gain consensus with your team through bi-weekly coordination meetings that track overall status, and perform continuous constructability review and reach consensus on time sensitive issues.
- ✓ **Major milestone meetings to improve quality.** Our team meets ahead of major submittal milestones to QC the design plans, reports and specifications that accompany the submittal. This additional level of scrutiny holds all parties accountable on our team and further promotes our united, project-centric approach.
- ✓ **Real time pricing updates improve decision-making.** Starting with a solid initial estimate, we will isolate discrete alternatives with conceptual layouts; then provide real-time updates to show where the money is being allocated to facilitate value-based decision-making by the City.
- ✓ **Leadership meetings will increase collaboration and will occur throughout the project.** The City's team (including operations staff), owner's advisor and other stakeholders participation will be key to the project success. Meetings will be frequent early in the process, as Phase One decisions have the biggest impact on total project cost and operational considerations.
- ✓ **Executive meetings demonstrate our corporate commitment.** Monthly meetings between the City and our JV executive team (Grant Gourley and Brian Daly) can bring early corrective action. They also routinely reviews project status, adherence to the City's budget, staffing, and project challenges. Brian and Grant are design-build practitioners on numerous water/ wastewater design-build projects and will be actively engaged in the details of this project.

Project Manager Role

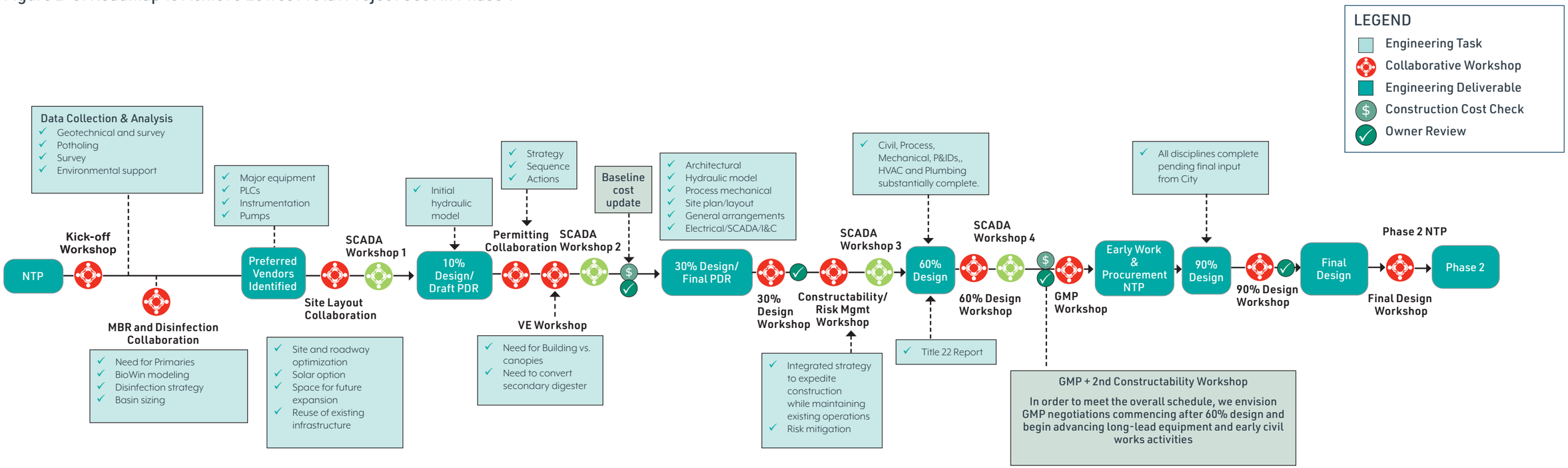
The project manager on this Project, Joe Lawrence, is responsible for overseeing the entire project team, including all firms and individuals involved in both pre-construction and construction phases. Joe has the authority to make critical decisions related to project management, resource allocation, and ensuring the project meets its goals and objectives. He plays a key role in integrating design and construction organizations, managing cost and schedule, and coordinating with key personnel and entities involved in the Project.



"I am fully committed to collaborating with the City and providing leadership to find the most cost-effective project that meets the City's objectives and provides for future growth and expansion.

– Joe Lawrence
Design-Build Project Manager

Figure 2-3. Roadmap to Achieve Lowest Total Project Cost in Phase 1



Our comprehensive approach to planning, collaboration and design development will result in clear decisions, streamlined procurement and construction and the Lowest total project cost delivered for your project

- A portion of the Project Progress Meetings will be allocated for Technical collaboration sessions. Only a few anticipated technical collaboration sessions are shown in this diagram.

- Value engineering will occur organically as part of our "Design-to-budget Approach". Value engineering will be specifically covered during the design workshops for the different design milestones as well as the cost update workshops.

- Dates and duration of activities, including anticipated permit sequence are included in the schedule, included in Appendix A.

BEST for BANNING

Our team will be well-prepared for each meeting, bringing the required detailed information to allow the City to understand the options and make the best choices to meet your budget

Below we present representative details to show how robust the preparation and documentation for each key meeting will be with the City so you can be confident in each decision made:

- ✓ **Kickoff meeting.** Discuss project expectations with the City including project execution, quality control, progress reporting, and deliverables. Review concept design and evaluate major unit process treatment that will meet the project performance goals. Make a preliminary selection of preferred major unit process options and vendors. A Project Quality Plan and Project Execution Plan will be developed for discussion in the kick-off meeting.
- ✓ **Technical Progress meetings.** The main purpose of the Technical Progress Meetings is to facilitate effective collaboration between the City and AECOM/Lyles to allow the selection of preferred unit process options that will be verified by subsequent design development. Evaluate and analyze the major unit process treatment alternatives that will meet the project performance goals and make a preliminary selection of preferred major unit process options.
- ✓ **Risk Management Workshop.** AECOM/Lyles will develop and maintain a risk log. The risk log is the key document used in managing risk. The log records risks identified during proposal and work plan development; workshops, technical reviews, and monthly project meetings; and through other events that occur during the project. An initial risk workshop will be used to build consensus among stakeholders and as a means to bring the Project together to identify and evaluate potential risks



PART III

Technical Approach

Delivering a quality project while driving down cost

Introduction

We appreciate the challenges the City faces in balancing numerous items associated with the expansion of its WWTP, including:

- ✓ Minimizing the cost to your rate payers
- ✓ Meeting future water quality requirements
- ✓ Promoting the use of recycled water
- ✓ Providing for long-term community growth

We will work closely with you to explore value based solutions and will be constantly challenging ourselves to make sure a design to budget approach is employed.

AECOM/Lyles has taken a close look at the City's initial concept and have noted several opportunities and challenges with this concept on Figure 3-1 on the following page. Later in this section, we present our concept that builds on the one presented in the DCR to optimize the project costs even further. We view this concept as the starting point on our collective journey to cost savings– throughout this section we present additional ideas, that if incorporated into the final scope, will provide the City additional cost savings while still meeting all of your core goals of this environmentally sensitive project.

BEST for BANNING

Throughout this Section we highlight how are team is committed to doing what is best for Banning. We will bring forward the most cost-effective solutions—but not at the cost of quality. We will not cut corners or propose items that are not in your best interest.

Our cost saving ideas can save the City more than $10M

Hydraulic Capacity

We understand the importance of efficient hydraulics and accurate flow splitting between unit processes. Our team will optimize the head loss through the plant to **reduce the energy costs associated with increased pumping, significantly reducing the initial capital and lifelong operating costs of the facility**.

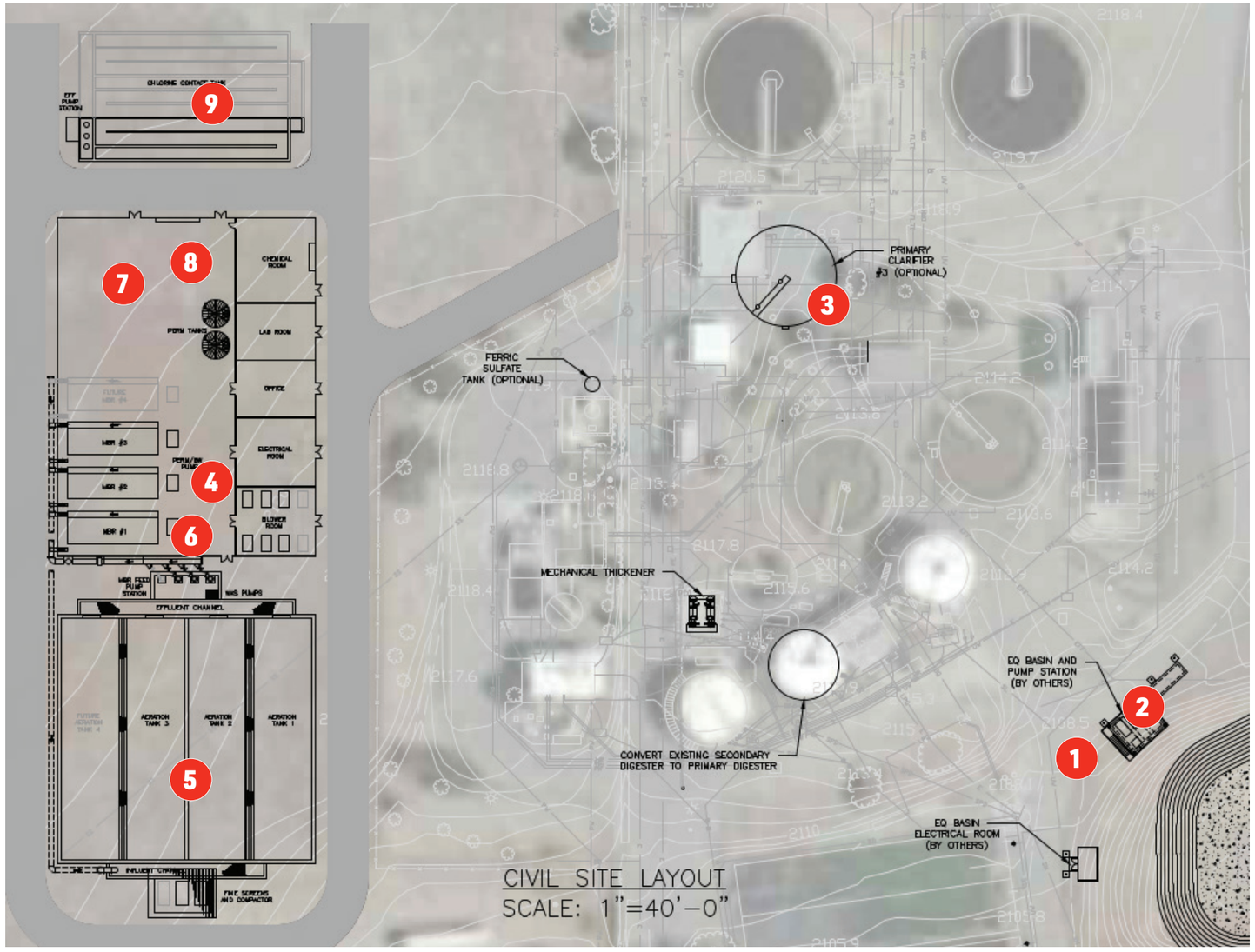
We will confirm existing profiles (as related to our new work) to ensure compatibility with existing plant tie-ins and prepare a comprehensive hydraulic profiles that considers minimum, average, and maximum flow rates and considers anticipated critical units out of service.

Figure 3-2 on page 3-3 show our initial hydraulic profile and a drawing is included in Appendix A. **Our proposed scheme will minimize pumping as the wastewater will only be pumped once from equalization through the MBR process**.

BEST for BANNING *Hydraulic Highlights- Building in Reliability & Flexibility for the future*

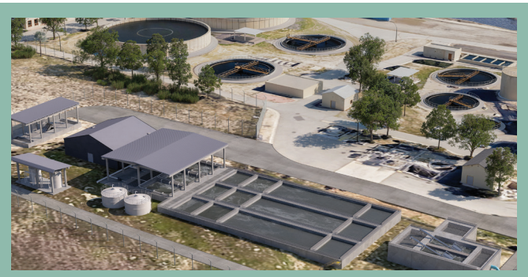
- ✓ **Redundant pumping (one redundant pump in all trains that convey the rated hydraulic capacity)**
- ✓ **In normal operation, one duty fine screen and one backup. Future third channel.**
- ✓ **Three aeration basins, two duty and one standby**
- ✓ **Three Membrane Tanks, two duty and one standby**
- ✓ **UV disinfection channel duty (~.5 MGD) and remaining flow directed to percolation ponds or UV disinfection channel off-line and all flows directed to percolation ponds**

Figure 3-1. Challenges and Opportunities with the City's Base Design presented in the DCR



When we looked at your DCR documents and drawings, we identified several key areas that were potentially adding cost, were technically complex or had implications for long-term operations or future expansion. These key items are summarized below and on page 18, we present our recommended solutions to improve the project budget and overall plant performance.

1. **Plant wide comprehensive hydraulic approach** – Due to flat topography of the site careful consideration must be given to minimize long term operations costs associated with pumping flow multiple times vs use of gravity conditions where possible.
2. **Water quality and flow data availability** – use of historical data can be supplemented with text book evaluations for overall plant design considerations
3. **Balancing the use of existing assets verses constructing new systems** - utilization of existing plant primary clarifiers versus need for an additional primary as it relates to the overall ability of the plant to meet future effluent guidelines.
4. **Identification of critical equipment and preselected vendors** – this strategy will allow all parties to gain early certainty in performance, project schedule and total project cost early in the project .
5. **Beaumont Basin water quality requirements (specifically for Total Nitrogen)** present a unique challenge for reuse and overall design of the facility. Consideration and inclusion of a supplemental carbon source will be required to meet RWQB requirements.
6. **Identifying design elements and construction approach to take advantage of adjacent structures** will shrink the overall footprint on site, reduce subsurface utilities and lower the total project cost.
7. **Getting the sizing correct**- Right sizing building and units to accommodate immediate needs and potential future regulatory or facility expansion
8. **Costly RO system adds significant complexity** to the plant layout and more important operator interface, monitoring and maintenance .
9. **Industry accepted CCT approach using Sodium Hypochlorite works against the Beaumont Basin TDS requirements** and challenges long term treatment goals. Using a technologically accepted alternative will lower overall operations cost, promote reuse, and align with long term TDS goals





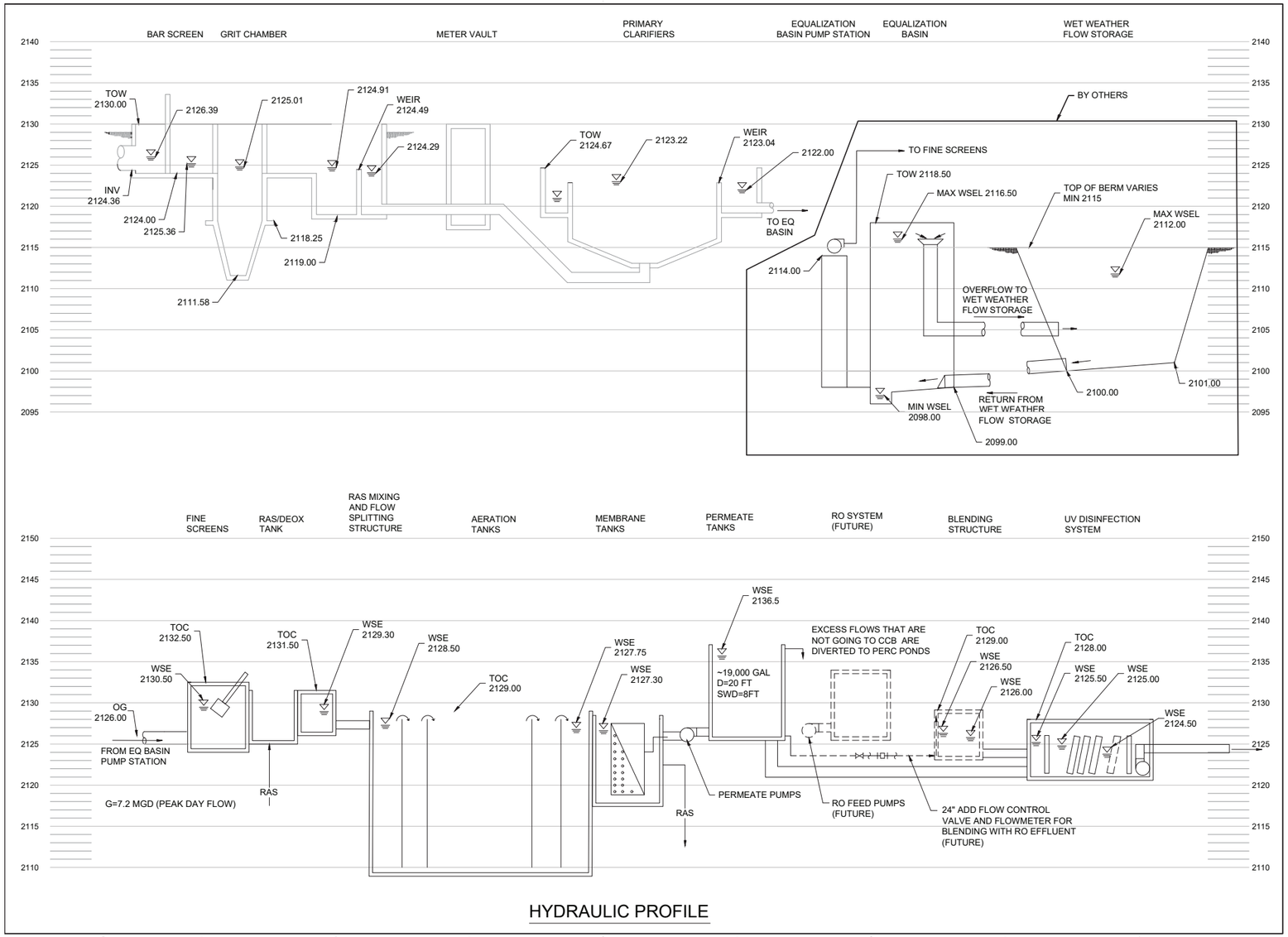
OUR INNOVATIVE CONCEPTS WILL SAVE THE CITY MONEY

- ✓ Shrink the size of the basins while still providing sufficient redundancy
- ✓ Using existing assets instead of new construction where practical
- ✓ Strategy to eliminate the need for the costly RO system will still meeting reuse goals
- ✓ Placing MBR under canopy instead

Details of our cost saving solutions are presented on Figure 3-3 and throughout this section

Figure 3-2. Our Hydraulic Profile Minimizes Pumping Costs

Our initial assessment is that the new primary effluent equalization basin pump station can convey the primary effluent from the equalization pump station to the proposed 2-mm mechanical screens. Effluent will be combined with return activated sludge (RAS) from the membrane tanks and then flow by gravity to a splitter box for even distribution through each aeration tanks and ultimately to the membrane tanks. Treated effluent (permeate) will be pumped out of the membranes to fill permeate tanks that will feed the UV disinfection process and or discharge to the percolation ponds (via the existing chlorination tank).



AECOM W.M. LYLES CO. a joint venture

PROJECT

BANNING WWTP RECYCLED WATER UPGRADES PROJECT

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Banning, CA

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REGISTRATION

CONCEPTUAL

ISSUE/REVISION

I/R	DATE	DESCRIPTION

PROJECT NUMBER

04191986

Designed By:	JF
Drawn By:	IB
Dept Check:	CB
Proj Check:	GP
Date:	OCTOBER 2024
Scale:	AS NOTED

DISCIPLINE

GENERAL

SHEET TITLE

HYDRAULIC PROFILE

SHEET NUMBER

00 G-006

Based on flow data presented in the Carollo study (2018) and the primary effluent equalization design documents, we believe the maximum day flow of 7.2 MGD shown in the conceptual design documents correlates to a peak hour wet weather flow. Based on the most current equalization basin and pump station design provided we believe the stated peak hourly flows can be managed by the equalization basin volume and the maximum daily flow rate should be in the range of 5 to 5.5 MGD which could also be mostly absorbed by the EQ basin. We recommend that early in the design setting a reasonable maximum day flow to secondary treatment that balances design hydraulic throughput with the cost of implementation.

We will confer with the City prior to finalizing design decisions cost and operational implications. **This collaborative effort will provide the City with all the technical and non-technical information necessary to make value-based, design to budget decisions that meet the City's current needs while also creating a plan for the future.**

BEST for BANNING

Future-proofing the WWTP for future flows and loads

- ✓ Piping sizing and layout for fourth aeration basin
- ✓ An expandable flow splitter box
- ✓ Space in membrane tanks for additional membranes to accommodate flows for a fourth aeration basin
- ✓ Space in the UV channel to accommodate additional UV banks for additional disinfection capacity
- ✓ Tie ins and layout for a future RO system and space for evaporation ponds
- ✓ Electrical systems expandable to accommodate the expanded facilities described above
- ✓ Spare I/Os in PLCs
- ✓ Spare conduits for electrical and instrumentation.

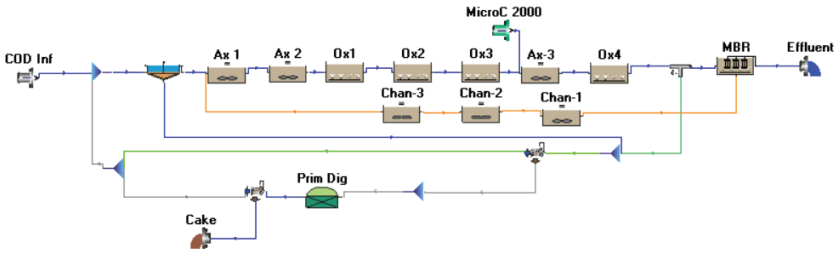
Treatment Processes, Equipment Selection & Capacity

Our team has invested significant effort over the last several months to develop concepts that demonstrate our project understanding, innovation and commitment to partnering with the City to deliver fiscally responsible solutions that consider both up-front capital and long-term operations cost savings, as summarized on **Figure 3-3** on next page.

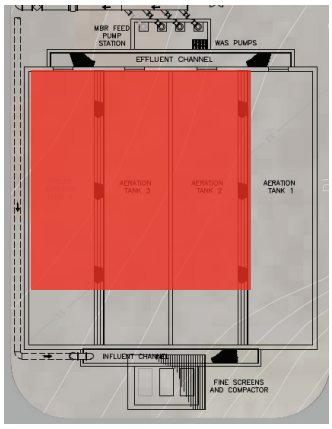
Determining the volume requirements for the major new process areas and establishing mass balances and critical process requirements for mechanical equipment is dependent on flows and wastewater constituent loads. The recommendations we are presenting herein are a result of our of review the water quality data provided coupled with industry accepted guidelines and representative data from other plants in the area. Our concept is to provide a facility that is right-sized without over-designing and causing challenges to the operations staff and having facilities that may not be needed for many years.

We successfully used a similar approach for City of Stockton, for the upgrade and expansion of their WWTP. Thus, as discussed in our confidential meeting with you, our base approach for your facility is to design the MBR facility to treat the 30-day maximum monthly of 3.6 mgd with BOD, TSS and TN concentrations as specified in the July 2024 CDR presented with the RFP.

In support of our approach, we developed an initial plant-wide process model in Biowin. We estimated primary clarifier TSS removal efficiencies using historical correlations between hydraulic retention times and TSS. The anticipated removal efficiency ranged from 55-60% for 2mgd to 45-50% for a peak of 3.6mgd.



Our modeling shows 1.2 MG is available within a three aeration tank configuration



Our modeling indicates that the City would have sufficient capacity with our proposed three aeration tank approach with a combined volume of 1.2 million gallons. **This approach provides sufficient redundancy to allow a tank to be removed from service and is about 17% smaller than the volume shown in the draft drawings in RFP.** This design to budget mindset is the cornerstone of our approach to assist the City with stretching is dollars to get the most out of the facility.

We had a VE session and spoke to hollow fiber membrane vendors about best practices and O&M considerations. This helped us achieve a layout that streamlines construction, considers future expansion and reduces the total project cost.

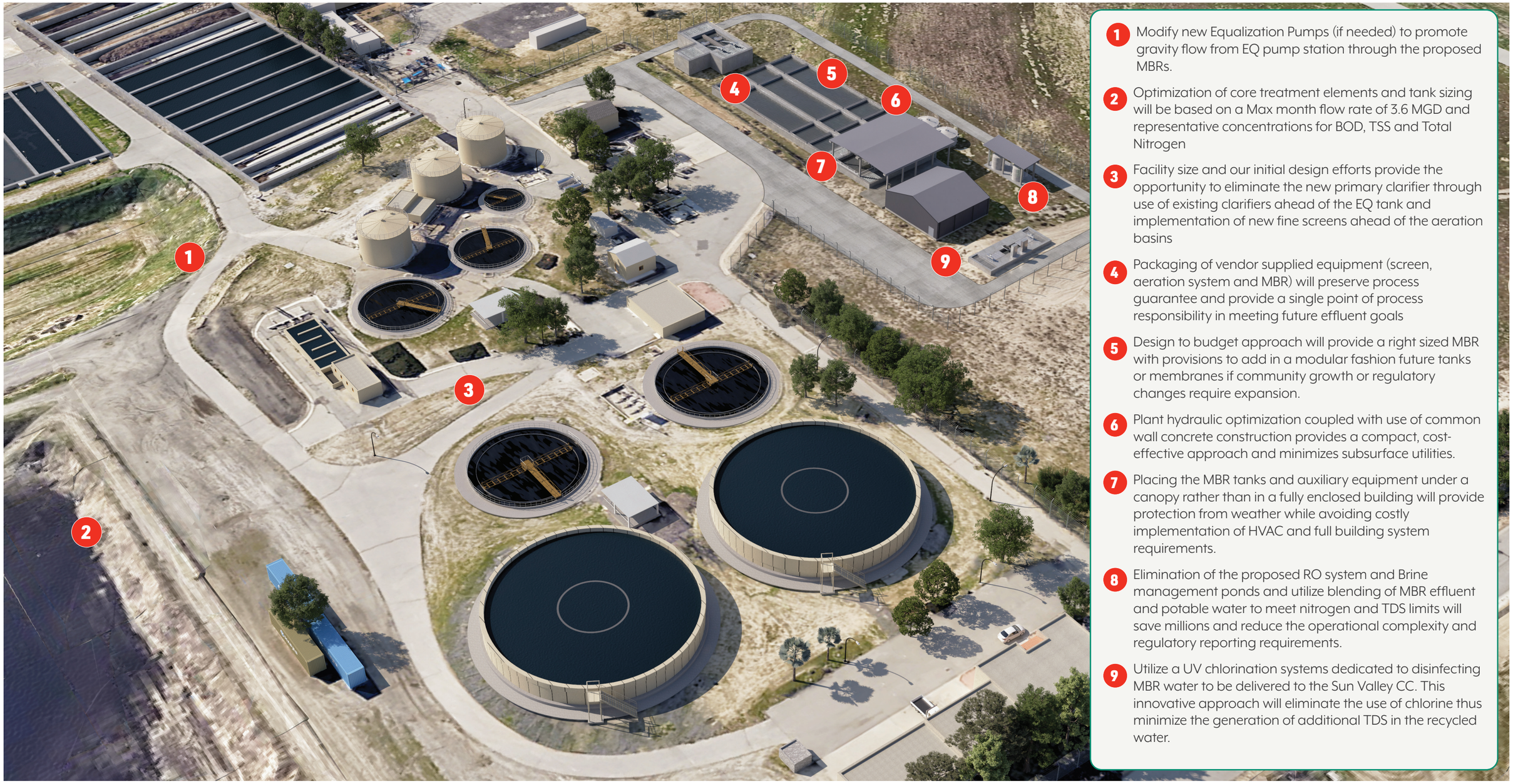
Key concepts for the development of the design of the new treatment facilities are here discussed following the flow of water from primary settling, through equalization and pumping, fine screening, biological treatment with a MBR system (aeration tanks and membrane tanks), and disinfection.

BEST for BANNING

Proven Experience implementing our Proposed Solutions

- ✓ **Beaumont.** MBR system installation at neighboring desert community
- ✓ **Stockton:** we analyzed the flows and loads, and future flow projections to implement a strategy that deferred some expansion to a future date, if and when it was needed.
- ✓ **Multiple MBR installations:** we have developed designs for similar-sized facilities such as Sand Island WWTP (Hawaii), City of Brandon (Canada), North Gate (Arizona), Provo (Utah).
- ✓ **Rialto.** Progressive Design-build where AECOM/Lyles did significant design to budget VEs to find a project scope that solved Rialto's WWTP issues while staying within their budget.
- ✓ **High Desert.** Progressive Design-Build of treatment plant including MBR and UV

Figure 3-3. Our Design Concept Provides Numerous Cost Saving Options



1. Modify new Equalization Pumps (if needed) to promote gravity flow from EQ pump station through the proposed MBRs.
2. Optimization of core treatment elements and tank sizing will be based on a Max month flow rate of 3.6 MGD and representative concentrations for BOD, TSS and Total Nitrogen
3. Facility size and our initial design efforts provide the opportunity to eliminate the new primary clarifier through use of existing clarifiers ahead of the EQ tank and implementation of new fine screens ahead of the aeration basins
4. Packaging of vendor supplied equipment (screen, aeration system and MBR) will preserve process guarantee and provide a single point of process responsibility in meeting future effluent goals
5. Design to budget approach will provide a right sized MBR with provisions to add in a modular fashion future tanks or membranes if community growth or regulatory changes require expansion.
6. Plant hydraulic optimization coupled with use of common wall concrete construction provides a compact, cost-effective approach and minimizes subsurface utilities.
7. Placing the MBR tanks and auxiliary equipment under a canopy rather than in a fully enclosed building will provide protection from weather while avoiding costly implementation of HVAC and full building system requirements.
8. Elimination of the proposed RO system and Brine management ponds and utilize blending of MBR effluent and potable water to meet nitrogen and TDS limits will save millions and reduce the operational complexity and regulatory reporting requirements.
9. Utilize a UV chlorination systems dedicated to disinfecting MBR water to be delivered to the Sun Valley CC. This innovative approach will eliminate the use of chlorine thus minimize the generation of additional TDS in the recycled water.

Vendors Selection for Large and Critical Processes and Electrical Components

During the early stages of Phase I, a critical step will be the identification, pre-selection of vendors for competitive solicitation efforts of critical equipment including an MBR package (potentially inclusive of fine screens, aeration system (blowers and diffusers), permeate pumps, and membrane equipment) and UV disinfection system. We have found this approach to be effective as it provides MBR vendors sufficient control over the scope of supply to allow provision of a reliable performance guarantee while still maintaining a competitive procurement process. We will also consider other long lead equipment such as transformers and electrical switchgear. This step will be completed in collaboration with the City and your advisory team to ensure that the pre-selection includes the City's preferences and ability to provide reliable service following post construction.

Early solicitation and selection allows the design to confidently identify footprint, piping and electrical and instrumentation requirements to provide an accurate final design that avoids design revisions and other costly surprises during the construction phase. This effort will also mitigate schedule constraints, secure early pricing certainty and help to reduce the total project cost.

From our past experience with MBRs and other technologies, we have developed a strong understanding of what works and what doesn't work. We align with industry leading vendors that provide process and performance guarantees for their equipment. Our approach further encourages flexibility from the suppliers to contribute their know-how to ensure innovation is incorporated, that is budget-conscious.

Our procurement approach has been successfully implemented on numerous past progressive design build projects for public agency Owners that have secured both SRF and WIFIA project funding. We will develop and finalize a cost evaluation for use in evaluating the equipment proposals. With the City's input, we will carefully document our evaluation so that once it is complete, the decision-making process will be thorough and clear. On previous projects, Owners have chosen to proceed with advancing the procurement process through and early GMP and lock critical equipment vendors into guaranteed pricing for the project. We would look to explore this option with the City (typically around the 30% design phase). A key benefit is obtaining shop drawings during the design phase which will expedite the design and delivery of the equipment and over all reduce the risk of design and construction challenges later in the project.

BEST for BANNING

When we procure the MBR system we will specify to the vendor key parameters for them to base their proposal on–Specifying what works rather just accepting whatever arrangement the vendor typically provides.

BEST for BANNING

We will take a close look if primary clarifiers are actually needed as part of the new treatment system—eliminating them would provide cost savings to the City

Discuss the anticipated useful life of the proposed systems

A key element to ensure value for the City is to ensure the quality of the construction and a long useful life for the equipment selected. In general concrete structures and buried civil infrastructure will last over 50 years. Equipment useful life will depend on materials used as well as proper installation, and O&M: however, Table 3-1 presents planning level useful life expectancies.

Table 3-1. Anticipated Useful Life

Infrastructure	Anticipated Life
Concrete structures	50 years
Permeate tank	30 years
Membranes	10-15 years
UV System	20 years
Blowers	20 years
Pumps	15-20 years
Fine Screens	20 years
Buildings & Canopies	20-25 years
Rotary Drum Thickener	15-20 years

Primary Clarifiers

The design team assessed the two existing primary clarifiers. Based on our previously mentioned removal rates for TSS and BOD and the use of 2 mm fine screens, we believe a third primary clarifier can be deferred to the future and not be provided as part of this project. There are many MBR plants of a size similar to this one that operate without any primary clarification. Our review of past condition assessments revealed that the primaries are in good condition, and could be left in operation to provide continued removal of solids upstream of the fine screens. The size of the aeration tanks, aeration system (blowers, diffusers) we have modeled (for a 1.2 MG overall tank volume) accounts for the elimination of the third clarifier. A secondary benefit of this approach is its support for achieving Total Nitrogen reduction goals in the plant. **An additional primary tank could remove too much carbon from influent and require a costly additional chemical dosing system ahead of the membrane tanks to achieve this water quality goal**.

Equalization Pump Station and Off-line Equalization

Although this process is currently being added under a different project it is important to confirm during design that the equalization pumps provide sufficient head and flow to meet the elevation requirements for the new fine screens to optimize the water level in the aeration and membrane tanks. Early in the design, an assessment should be made of the optimal elevation for siting the new MBR facility. There is typically significant cost and operability differences between locating the aeration tanks aboveground, below ground or partially in the ground, based on geotechnical conditions, construction costs and operability. Once this is established, the operating conditions for the EQ pumps can be finalized.

Fine Screens

The build-up of debris within the membrane tanks is operationally unacceptable and an ongoing challenge for MBR operations. MBR manufacturers properly require the installation of fine screens upstream of the MBR to remove inorganic material, fibers, and hair present in the wastewater stream before they get into the membrane tank. Manufacturers of hollow fiber membranes, typically, require 2 mm or smaller openings to protect the membranes while flat sheet MBR systems allow larger openings as their cassettes are less affected by the accumulation of solids.

Our approach considers in-channel gravity rotary drums equipped with perforated plates as they provide proper protection for the membranes, are easy to maintain and provide efficient solids collection and handling.

Figure 3.4 illustrates a layout for in-channel gravity rotary drum screens at your new plant. Primary effluent after diurnal equalization will be pumped from the new primary effluent pump station into the fine screening influent channel. Two screens, each sized for 100% capacity will designed. Space for a third screen will be reserved for future expansion. The solids collection and management system can be equipped with an integral bagging system that will both assist with solids consolidation into the solids container with the additional benefit of odor mitigation.

Aeration Tanks

Hydraulic and biological modeling of the new aeration and MBR facilities will be important in optimizing the design of the anoxic/aerobic zones and RAS de-oxygenation zone to meet the anticipated permit requirements for nitrogen.

We have conducted a preliminary plant-wide treatment model based on the data available with the RFP, supplemented and enhanced with plant influent data (COD, N and P) collected by this team on wastewaters of similar strength and community demographics in southern California. We also considered anticipated loads generated by your solids processing and digestion (three primary digesters) systems—particularly the stream containing the high ammonia concentration from the drying beds and future dewatering. Some of the key considerations are described on the two pages.

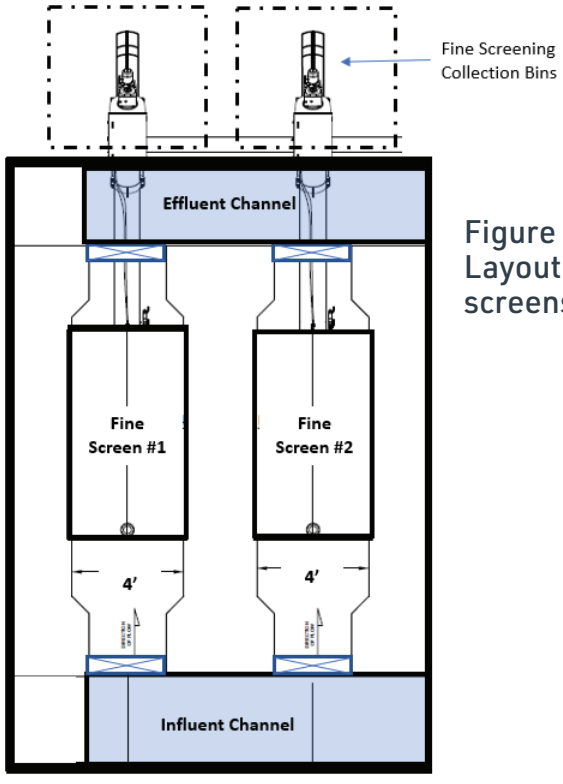


Figure 3-4. Layout for fine screens

After review of three and four-tank configurations, a three-tank configuration for the aeration tanks is recommended to minimize overall cost. Based on the conceptual-level process modeling results, a total volume of 1.2 million gallons. An aerobic Solids Retention Time (SRT) of 8 days was assumed under winter conditions and a maximum Mixed Liquor Suspended Solids (MLSS) concentration of 8,000 mg/L was used. This is well below what most MBR facilities can operate (10,000 mg/l). The aerated zones in the three aeration tanks will be supplied air from a common air header system and three blowers in a two duty/one standby configuration. Space will be allocated for a fourth MBR of identical dimensions and additional blowers to allow the City to build additional treatment capacity in the future.

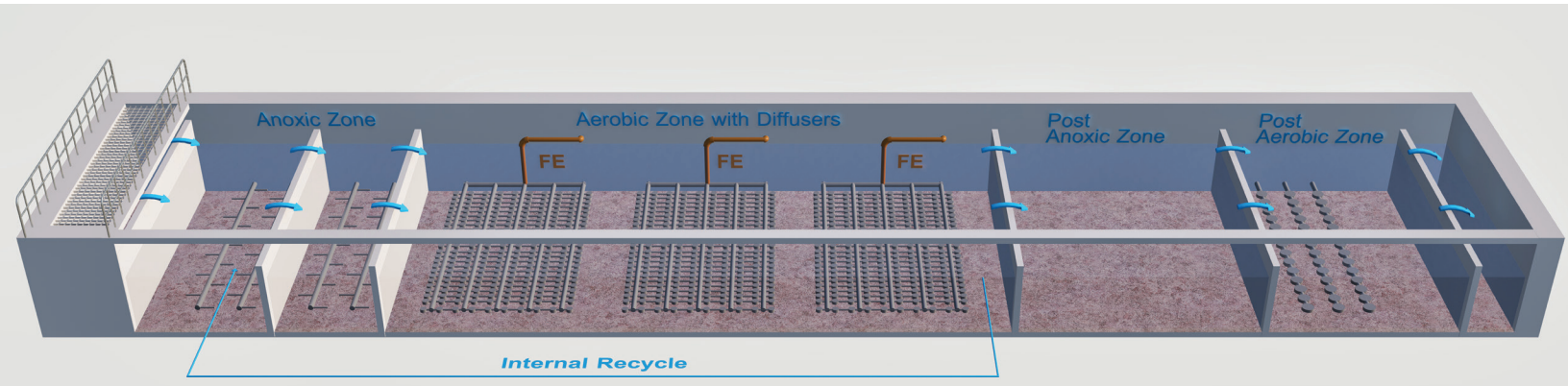
A 4-stage Bardenpho process will allow the City to reliably meet the plant effluent Total Nitrogen (TN) limit of 10 mg/L (see Figure 3.5). The "Pre-Anoxic" zone will receive nitrate from the Return Activated Sludge (RAS) from the downstream membrane tanks (see following section on the membrane tanks) and Internal Mixed Liquor Return (IMLR) as shown below. Following the Pre-Anoxic zone will be a single aerated zone with dissolved oxygen control. The "Post-Anoxic" zone in each reactor will provide endogenous denitrification. In the final "Post-Aerobic" stage, the mixed liquor will be aerated to oxidize remaining ammonia prior to the mixed liquor flowing into effluent channel. With the RAS and IMLR pumps, the operators will have an opportunity to optimize nitrogen removal through the different seasons.

A mixed RAS Deoxygenation Zone with 5 minutes of contact time at the 3.6 MGD design condition will allow the dissolved oxygen to be depleted prior to the RAS being mixed with primary effluent. Depleting the dissolved oxygen in the RAS ahead of the primary effluent will allow more readily degradable carbon to be available for denitrification in the Pre-Anoxic zones without the need for an expensive additional carbon chemical system.

Blower Selection – High-speed turbo blowers and hybrid (rotary screw) blowers will be considered for process aeration. Blowers are also required for scouring the membrane cassettes to manage membrane fouling. For the size of this facility, a positive displacement blower is most common. Final selection will not be based solely on membrane supplier preferences or the lowest equipment cost, but will also consider operating cost and maintenance requirements, with the City's input to ensure this key process mechanical equipment meets the City's needs. As noted above, space will be provided in the blower room for installation of an additional blower(s) in the future.

Diffuser Type Selection – There are a wide variety of diffusers available in today's markets in many different shapes and materials. Each performs differently in a site-specific environment in terms of fouling and long-term oxygen transfer efficiency. Our team has performed diffuser analysis for other facilities in California and will bring that experience to the City. Fine bubble disc and tube diffusers will be considered since they are most commonly used and multiple manufacturers are available for competitive bidding. Selection will be based on the option that meets the oxygen transfer requirements and efficiency at the lowest cost.

Figure 3-5. The aerated zone that follows the Pre-Anoxic zone would be comprised of three separate diffuser grids



Diffuser Layout – Aeration diffusers provide air for both oxygen transfer and mixing energy in the aerated zones in each aeration basin. They must be laid out in patterns that allow the changing oxygen demand along the length of the aerated zone to be efficiently met. Diffusers are typically laid out in a tapered density pattern as the first level of control of airflow rates. Higher oxygen transfer is required in the upstream section of the aerated zone where oxygen demand is highest, resulting in a need for a higher diffuser density, and lowest at the end of the aerated zone prior to the Post-Anoxic zone. Diffusers will be designed in specific grids sized to allow localized control. The aerated zone that follows the Pre-Anoxic zone will be comprised of three separate diffuser grids, each with a Dissolved Oxygen (DO) probe, an air flow control valve with high precision actuator and air flow meter. The aerated zone downstream of the Post- Anoxic zone will have a single diffuser grid. The ultimate diffuser layout will be proposed by the diffuser supplier in concert with the MBR supplier and in close coordination with AECOM/Lyles.

Airflow Control System –Our experience has shown that primary effluent constituent loads to the aeration tanks will change throughout the day due to diurnal changes in their concentrations (cBOD5, TKN). In-line analyzers (DO probes) and automated control systems (most open valve/blower output) providing an instantaneous response to these changing conditions will be implemented.

The design will be based on tapered DO setpoints for the three diffuser grids in the aerated zone that follows the Pre-Anoxic zone such as 2, 1.5 and 1 mg/L. The aeration system will have sufficient turndown to allow lower setpoints to be used to optimize performance and minimize energy consumption. The DO concentration at the end of the aerated zone will be designed to be no higher than 1 mg/L since the IMLR pumps send mixed liquor from this location to the Pre-Anoxic zone.

The DO in the aerobic zone following the Post-Anoxic zone will be designed for greater than 1 mg/L to ensure residual ammonia is thoroughly oxidized.

Optional Aeration Improvement. There has been an increasing trend in the industry in the use of Ammonia Based Aeration Control (ABAC) to control airflow while using DO probes to establish both maximum and minimum set points. In our experience from implementing ABAC in other facilities, this is a reliable control philosophy that further minimizes blower power consumption while optimizing process performance. However, ABAC requires ammonia probes and associated maintenance and calibration. Information on

BEST for **BANNING**

A small, low cost supplemental carbon addition system will allow the plant to meet treatment objectives without a costly RO system

ABAC can be provided to the City to determine if its implementation is justified and best meets the City's needs. This will be one of the topics planned for one of our technical collaboration segments.

Large bubble mixing is proposed for use in the RAS de-oxygenation zone, bioreactor mixed liquor effluent channel and the anoxic zones as this mixing approach has the lowest energy costs. Note the proposed **use of a PE/RAS flow splitter box eliminates the need for a flow distribution channel and its associated mixing requirement**.

Supplemental Organic Carbon Addition – While advanced WWTPs commonly achieve an effluent TN of less than 10 mg/L without any carbon supplementation, our approach for deferring the RO will require an effluent nitrogen of approximately 6 mg/L for meeting blended water quality requirements for reuse at Sun Lakes. Since this lower level of effluent nitrogen may not be achievable, we recommend including a supplemental carbon feed system. By providing carbon storage, pumping, piping, and distribution diffusers in the Post-Anoxic zones in the three aeration tanks, supplemental carbon can be added as needed. Micro-C 2000, a non-hazardous glycerin-based product produced and marketed by Environmental Operating Solutions, Inc. are commonly used for facilities of this size and is recommended by AECOM/Lyles. Dosage rates can be controlled by a nitrate-N probe in each Post-Anoxic zone. This approach will reduce TN to a level low enough to minimize the amount of potable water used for blending to defer the RO system construction.

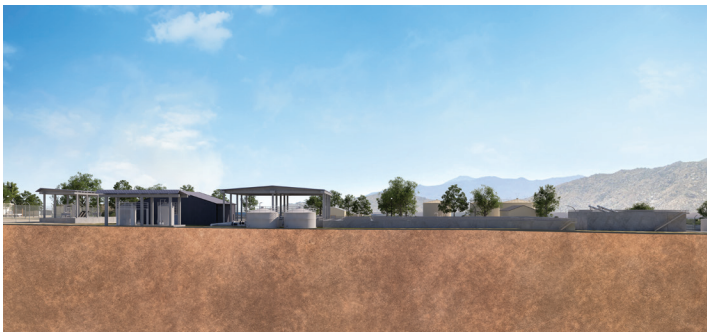




Figure 3-6. A 3-tank configuration is cost effective and allows for easy expansion in the future

Membrane Tanks

Based on our experience from developing designs for similar-sized facilities, and following discussions with several prominent MBR suppliers, our team has developed a preliminary layout with several innovative/ alternative ideas that enhance the system layout, performance and operator interface. The design is based on typical dimensions using hollow fiber cassettes. Flat plate technology can also be used in a similar configuration.

Figure 3.6 illustrates a 3-tank configuration and how we propose to integrate the membrane tanks within the new biological system.

The concept layout shown utilizes the Veolia Leap MBR cassettes. This approach will require four cassettes (500EV modules), and with one membrane tank out of service will meet the City's peak flow (3.6 mgd) and load requirement. The proposed two-row cassette layout is advantageous since it reduces the length of the tanks and provides a more compact common-wall design and provides a conservative flux rate of 14 gfd under average day flow conditions. During the detailed design we will explore with the City the option to add an additional six feet of length to accommodate additional cassettes consistent with a fourth (future) aeration basin.

In this layout, the footprint includes an average sidewater depth of 20 feet (which we deem to be optimal for aeration design) and will be gravity-fed through a common channel that collects flow from all aeration tanks in service. Lastly, two duty RAS pumps will be required to pump up to 15 MGD (400% of the primary effluent flow rate) to limit the membrane tank MLSS to 10,000 mg/L at the design condition. At plant influent flows and loads in the near-term, the RAS pumping rate is anticipated to be 100 to 150% of the primary effluent flow rate. Waste Activated Sludge (WAS) pumps (one duty/one standby) will also pump sludge from this channel to the mechanical thickener.

Our initial cost assessment of this layout suggests that **a concrete structure with common walls for the entire MBR system is the lowest cost option**, in comparison to concrete aeration tanks followed by elevated individual stainless steel membrane tanks that will require additional piping, controls and electrical elements.

Other key design-to-budget aspects of our robust and flexible membrane tanks approach include:

- ✓ Total membrane filtration area and range of design fluxes minimize fouling for the following flow conditions: 30-day ADWF of 3.6 MGD; peak 24-hour average flow up to 5 MGD.
- ✓ Provide spaces to accommodate additional membranes for future flows without capital expansion
- ✓ Provide redundancy to allow one membrane tank to be removed from service for the clean-in-place procedure required
- ✓ Minimize pumping energy by pumping only RAS back to the aeration basin rather than pumping ML (PE + RAS flows) to the membrane tanks
- ✓ Safe delivery and storage areas for membrane cleaning chemicals (i.e, sodium hypochlorite and citric acid)

Scum Management. Scum formation is anticipated to occur at some undefined frequency in the three aeration tanks and MBR tanks. A manual weir gate is proposed at the end of each tank that allows the operators to lower the weir to remove scum from the tanks. A similar manual weir gate will be provided in the RAS channel at the end of the membrane tanks. In both cases scum will be conveyed to a scum wet well and pumped to the digester inlet.

Final Disinfection

A portion of the MBR effluent will be used for unrestricted water reuse (irrigation) and will require Title 22 disinfection. The remaining MBR effluent diverted to percolation ponds does not require disinfection and will reduce the size of this systems thus right sizing the overall application lower both the capital and long-term operating costs of the facility.

The DCR base approach project includes chlorine disinfection using a three-pass 110,000-gallon chlorine contact basin (LxWxD of 60x20x12 feet, respectively) to provide a chlorine residual that provides 450-milligram minutes per liter (mg-min/L) under a minimal modal contact time (CT) of 90 minutes. The chemical for disinfection is NaOCl. Per the 2022 Feasibility Report, the cost of this contact basin and chemical storage and feed system is ~ $2.4 M. This is a solid approach that follows industry accepted practice and guidelines.



Our team examined this approach and applied some additional critical thinking including operability, meeting future water quality requirements, and providing recycled flow to the Sun Lake Country Club. We concluded that a UV system would best serve the City's goals for this project while meeting disinfection requirements. We believe **UV is a more cost-effective solution that is readily expandable to accommodate future demands.**

One of the key considerations of our proposed modification is that chlorine disinfection utilizes sodium hypochlorite (NaOCl), which increases the Total Dissolved Solids of the effluent. We estimate the additional TDS added to the MBR effluent within the 12-15 mg/l. This outcome is contrary to the City goals associated with the anticipated RWQB requirements and need to reduce TDS overall to provide a suitable water source to the Sun Lake Country Club. The additional costs associated with an RO system, brine management and disposal approach make our approach highly attractive. We have also considered a cost effective unique approach to the recycled water production for the country club described in greater detail below. **Eliminating the hypochlorite disinfection approach will save up to $75k to $95k annually.**

In recent years and on several projects (Rialto, Stockton) AECOM/WML have compared the life cycle cost of UV and chlorine disinfection (both chloramination and free chlorine) and UV disinfection has turned out to be the most economical alternative. For Banning, because of the improved UV transmittance of membrane effluent (>65%), UV disinfection is particularly attractive.

We have done a preliminary design for a UV facility for 1.07 mgd (the combined amount used by Sun Lake CC and by the new plant)and this will require a single channel (LxWxD of 35x5x8 feet, respectively) with three UV banks (two duty and one standby, each bank with 4 modules with 8 250 W lamps per module). Our preliminary estimate of the construction cost for this system is approximately $ 0.75 M

The approximate annual power usage and cost to treat 1.07 mgd are 140,160 kW and $14,160, respectively. An additional bank can be added to increase the firm capacity for this system to 1.6 mgd, if additional capacity is needed in the future.

Primary Sludge and Waste Activated Sludge Processing

While co-thickening primary sludge and waste activated sludge (WAS) is shown in the RFP documents, our experience is that the primary sludge will likely not be consistent enough to give a stable operating point for the mechanical thickener. This could result in the need to construct, operate, and maintain a large combined sludge storage tank with feed pumping ahead of the thickener to provide a more consistent solids composition by mixing and equalization. With respect to gas production it is beneficial to avoid spikes can result from intermittent feed pumping and instead have a mostly continuous feed of sludge (especially primary) to the digester which can provide constant gas production and more stable digester operation. Therefore, the team proposes to keep the two sludges separate and the primary sludge will be fed to the digesters as it is done in the current operation while thickening the WAS. Since primary sludge readily thickens, we suggest adding a density meter to the combined discharge of the primary sludge pumps to provide feedback to the operators for achieving the desired primary sludge feed concentration to the digesters.

Our recommendation is to provide two rotary drum thickeners (one operating, one spare) to thicken WAS with space for expansion in the future. We agree with the RFP selection of rotary drum thickening (RDT) as the most cost-competitive thickening technology for this application and installation size. Furthermore, there is demonstrated experience with the unattended operation of RDTs with WAS feed, which provides the City with greater flexibility for 24-hour WAS processing and constant feed to the digester while saving on capital cost by installing a smaller unit.

Mechanical thickening will be provided with the associated polymer feed system. We recommend that the skid system using liquid polymer totes. Both thickening and polymer system will be installed outside under the canopy structure.

Recuperative Thickening Alternative. A main driver for the mechanical thickening is the optimization of digestion capacity. As an alternative to thickening WAS prior to digestion or separately thickening primary sludge in the future, the City could consider recuperative thickening of digested sludge. Recuperative thickening consists of pumping some sludge from the digester, thickening it and returning thickened sludge into the digester. This could be cost-competitive and provides several operational benefits. First, it keeps the digester feed operation the same as it is currently. It can be operated on demand, when there is a need for more digester capacity. The feed to thickening is more uniform since it is digested solids, making it easier to control the thickening performance. Recuperative thickening does not require tanks upstream or downstream, and the thickening process can happen for each digester in sequential order. The limit of thickening is typically based on the type of digester mixing system. Although replacing the digester mixing system is not part of this project, it may be possible to change the digester mixing system in the future to further increase overall capacity. For example, this could be done using low speed, high torque mechanical mixers similar ones our team is implementing on the East County AWP project in Santee.

Conversion of the Secondary Digester to a Primary Digester. As stated in the RFP scope, the secondary digester needs to be upgraded to a primary digester to ensure the City can continue producing Class B biosolids. We will provide new digester heating system similar to the heating systems of the other digesters for the familiarity of operation and controls. Digester gas handling and use for the upgraded digester will be connected to the existing boiler and the digester gas flare. Although the upgrade of the digester gas system is not in the scope of this project, once the thickening system is selected and designed, the potential peaking factors in digester gas production in the future upgraded system be evaluated. If the digesters feeding happens over short periods of time at higher rates, the digester gas peak flows may potentially be higher than the existing system capacity and may require an upgrade.

Our Solution alleviates the need for RO

A key element of this project is to produce recycled water suitable for irrigation within the boundaries of the Beaumont Basin, specifically the Sun Lakes Country Club.

The DCR includes an RO system to reliably meet the water quality objectives for this basin, specifically TN ≤ 5 mg/l and TDS ≤ 330 mg/L. All other uses have less restrictive water quality objectives. We anticipate that the water quality generated by the MBR system will have a TN < 6.3 mg/l and TDS of ~380.

The proposed RO solution has substantial capital and annual operational costs to the City. Additionally, the handling of multiple chemicals for scaling minimization and periodic cleaning of the membranes will place additional stress on the operations staff and possibly require additional personnel support. Lastly the option requires a large amount of land allocated for brine disposal evaporation ponds (potentially up to 15 acres or more depending on the treated flow).

Per the 2022 Feasibility Study, the construction cost of these facilities is estimated at $8.75M. The cost for power and chemicals for a 0.4 mgd system is estimated at ~$260k per year. Additional O&M costs to be considered include labor for operations and maintenance for the RO system and brine evaporation ponds, spare parts, and environmental monitoring for the evaporation ponds and ultimate disposal of the brine salt which will likely need to be treated as a regulated or hazardous waste depending on the concentration of certain metals.

Having completed several recent RO systems associated with water reuse project, we are very aware of items that lead to the successful design and operation of these complex systems. Water characterization that includes silica and phosphates concentrations are essential to understanding membrane fouling, chemical recovery and performance warranty offered by the vendors. Many communities have invested in extensive water quality sampling and pilot studies to determine the ultimate efficacy of using a proposed RO system. We appreciate the challenges the City is facing with providing a sustainable water source for Sun Lakes and other recycled uses and believe that it is the City's best interest to consider another option.

Deferment and potential elimination of the RO system reduces the overall risk exposure to both the City and its operators. Our team has a solution that is sustainable and cost effective (both capital and operations). Our

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Eliminating the need for the RO system will save the City nearly $9M in construction expenditures.

option will eliminate the capital expenditure of $8.75M associated with the RO and brine management ponds and the annual operating costs of $260K/year would be offset by a similar cost, however with significantly less stress placed on the operations staff. There is also the elimination of the brine salt disposal which may requires specialized handling and disposal requirements due to heavy metal concentrations.

To accomplish the project goals without the use of an RO system, AECOM/Lyles suggests the blending of MBR effluent with potable water. The key elements of this approach are:

Optimize total nitrogen removal in the biological process from 7.5 mg/l to 6.3 mg/l to reduce the amount of potable water needed for blending.

Blend MBR effluent and potable water for irrigation at Sun Lakes Country Club only. Per the 2023 water quality reports the potable water of the City of Banning, TN is ~1.5 mg/l and TDS is ~200 mg/l.

Using this scheme, 0.55 mgd of UV-disinfected MBR effluent will be blended with 0.21 mgd (143 gpm) of potable water at the Sun Lakes Country Club. The resulting blend will provide 0.76 mgd of irrigation water and meet the TDS and TN requirements for the Beaumont Basin.

The estimated yearly cost of the potable water is ~ $390k using $3.88 per HCF (2024-2025 retail rate). This expected to be even lower, that the O&M cost for the RO and evaporation ponds facilities when adding in the additional labor and brine salt disposal costs.

Considering that blending with potable water is only required for the flow pumped to the Sun Lakes Country Club, this approach will meet ALL irrigation demands (1.07 mgd), using 0.86 mgd of recycled water produced at the WWTP and 0.21 mgd of potable water, while deferring or totally eliminating the capital and O&M costs associated with an RO system and evaporation ponds.

As part of our blending concept we will prepare a technical memorandum focused on salinity and nitrogen management and we will endeavor to meet with the Regional Board to get obtain their concurrence with this cost effective solution.

Non-Process Design and Auxiliary Facilities

Once the key decisions are made regarding the major process facilities then the remainder of the project elements can be developed. These non-process related features of the project will be documented in the PDR, additional meetings with the City staff will be conducted to further flesh out existing operational needs and practices at the WWTP. Some initial thoughts about the approach and challenges are presented below for civil/site work, geotechnical, and building services. All of these engineering and architectural design disciplines are located together in one place – the AECOM design center.

Civil/Site Work

Key features include:

- ✓ New force main to transfer flow from the equalization basin to the to the new MBR facility.
- ✓ New force main to transfer treated effluent from the UV system to the the reservoir tank.
- ✓ New pipe to transfer excess flow from the permeate tank to the evaporation ponds
- ✓ New roadways and parking to support the new MBR treatment facility.
- ✓ Management and establishment of site specific stormwater measures
- ✓ Onsite vehicular access and roadway systems that accommodates chemical deliveries and emergency vehicles
- ✓ Site grading that promotes positive run-off away from buildings and structures

We plan to follow existing pipeline alignments where possible to best avoid any conflicts with existing structures and subsurface obstacles. Site grading will be developed around new facilities such that there is a natural transition from new to existing facilities.

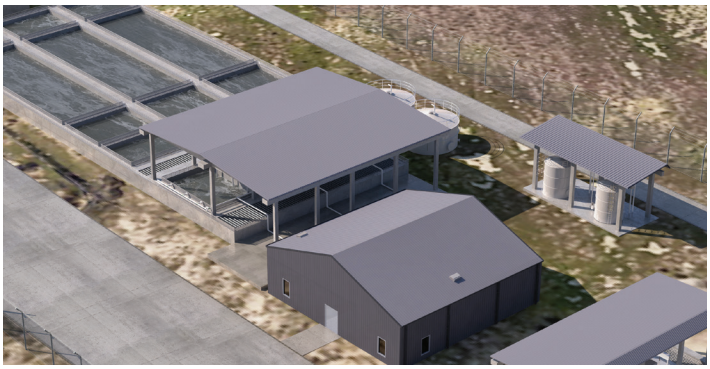
Geotechnical Field Investigations

We will perform subsurface geotechnical investigation in the vicinity of proposed new structures to determine soil conditions to assist in the development of detailed design and construction cost estimates. Investigations will include review of available geotechnical maps and documents along with site reconnaissance and obtaining appropriate permits. Soil borings will be conducted with hollow stem auger methods. Borings will be advanced to an appropriate depth determined during preliminary investigations and soils will be collected for laboratory testing and analysis including moisture and density, grain size distribution, Atterberg limits, corrosion potential, and direct shear testing. A geotechnical report will be developed including results of field investigation and laboratory testing and will provide geotechnical engineering recommendations for seismic design, foundations, slope stability and earthwork. Based on preliminary review of site conditions and provided subsurface information we anticipate that foundations

for the main proposed structure development will primarily consist of shallow foundations (spread and continuous footings, mat foundations).

Process Building

Our concept for the new process building includes a new pre-engineered metal building on a reinforced concrete slab floor with individual equipment support pads. The process building will house the main electrical room that will support the upgrades, blowers, chemical metering, as well as a new laboratory and office space. Initial collaborative discussions will include identifying the needs of the City and WWTP staff to right size this building and provide value based design to budget. Building will be designed to 2022 Building Code. All finishes (both interior and exterior) will be developed and selected collaboratively between our team and your staff. Building layout will consider ADA requirements in appropriate areas. Windows and Doors will meet the intended use of the areas (i.e. finishes, size, area requirements, area classification).



Power Supply & Electrical Equipment

Evaluation of the existing electrical distribution will be critical in developing the electrical design on the new treatment facility. One of our team's initial efforts in support of the electrical design will be to evaluate the total operating demand of the existing WWTP loads and review 12-month peak demand KW from the utility. Then with an inventory of existing equipment to remain and proposed equipment our electrical design team will verify that the existing transformer and switchboard have enough capacity to run the new and existing loads.

It is anticipated that the existing electrical system is in good condition and will be expanded upon as part of the facility upgrades. The upgrade will include 480VAC feeders installed from the existing spare breakers at the existing main switchboard SWBD-MS. The following presents our approach to the electrical design of the upgrades.

- ✓ The new electrical system equipment will be housed in air conditioned, environmentally controlled electrical rooms.
- ✓ During the design phase, a detailed and comprehensive electrical load analysis to evaluate plant service loading at the main switchboard as well as each MCC, distribution and lighting panels. The load study will be used to support the plant upgrade and to confirm each electrical system loading.
- ✓ The motor control centers, variable frequency drives (VFDs)switchboards, distribution panels and lighting panels shall be provided with integral surge protection devices (SPDs) for increased electrical system reliability and for safe operation.
- ✓ Overall short circuit withstand and interrupt rating of the equipment will be determined as required.
- ✓ To optimize plant power operation and to monitor electrical energy and electrical protection functions, the electrical distribution equipment shall be provided with a plant wide power monitoring system connected in a network to a dedicated power monitoring workstation.

Standby Power

- ✓ Evaluate capacity required to provide standby power for both new and existing facility loads and provide a standby diesel engine generator set.
- ✓ Standby generator to be provided with double wall, sub-base fuel tank sized as required for 48 hours of full load operation.
- ✓ Automatic Transfer Switch (ATS) to be provided to transfer from utility power to standby generator power if utility power is unavailable. Transfer switch to be open-transition type

Instrumentation & Controls

The distributed PLC-based SCADA system will include a client server environment, highly integrated Human Interface (HMI), and process control distributed to the unit process. Workshops will be held to develop the specific design approach for the new system, including requirements for redundancy and reliability. Balance of Plant PLCs will be distributed throughout the site and connected via a fiber optic communication backbone. Vendor-provided PLCs will control packaged systems and connect to the local balance of plant PLCs. The SCADA system will be flexible and expandable to allow for future process enhancements and hardware changes.

The system will provide information to the Operators and other users from any system access point. Operator control commands generated from an HMI shall be executed in the respective PLC. Access and information may be expanded and available based on needs, technology, and cost of ownership.

The commonality of control will extend throughout the facilities control hierarchy from the discrete devices in the field, to the PLCs, and the HMI. Specified instruments will monitor plant process parameters to optimize plant operation. Operator and machine safety will be integrated into the monitoring and control of the facilities. The alarm management system will provide a uniform and easily understood operator alarm notification presented at the HMI. Software and control system integration will monitor and control the process and provide text-based reports for operations and regulatory reporting needs.

Energy Incentives

There are several energy incentive options that will help adding solar energy to the project a substantially more affordable proposition. Adding solar energy to the project will pay by itself in a few a years and help offset the added energy consumption from the added treatment processes.

Solar Incentives (Federal ITC)

The Federal Investment Tax Credit (ITC) allows the water treatment facility to claim 30% of the total cost of their solar installation. This includes solar panels, inverters, labor, and other associated costs like permitting fees. The ITC applies to projects completed between now and 2032, providing significant tax savings. For instance, a $100,000 solar installation would result in a $30,000 tax credit, reducing upfront expenses. If the facility's tax liability is less than the credit, the remaining amount can be carried over into future years. This makes solar installation more affordable and offers a quicker return on investment.

Battery Energy Storage Incentives (SGIP)

The California Self-Generation Incentive Program (SGIP) provides rebates for battery energy storage systems (BESS). The rebate starts at $150 per kilowatt-hour (kWh) of installed battery capacity. After the SGIP rebate is applied, the federal Investment Tax Credit (ITC) allows you to claim 30% of the remaining project cost. For example, if a battery system costs $100,000 and qualifies for a $15,000 SGIP rebate, the ITC would then apply to the remaining $85,000. This combined approach can significantly reduce the overall cost.

Direct Pay Provision

For tax-exempt entities like nonprofits or government-run facilities, Direct Pay allows them to receive the full value of the ITC as a direct payment instead of a tax credit. This ensures that even entities without tax liabilities can fully benefit from both the ITC and any bonus credits.

Innovation & Design Optimization

Please refer to Figure 3-3 for a graphical summary of our innovation and optimization concepts. Below, we summarize them.

Design Criteria. Base the process volumes on 3.6 MGD 30-day average flow rate with average influent concentration data to avoid over-building tank volume in comparison to assuming maximum month load peaking factors. Revisit peak-day flows as it is likely will be lower than 7.2 mgd.

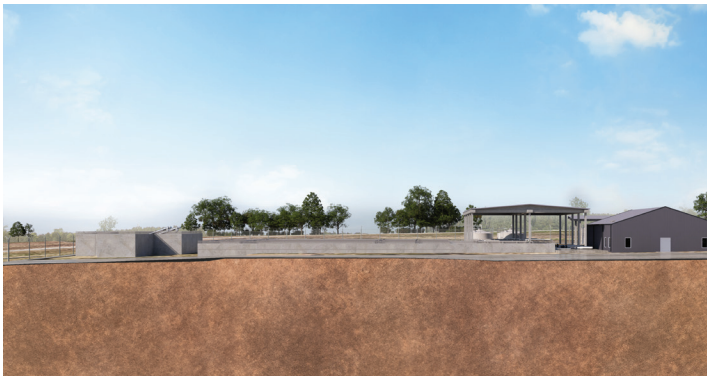
Overall Site Layout and Piping and Pumping. Efficient layout and adequate sizing of yard piping will ensure the project set the stage for the future capacity expansions beyond this project. Our approach minimizes pumping by providing gravity flow for most of liquid train, with only two pumping stages (permeate pumps and disinfected effluent pumps) from the fine screens discharge to the recycled water storage tank.

Headworks and Primary Treatment. Defer construction of a third primary clarifier. Performance of the two existing clarifiers is anticipated to be adequate for flows up to the deswign flow of 3.6 MGD.

Biological Treatment. A four-stage Bardenpho configuration will allow optimization of nitrogen removal and flexibility to reduce the effluent TN as desired to eliminate the need for RO.

Disinfection. UV offers cost savings and provides additional flexibility for future expansion.

Eliminate Costly RO. Use Potable Water or Raw Water for Blending RW to SL Golf Course to Eliminate the Need for RO.





PART IV

Construction & Startup Process

Understanding the balance required between efficient construction, maintaining plant operations and preserving environmental conditions, we have devised a comprehensive plan that addresses all aspects. With our proven track record and strategic planning, we are poised to deliver a project that exceeds your expectations.

Introduction

We've developed a comprehensive sequence plan, layout, and schedule addressing site logistics, safety, and compliance to balance efficient construction with environmental preservation. AECOM/Lyles has extensive experience working in dry and windy landscapes like the City of Banning, having successfully completed projects in neighboring communities, including a similar project in nearby Beaumont. This regional expertise, combined with our local craft labor resources and access to local subcontractors, ensures we can secure the right partners to deliver your project successfully. **Our team lives and works in Riverside and the surrounding area and have strong relationships with local subcontractors/ suppliers** through our dedicated outreach efforts and repeat business on completed and ongoing projects. This network allows us to quickly secure qualified subcontractors familiar with the local conditions. Our regional projects include the Hi-Desert Wastewater Reclamation Facility, CR&R Riverside County Environmental Center, VVWRA Hesperia Subregional MBR Plant, VVWRA Apple Valley Subregional MBR Plant, Morongo WWTP, Palm Springs WWTP, Yucaipa WWTP, Yucaipa Water Treatment Plant and Lytle Creek WWTP. These successfully completed projects demonstrate our ability to leverage our resources and local reputation to deliver positive results.

Construction Planning and Sequencing

With years of experience in managing large-scale infrastructure projects, we have developed a robust approach that prioritizes efficiency, safety, environmental stewardship, and the operation of existing facilities.

Your project site is ideally situated, with many of the proposed new facilities located on the adjacent lot. This allows a straightforward approach to site layout, logistics, and resource management. Notably, the bulk of the proposed facilities are greenfield in nature, confined between the existing plant entrance road, Charles St, and the Animal Shelter facility. Reference Part II: Site Layout for further discussion. Other than the smaller-scale RDT, Digester improvements and a few miscellaneous improvements at the existing plant, this limits the impact on the existing facilities and personnel. Shutdowns of the plant are also limited, allowing for the completion of the main MBR facilities to be constructed almost in whole, off to the side, and without straining existing space and resources. When work involves interaction with existing facilities, AECOM/Lyles will submit a detailed shutdown request that includes a field coordination meeting and a comprehensive plan submission, for City approval at least two weeks prior to the scheduled activity.

Our early procurement strategies and just-in-time delivery streamline project timelines by ensuring that critical materials and equipment are secured in advance and arrive when needed. Our QA/QC team will implement a QR code tracking system to verify that all process equipment is checked in upon delivery, ensuring it arrives undamaged and meets project specifications. This provides an early opportunity to confirm that the equipment is in proper condition before installation. Additionally, the City can use the QR code system for real-time, on-the-spot compliance verification in the field. This proven approach will minimize storage costs, reduce the risk of damage, and prevent delays in construction. Our specific strategy for your project, including the advancement of a 60% GMP in line with early procurement and work packages, allows us to achieve your construction schedule and proactively address current long lead durations on critical

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We have assigned **Philip Portillo**, who has nearly 12 years of safety experience, to serve as our Safety Director. He will work closely with the local safety manager to ensure our site safety representatives are all well qualified and expertly trained. Our safety team will passionately pursue compliance with safe practices dictated by locations, conditions, and circumstances unique to this project.

equipment and materials. We advocate for early Phase 2 NTP following GMP, and ahead of the Final Design. This is specifically discussed in the Schedule section.

Approach to Self-Performance

AECOM/Lyles has the capability to self-perform approximately 75% of the construction work on this project, including all earthwork, concrete, structural steel and metals, mechanical piping, equipment installation and instrumentation integration for the project. This allows us to control project costs, maintain efficiency, enhance coordination, mitigate risks, improve safety, enable resource flexibility, control schedules, and ensure quality. **The benefit to the Ciy is the lowest total project cost due to reduced schedule and elimination of double markup on subcontractors.**

As a JV, this self-performance responsibility is shared by both parties and is supported by the capabilities of both AECOM and Lyles. This approach provides the City joint and several accountabilities while providing confidence in the availability of resources. Also, the integration of design scope with primarily self-performed construction scope and a limited number of dedicated subcontractors reduces the layers and amount of markup embedded in the price. What sets us apart for the Banning project is our unmatched self-performance experience with MBR. **We have installed, modified, removed, and replaced more MBR cassettes than any other contractor in Southern California**, giving us deep insight into both effective and flawed designs. For Banning, this means AECOM/Lyles will not only execute the MBR installation with precision but will also bring invaluable expertise to guide the design for optimal operations and long-term maintenance. Our team will design the MBR tanks, bridge crane, permeate piping, and air piping connections to ensure the safe and efficient removal and replacement of the MBR cassettes—prioritizing the safety of the operations team long after our work is complete.

While Lyles self-performs a majority of the work, we typically subcontract specialty trades such as concrete reinforcing steel (rebar), masonry, painting and coating, interior finishes, and electrical. This allows AECOM/Lyles to leverage the expertise and experience of industry leaders who can provide input in schedule, budget, and constructability, expanding the benefit of trade partners beyond installation only. Our goal is to align with subcontractors and vendors who share our "project-first" mindset, are local to the project thus keeping the money spent in the community, fostering a collaborative work atmosphere that delivers high-quality results for the overall benefit of the project.

Securing Competitive Bids

AECOM/Lyles will collaborate closely with the City to tailor our procurement strategies to the project specifics to ensure that adequate vendors and subcontractors are identified, facilitating maximum competitive bidding from qualified firms. Before beginning procurement, anticipated purchase agreements and subcontracts will be prioritized based on complexity, manufacturing lead time, historical performance of the vendors/ subcontractors, impact on schedule and sequencing, overall value, and long-term O&M. Using this methodology, our team will identify critical scopes and recommend that some be competitively procured early, aiding the GMP development, and allowing the design to be tailored accordingly. This approach maximizes design efficiency and ensures that the City and other stakeholders are fully satisfied with the critical elements. The procurement of the remaining work will be timed to provide maximum pricing competition, particularly for commodities such as concrete, piping, and metals. We will reach out to trusted partners to ensure participation as well as solicit the overall market through Good Faith Efforts (GFE). The team will use Building Connect or other solicitation software to ensure GFE documentation and related requirements are adhered to along with maximum distribution.

Our team will use both one-step best value and low lump sum procurement approaches across the various scopes.

- ✓ Best value selection will be used for complex scopes or where subcontractor input during the design would benefit the project. These are typically initiated through RFP that is tailored to the scope specifics and will conform to minimum 30-day solicitation requirements. RFP scoring will be based on criteria established with the City and include experience, safety record, bonding capacity, and other proof of financial stability requirements followed by technical requirements and pricing. Following panel review, the highest scoring proposer will be recommended to the City for confirmation and subsequent award. Interviews and/or reference validation may be required.
- ✓ Low lump sum selection is typically used for more straightforward scopes where the benefit of subcontractor input in the design is minimal (i.e. painting & coating) or for commodity or equipment purchases that are specification-based (piping, valves, etc.). Lump sum selected proposers will still be prequalified to ensure responsible and responsive bids before selection.

Our final selections will be made with City input and consensus, following thorough bid validation. We will clearly define roles, responsibilities, and expectations with all selected subcontractors to ensure seamless collaboration and alignment with our project goals.

Communication Strategies

Our approach to self-performance, sub-selection management, and communication is designed to maximize efficiency, quality, and collaboration with you and your Owner's Advisor throughout the project.

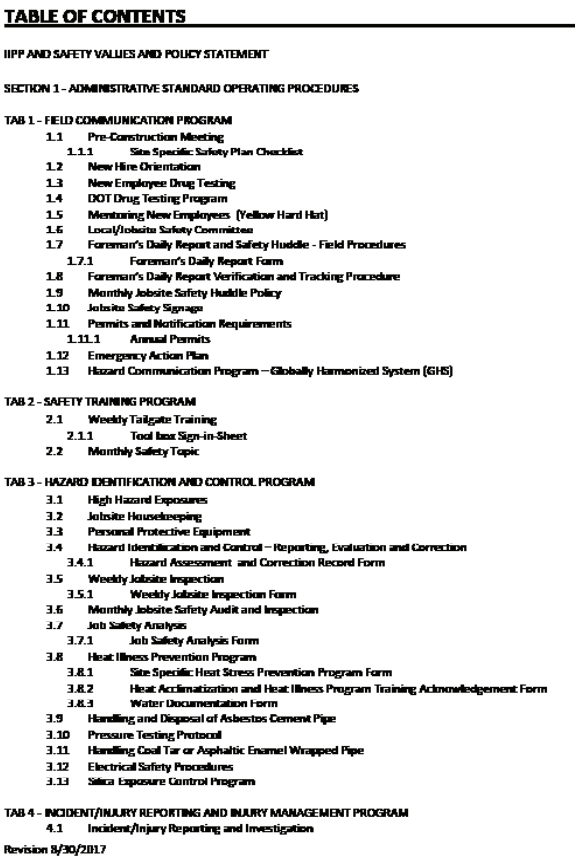
We will establish a dedicated SharePoint site to share updates, schedules, technical information, and other relevant documents in real-time. This centralized platform will ensure transparency and facilitate efficient information exchange among all participants and will be accessible to all stakeholders. This site will also store and allow access to the Submittal, RFI, and PCO/Change Logs, as well as Daily Construction Reports, Testing Reports, etc.

Our project team will hold regular progress meetings with the City and other stakeholders, supplemented by as-needed ad-hoc meetings to address specific issues or opportunities. We encourage open dialogue, actively listen to feedback, and being responsive to any concerns or questions that arise from the team, implementing or revising best practice strategies where applicable. Project decisions made during these meetings will be documented in a Decision Log and stored on the project SharePoint site as well.

The construction team will meet weekly with superintendents and foremen and as needed to review the 3-week schedules and ensure that all preceding work and resources are onsite or in transit. Premobilization or Kick-off meetings for any new subcontractors on site will be conducted to ensure that all new personnel are aware of the project details, safety requirements, site access, and hauling routes, etc. Noncompliance is unacceptable and may result in the replacement of nonconforming personnel. To address client interface, we will maintain open and consistent communication with the City and other stakeholders throughout the project. This will also involve regular progress updates, transparent reporting through our dedicated SharePoint site, and scheduled meetings to discuss any emerging issues or opportunities. Our goal is to foster a collaborative environment where client feedback is actively sought and integrated into project decision-making.

Through our focus on self-performance, rigorous sub-selection, and proactive communication, AECOM/Lyles will ensure a well-managed, collaborative project environment that delivers outstanding results.

Figure 4-1. Safety Manual Table of Contents



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Revision 8/30/2017

Shown above is an example of a Table of Contents that we include in all of our Safety Manuals. This enables easy navigation and quick reference to specific safety topics. It also clearly demonstrates the comprehensive nature of our safety planning, covering all critical aspects for a safe and successful project.

Approach to Safety

With AECOM/Lyles, safety isn't just a priority; it's our most important core value, ingrained in every aspect of our operations. We are dedicated to implementing an effective safety program on your project that emphasizes best practices, rigorous safety protocols, workforce training, and fostering a culture centered around safety. Our commitment extends to providing a safe and healthy working environment during all phases of the project for all employees (both our and yours),

subcontractors, project stakeholders, and the community. Our most important resource is our people and our priority is to ensure their wellbeing.

Our commitment to safety begins with the designation of a full-time, on-site Safety Coordinator who is responsible for overseeing all safety protocols throughout the project. This ensures that safety remains a top priority every day, on every part of the site.

We have established a comprehensive safety review process that includes regular safety meetings, where issues are proactively addressed, and any concerns are resolved quickly and efficiently. Our safety framework also includes thorough documentation of all safety procedures, ensuring full compliance with regulations and that all team members have access.

Central to our approach is the meticulous evaluation of risks associated with the project. We recognize that every project comes with its own set of challenges and potential hazards. Therefore, we conduct thorough risk assessments to fully identify and understand these potential hazards. This allows us to devise strategies for equitable risk identification and distribution, ensuring that safety concerns are addressed proactively throughout the project lifecycle. Job Site Safety Analyses (JSAs) are developed for each task on a daily basis, followed, monitored, and revised as necessary. Every employee has the authority to stop work at the first sign of an issue. This allows the team to come together and reassess a situation and provide alternate safer approaches.

We emphasize workforce training to promote safety excellence. Our team receives extensive training and resources to navigate diverse construction environments safely. This training is both general to our industry as well as specific to the project site and the tasks at hand and would look to integrate your staff into this training protocol as well. This empowers our workforce to recognize and respond to hazards, fostering a culture of vigilance and accountability.

We prioritize site safety and security through specialized training in construction traffic management and equipment handling. All personnel receive material safety training to ensure proper chemical handling and storage. Strict access controls and personnel tracking systems maintain a secure job site, allowing us to deliver high-quality results on schedule while safeguarding everyone involved. A guard shack and security guard will be utilized for the site entrance off Charles St. to direct both construction traffic and check-in visitors and direct them accordingly or deter unnecessary personnel. All construction facilities around your project site will be fenced.

By aligning with your O&M goals, we reinforce our commitment to these safety initiatives. This dedication to safety is demonstrated by both AECOM and Lyles, which have a Worker's Compensation Insurance Interstate Experience Modification Rate (EMR) well below industry averages statewide and nationally.

Table 4-1. AECOM/Lyles EMR Numbers

AECOM and Lyles prioritize safety, as shown by our low EMRs. This shared commitment minimizes risks and supports the City's goals for a successful project..

EMR	2024	2023	2022
AECOM	0.57	0.62	0.58
Lyles	1.0	0.93	0.74

Design-Build Schedule

AECOM/Lyles understands that the City expects to issue the Notice to Proceed in December 2024, with the goal of achieving Final Acceptance in the 4th Quarter of 2027. To meet this objective, we have developed a comprehensive Critical Path Method (CPM) schedule outlining all major activities and milestones from the Contract Date to Final Completion. As shown in **Appendix A,** our schedule includes approximately 375 activities with a critical path that extends from NTP through PDR/10% Design, 30% Design, 60% Design, GMP and Construction Amendment Approvals, early equipment and subcontractor procurement, Aeration Basin construction, MBR facility construction, start-up, and into Plant Commissioning and Acceptance activities. Using the December 10, 2024 tentative NTP date listed in the RFP, our team anticipates Substantial Completion on August 16, 2027, followed by Final Completion and Acceptance on November 9, 2027. This provides for approximately 33 working days of total float against the City's Final Completion goal.

We understand the City's schedule requirements for key milestones, approvals, construction, shutdown and tie-ins, procurement, start-up and testing and our schedule clearly outlines the necessary design, construction, and start-up phases. We will collaborate with the City and plant O&M staff to proactively address project requirements, define responsibilities, and maintain momentum while maintaining existing operations.

Our dedicated scheduler will work closely with Joe Lawrence, Gabe Perigault, Vince Guillama, key subcontractors, trusted suppliers, and the City to iteratively refine the schedule throughout the design phase. We will provide regular monthly schedule updates as well as at each design milestone (30%, 60%, etc.) and at any major change or update in scope or duration. Three-week schedule updates will be provided at each Progress Meeting to help provide more detailed information on ongoing or anticipated activities to enhance coordination with the existing plant operations.

Project Schedule

The project schedule includes 33 working days of float, which provides some flexibility, but requires careful management to avoid delays. Proactive monitoring of progress against the schedule is essential, with immediate action taken at the first signs of potential delays. Identifying opportunities to recapture lost float is crucial to maintaining the project timeline. Delays in procurement, civil works, design, or other aspects can quickly erode this buffer due to the schedule's tightness. Therefore, vigilant planning and monitoring are necessary to keep the project on track and avoid consuming the float.

This strategy will require associated amendments to allocate the necessary funds. However, it will significantly reduce the need for extensions and ensure a more streamlined project timeline.

Early Procurement of Equipment and Materials

Recognizing the City's willingness to request modifications to funding deadlines to accommodate extended construction durations, while desiring a 2027 completion, our team recommends the early procurement of major and/or long-lead-time equipment pieces. This approach offers several advantages:

Design Efficiencies: Early procurement expedites the receipt of shop drawings for key equipment allowing designs to be tailored around the specific equipment for the project, avoiding generic representations and potential costly revisions during the submittal and construction phases. **This further ensures a precise fit and optimal system configuration from the outset**.

Price Certainty: Early contracting locks in prices for high-value equipment, reducing uncertainty and conservatism in the GMP or related contingencies and effectively shielding the project from unpredictable market fluctuations and potential supplier escalation. Global conflict often strains supply and drives up costs. Early price certainty provides a solid financial foundation for the project moving into construction.

Supply Chain Mitigation: Procuring equipment early can avoid vulnerable points in the supply chain, such as potential production lulls during Phase 2. Coming out of COVID and the resulting ramp-up to meet high demands exposed the economic and supply chain vulnerability to work stoppages such as the recent East and Gulf Coast longshoreman and harbor disputes. Climate change and major natural disasters in and around major manufacturing facilities can also prove to be an issue. We are already hearing of extended delays related to certain electrical equipment manufacturers in and around North Carolina and have already seen deliveries for PLCs and VFDs on current projects increasing up to 56 weeks after submittal approval, still affected by the lingering pandemic effects. By obtaining submittals and releasing as far in advance as reasonable, we can minimize the risk of overall project delays and ensure a steady progression of work.

Schedule Condensing: By strategically shifting components of the procurement forward, overlapping with Phase 1, we can condense the overall project



Lyles' recent success with the Hi-Desert Water District (HDWD) exemplifies the value we can bring to the City of Banning. When HDWD needed to select equipment for their MBR units, we guided them through a complex procurement process that demanded a deep understanding of technical specifications and budget constraints. Our collaborative approach, transparent analysis, and constant communication empowered HDWD to make informed decisions that aligned with their goals and priorities. By involving HDWD throughout the process, we ensured the selected solution met their unique needs and expectations, delivering a cost-effective, high-quality result that met all technical requirements. Given the similar scope and terrain of the City of Banning project, we are confident in our ability to replicate this success. Through our collaborative, transparent, and data-driven approach, we will deliver a project that exceeds expectations and sets a new standard for municipal water infrastructure in the region.

schedule. This streamlined approach optimizes the construction timeline for greater efficiency.

To take advantage, we anticipate early procurement of the following major equipment pieces in order to advance early design and ensure on-time delivery;

- ✓ Electrical Gear (PLCs, VFDs, MCCs, Transformers, etc.)
- ✓ Fine & Course Bubble Diffuser Systems
- ✓ Aeration Blower Equipment
- ✓ Membrane Bioreactor Equipment

Early Procurement of Subcontractors

Similar to the critical equipment and materials strategies noted above, our team recommends the early procurement of select subcontractors. Specifically, this would include electrical and instrumentation (EI&C), pre-engineered metal buildings (PEMB), and concrete reinforcing. While requiring design details to advance sufficiently at earlier stages with a higher upfront effort, this approach offers several advantages:

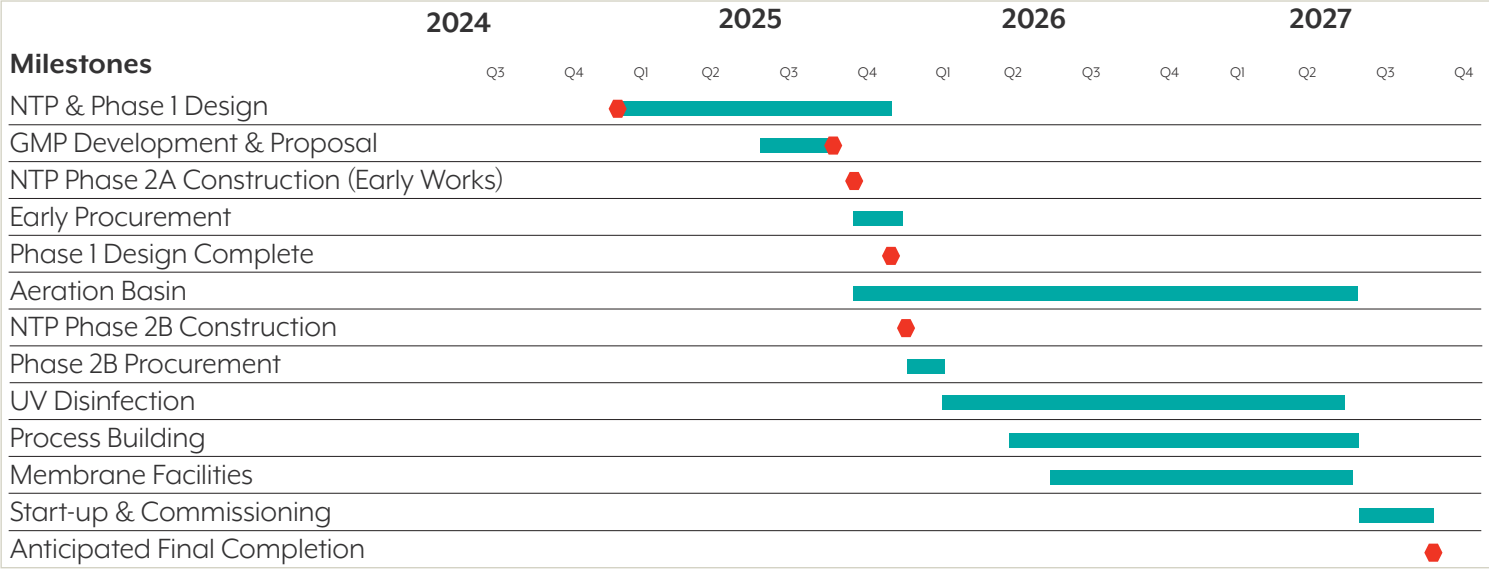
Increased Constructability: Bringing a subcontractor on prior to the completion of Final Design, in this case between the 60% and 90% stages, allows us to take advantage of the specialty expertise, ensuring that the design as shown can be built and used efficiently as well as providing the ability to take and use real-time and real-world alternate approaches that have the potential to save time, cost, and/or reduce risk for the subcontractor and the project overall.

Budgeting and Price Certainty: Early subcontracting also helps lock in pricing for critical specialty scopes not performed by the AECOM/Lyles team. We rely on our partners to review and back-up our original budget assumptions advanced from early design and estimate iterations as well as provide their current understanding of the market conditions in their specific sectors for a more precise GMP. The subcontractor input on design ensures that the design details necessary for pricing are available and accurate, reducing conservatism and contingency.

Supply Chain Mitigation: Just like general contractors, subcontractors are exposed to the same vulnerabilities in the supply chain related to limited supply, work stoppages, conflict, etc. Deliveries for PLCs and VFDs on current projects are increasing up to 56 weeks after submittal approval, still affected by the lingering pandemic effects. Getting early development, shop drawings, and into the fabrication queue for these types of items is imperative for on-time project completion. We then rely on and support our subcontractors to coordinate with their known contacts as well as maintain dates and track deliveries to minimize the risk of delays and ensure a steady progression of work for them and the project overall. Electrical gear on this project has limited float and has the potential to push start-up beyond the intended completion dates if not properly managed.

Schedule Condensing: Early subcontracting also allows our subcontractor to procure equipment and materials during Phase 1 that would traditionally not be available until first executing a subcontract and then second-tier purchase agreements after a Phase 2 NTP, extending project duration. For this project, acquiring a concrete reinforcement (Rebar) subcontractor in lockstep with the 60% Design and GMP is imperative. This allows for the necessary time for the rebar design, submittal, approvals, and fabrication to advance specifically for the Aeration

Figure 4-2. Milestone Schedule



Basin well ahead of the Final Design. This ensures that rebar can be onsite at the earliest possible date to maintain construction on one of the most critical structures due to its depth and the proximity of other structures within its excavation footprint.

Early Work Packages

In order to take advantage of early procurement, design for specific aspects of the work must be substantially advanced to allow vendors and subcontractors to accurately price the work, and with minimal revisions. Several of these packages will be developed as part of the 60% Design and will be provided to the City for review and comment before being revised and stamped for construction use. This will require our design team to advance selection of and design around critical equipment pieces ahead of the Final Design. This will allow the submittal, review, and release of long lead items. Additionally, advancement of this design will allow the construction team to excavate, install underground utilities, and move into foundation construction while preparing for equipment installation during the fabrication period. To ensure on-time completion, we anticipate the development of an early work package for the Aeration Basins allowing for civil work (including mass excavation) and structure foundations. Completion of this deep structure is critical to advancement of the MBR Tank and all other structures within the AB excavation footprint. **Early procurement is a key strategy for ensuring a more streamlined project timeline, staying within budget, and ultimately delivering a superior final product for the City.**

The Phase 1 Design period is anticipated to be 390 calendar or 275 working days through December 15, 2026. We anticipate GMP development beginning in July 2025, following completion of the 60% Design, moving into a City approval of an early works GMP. Approval of Construction or NTP 2A by October 30, 2026 ahead of Phase 1 completion. The early works GMP NTP marks the go-point to procurement of major equipment and critical material, taking advantage of the strategies noted. Phase 2B NTP is anticipated to occur shortly thereafter, marking the issue of the full construction documents and the start of the balance of the construction and remaining procurement.. This approach saves the project approximately four months and avoids a down period allowing design completion for negotiations, amendment drafting, and agreements. The design and construction teams are able to roll seamlessly from design into construction and engineering support during construction, maintaining team focus and momentum.

Cash Flow

AECOM/Lyles recognizes that one of the most important monthly deliverables is providing an accurate cash flow forecast for the City's use and for coordination with funding agency requirements. We will provide an initial Cash Flow curve related to the anticipated schedule, equipment and material deliveries, and construction operations for the City's use. Any changes or updates in either the schedule or expected dollar distribution will be communicated with the greater team. Note that all costs incurred are summarized weekly, and tracked against the initial budget. Additionally, an "estimate to complete" is performed routinely to track the status of the project against the remaining budget. Any deviations from the expected or forward-looking budget concerns are brought to the overall project team during Progress Meetings. These estimates will also be compared against the baseline drawdown schedule to ensure that the City can proactively manage its financial needs. This will be made available as part of our open-book process to ensure no surprises throughout the project delivery.

Functional Testing, Startup, Acceptance Testing and Transfer of Operations

Proper implementation of these activities is a key element in achieving ultimate success for this project. These steps will be the culmination of nearly a decade of hard work invested by the city into this project. Recognizing the significance, we have already started planning for start-up in our design, as designing with the end performance goals in mind is a key tenet of the AECOM/WML Team's approach to design-build.

Prior to any commissioning, startup, training, or performance testing activities, our team will develop testing and training plans that align with City staff schedules to demonstrate the efficiency of the new facility. Many key items have already been considered in developing our conceptual design and proposal offering. Some key elements of plan are presented in the following subsections.

The plan will be documented in our Startup and Commissioning Plan. This approach has been implemented successfully on other projects involving complex startup and sequencing efforts, including California WWTP design-build projects for the cities of Davis, Rialto, and Stockton.

Equipment Documentation and Testing

Many of the requirements for equipment and system testing can be found in the Final Design Specifications and will be implemented during construction. These activities include:

- ✓ Leak testing of tanks and pipes
- ✓ Electrical and instrumentation tests (aka dry testing)
- ✓ Vendor certification (where applicable) of installed process equipment

Other activities will be addressed in a draft startup and commissioning plan developed and submitted to the City and its Advisor for review during the early stages of construction. Examples of planned activities include:

- ✓ Confirmation that all process equipment supplier O&M manuals have been received
- ✓ Inspection of the electrical power system completed by the local power authority
- ✓ Vendor startup and checkout of process equipment

The plan will include ample time for manufacturers' representatives to be on site and to allow time for potential revisits and adjustments. Results of the equipment testing, including vendor startup and checkout reports, will be compiled and submitted as documentation of the testing program. Certificates of Proper Installation (COPI) will be prepared and signed by equipment manufacturer representatives.

System/Clean Water testing

After the individual process components are functionally tested, a series of systems tests will follow. Whereas the equipment testing will have focused on individual units, these tests will be structured to confirm that inter-related components will work correctly. Typically, this testing is done with clean water. For example, one aeration tank, membrane tank, and permeate tank would be filled with water. A temporary pump would be installed at the permeate tank to recycle a water stream back to the fine screens where one screen would be in service and treated flow would travel by gravity to the in-service aeration basin and membrane tank. Here, a permeate pump would transfer flow back to the permeate tank. This would result in a constant flow of water thought the fine screen/MBR system and testing of all associated equipment (blowers, diffusers, pumps etc.) Once testing is complete, the water would be transferred to the next screen/aeration/MBR tank for the next round of testing and so on until and all facilities are satisfactory. Examples of systems that will be tested include:

- ✓ Aeration/biological systems including membranes, pumps, blowers, diffusers, and instrumentation
- ✓ UV disinfection systems
- ✓ Dewatering equipment, pumps, VFDs, pipelines, valves and control logic
- ✓ Standby and emergency systems, including generators and UPS systems
- ✓ Power distributions and MCC equipment

Additional vendor documentation including additional COPI forms will be submitted at the completion of the systems testing process documenting the successful results of the functional testing.

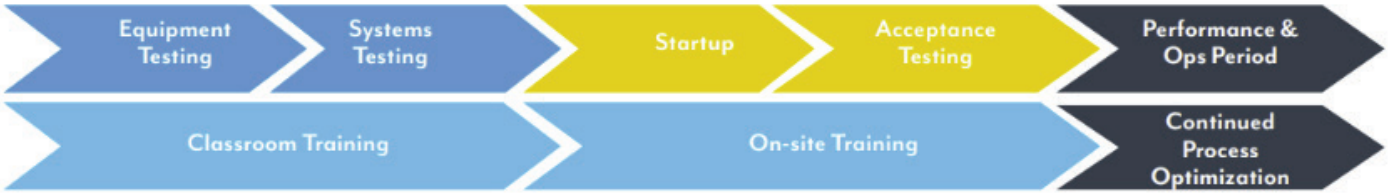
Wastewater Startup

Startup of the new facilities on wastewater will follow completion of all pre-startup checks. This will be performed in accordance with a written startup plan and under the direction of our team's startup manager.

For the most operational flexibility, startup of the new MBR facility can be done in a stepwise manner: first the biological treatment process will be started up with the objective of discharging fully treated but undisinfected effluent to the onsite disposal beds. Because biological treatment systems need to grow sufficient mass of bacteria to treat the incoming wastewater, the start-up must be done in gradual increments to slowly ramp up treatment capacity. This will require close coordination between the existing WWTP and the startup of the MBRs as the bulk of treatment will still need be provided by the existing trickling filters.

Following systems testing with clean water, off-site biological material (waste activated sludge or seed) will be collected and transported to the site and introduced to the biological (SBR or MBR) system. This critical step will require a well thought-out plan of introducing raw wastewater to the new plant in a controlled manner.

Figure 4-3. The AECOM/Lyles team will develop a well thought-out Startup Plan



Small batches of wastewater will initially be received, with the treatment process closely monitored to ensure complete treatment. These batch increments will be slowly increased (typically 5 to 10% per day) until one treatment train is full and treated flow is of a high enough quality to discharge to the effluent beds. The next step is to bring the second aeration tank online and continue to slowing ramp up the wastewater flow while monitoring mixed liquor concentration levels and permeate quality. These steps will allow a viable biological community to be established that will be capable of treating the full plant flow. This process typically takes four to six weeks to complete.

Following the establishment of a strong biological community, the plant will be run for a few weeks to ensure all systems are working and fine-tuned prior to formal acceptance testing. At some point prior to acceptance testing but after full plant flow is achieved, UV disinfection will be placed in service for its Title 22 treatment. UV testing as required by DDW will be accomplished.

All equipment will be operated in accordance with the operational needs of the plant at flow/process loading rates as determined by the AECOM/Lyles Team. The purpose of the startup testing will be to demonstrate the operational readiness of the equipment and the functionality of associated instrumentation.

Acceptance testing

Following functional testing, we propose to operate the new facilities during a two-week acceptance test to demonstrate satisfactory performance and compliance with Title 22 reuse regulations and effluent bed discharge requirements.

In general, the liquid processes will be operated to treat the influent flow and loads that enter the treatment facility over the 14-day test period, with reuse water treated in quantities as needed and the remainder of the flow discharged to the effluent disposal beds.

During the acceptance test we anticipate that sampling and testing will be in accordance with the discharge permit requirements. Composite samples of the influent and final effluent will be collected and analyzed at the required permit frequency. In addition, sampling of the primary influent and effluent will be included for targeted water quality parameters.

Once the acceptance testing has been completed, normal industry practice is to transfer full operational responsibility back to the Owner.

BEST for **BANNING**

Vijay Kumar, a seasoned Startup and Commissioning Manager, brings 27+ years of hands-on experience in water/wastewater treatment system installation, commissioning, and optimization. A notable example is his Commissioning Engineer role on the $54.4M City of Beaumont WWTP Salt Mitigation Upgrade Project. This extensive project demanded the demolition, modification, and construction of various system components. Vijay's technical expertise and problem-solving skills ensured a successful, on-schedule commissioning process. His comprehensive knowledge and experience make him an ideal partner for efficient and reliable water/wastewater treatment projects.

APPENDIX

A

Preliminary Drawings and Schedule



CITY OF BANNING, CALIFORNIA

RFP-24-074

BANNING WASTEWATER TREATMENT PLANT RECYCLED WATER UPGRADES PROJECT

BANNING, CALIFORNIA
OCTOBER 2024

AECOM W.M. LYLES CO.
a joint venture

PROJECT

BANNING WWTP
RECYCLED WATER
UPGRADES PROJECT
2242 Charles Street
Banning, CA

CLIENT

City of Banning, CA
2242 CHARLES STREET
BANNING, CA 92220
951.922.3100 tel
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CONSULTANT

AECOM TECHNICAL SERVICES, INC.
250 APOLLO DRIVE
CHELMSFORD, MA 01824
PHONE: (978) 905-2100
www.aecom.com

REGISTRATION

CONCEPTUAL

ISSUE/REVISION

I/R	DATE	DESCRIPTION

PROJECT NUMBER

04191986

Designed By:	JF
Drawn By:	IB
Dept Check:	CB
Proj Check:	GP
Date:	OCTOBER 2024
Scale:	AS NOTED

DISCIPLINE

GENERAL

SHEET TITLE

COVER SHEET

SHEET NUMBER

00 G-001

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LAST UPDATE: Wednesday, October 2, 2024 9:49:16 AM
PLOT DATE: Friday, October 4, 2024 10:47:44 AM

INDEX OF DRAWINGS

GENERAL

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00 G-003	VICINITY AND LOCATION MAP
00 G-004	DESIGN CRITERIA
00 G-005	PROCESS FLOW DIAGRAM
00 G-006	HYDRAULIC PROFILE

CIVIL

00 C-101	SITE PLAN
00 C-102	ENLARGED PLAN

ARCHITECTURAL

00 A-101	ARCHITECTURAL VIEWS

PROCESS

00 D-101	UV CHANNEL PLAN AND SECTION
00 D-102	MBR PLAN AND SECTION

PROCESS FLOW ABBREVIATIONS

AAB	AERATION AIR BLOWER
BSC	BAR SCREEN
BW	BACKWASH
CCT	CHLORINE CONTACT TANK
DS/DSL	DIGESTED SLUDGE
GR	GRIT
GP	GRIP PUMP
HEX	HEAT EXCHANGER
HW	HOT WATER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
MBR	MEMBRANE BIOREACTOR
MBS	MECHANICALLY CLEANED BAR SCREEN
POL	POLYMER
PFD	PROCESS FLOW DIAGRAM
RAS	RETURN ACTIVATED SLUDGE
RLS	RAW SLUDGE
RO	REVERSE OSMOSIS
RSP	RAS PUMP
SCC	SCREENING COMPACTOR
SCN	SCREENINGS
SE	SECONDARY EFFLUENT
SH	SODIUM HYPOCHLORITE
WAS	WASTE ACTIVATED SLUDGE
WSP	WAS PUMP

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DISCIPLINE

GENERAL

SHEET TITLE

INDEX OF DRAWINGS AND PFD ABBREVIATIONS

SHEET NUMBER

00 G-002

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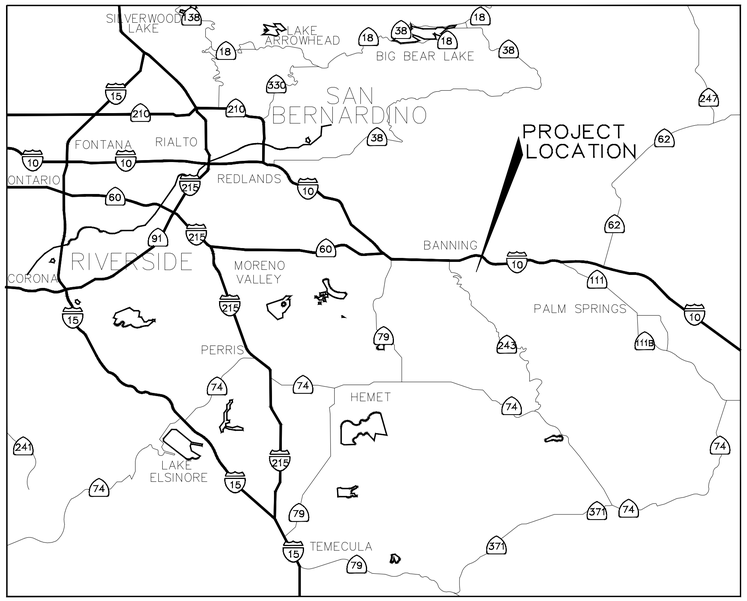
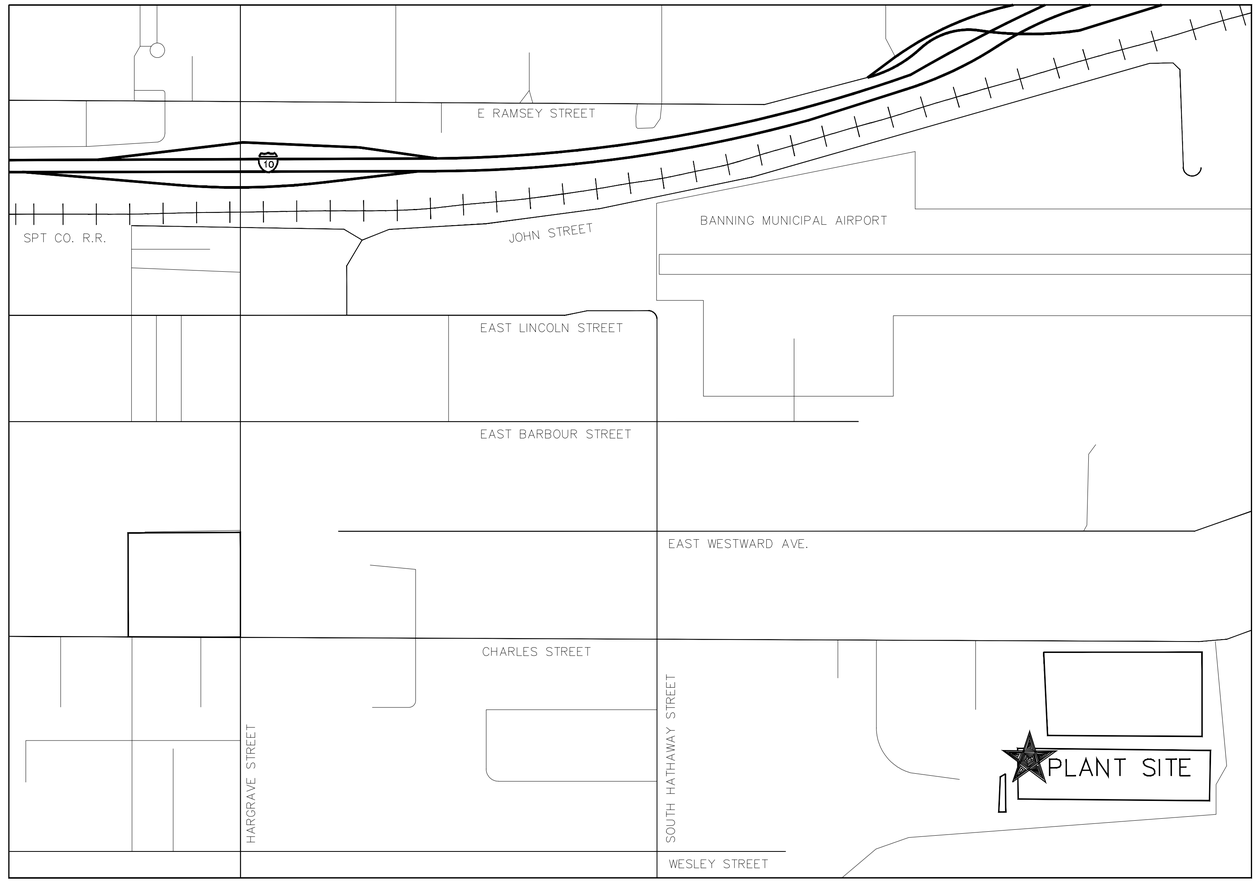


VICINITY MAP

NOT TO SCALE



PROJECT LOCATION MAP

NOT TO SCALE

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DISCIPLINE

GENERAL

SHEET TITLE

VICINITY AND LOCATION MAP

SHEET NUMBER

00 G-003

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LAST UPDATE: Friday, October 4, 2024 10:50:01 AM
PLOT DATE: Friday, October 4, 2024 11:53:31 AM

DESIGN INFLUENT WASTEWATER FLOW

ITEM	UNIT	EXISTING	UPGRADE
AVERAGE DAILY FLOW	MGD	3.6	3.6
MAX DAY PEAK HOUR FLOW	MGD	7.2	7.2
INFLUENT WASTEWATER CHARACTERISTICS			
BOD	MG/L	317	3.6
TSS	MG/L	318	7.2
TOTAL NITROGEN	MG/L	>58	

DESIGN EFFLUENT QUALITY

ITEM			
BOD	MG/L	30	<5
TOTAL INORGANIC NITROGEN	MG/L	22	<7.5
TSS	MG/L	30	<5

PRIMARY TREATMENT

ITEM			
HEADWORKS			
MECHANICAL BAR SCREEN	NUMBER	1	
CAPACITY	MGD	5	
OPENING SIZE	IN.	0.25	
MANUAL BAR SCREEN	NUMBER	1	
OPENING SIZE	IN.	1.5	
COMPACTOR	NUMBER	1	
CAPACITY	CU. FT/HR	133	
GRIT BASIN	NUMBER	1	
DIAMETER	FT	18	
GRIT WASHER/CYCLONE	NUMBER	1	
CAPACITY, EACH	MGD	3.6	
FERRIC SULFATE FEED PUMP	NUMBER	2	
CAPACITY, EACH	GPH	28	
MOTOR, EACH	HP	0.5	
HEAD, EACH	PSI	150	
STORAGE CAPACITY	GAL	2000	
PRIMARY CLARIFIERS	NUMBER	2	1 (OPTIONAL)
WEST TANK			
DESIGN FLOW RATE	MGD	1.6	
DIAMETER	FT	45	
SIDE WATER DEPTH	FT	6.5	
EAST TANK			
DESIGN FLOW RATE	MGD	2	
DIAMETER	FT	50	
SIDE WATER DEPTH	FT	7	
EQ BASIN STATION PUMPS (BY OTHERS)	NUMBER	3	
CAPACITY, EACH	MGD	3.6	
MOTOR, EACH	HP	70	
EQ BASIN VOLUME	MG	2.1	

NOTE:
(1) TO BE USED FOR MBR SYSTEM AND CHLORINE CONTACT TANK.
(2) CONVERT EXISTING SECONDARY DIGESTER TO PRIMARY DIGESTER.
(3) ALL DRAWINGS ARE CONCEPTUAL AND SUBJECT TO CHANGE BY THE DESIGN BUILD ENTITY.

SECONDARY TREATMENT

ITEM	UNIT	EXISTING	EXPANSION
MECHANICAL FINE SCREEN	NUMBER		2
CAPACITY, EACH	MGD		5
OPENING SIZE	MM		2
MEMBRANE BIOREACTOR (MBR) UNIT			
AERATION BASIN, EACH (L, W, D)	FT		115, 23, 20
NO. OF BASINS	NUMBER		3 (2+1)
MEMBRANE TANK, EACH (L, W, H)	FT		15, 19, 10
NO. OF TRAINS	NUMBER		3
DESIGN MLSS	MG/L		6,000 – 8,000
DESIGN AEROBIC SRT (WINTER)	DAY		8
RAS PUMPS	NUMBER		3+1
CAPACITY, EACH	GPM		3,700
MOTOR, EACH	HP		40
PERMEATE/BACKPULSE PUMPS	NUMBER		3+1(SHELF SPARE)
CAPACITY, EACH	GPM		1,270
MOTOR, EACH	HP		15
WAS PUMPS	NUMBER		1+1
CAPACITY, EACH	GPM		40
MOTOR, EACH	HP		TBD
MBR CHEMICAL FEED SYSTEM			
CITRIC ACID PUMP	NUMBER		1+1
CAPACITY, EACH	GPH		6
MOTOR, EACH	HP		1
HEAD, EACH	PSIG		60
SODIUM HYPO PUMP (NOTE 1)	NUMBER		1+1
CAPACITY, EACH	GPH		6
MOTOR, EACH	HP		1
HEAD, EACH	PSIG		60
STORAGE CAPACITY	GAL		2500
AERATION BLOWERS	NUMBER		2+1
CAPACITY, EACH	SCFM		1,800
MOTOR, EACH	HP		TBD
AIR SCOUR BLOWERS	NUMBER		2+1
CAPACITY, EACH	SCFM		800
MOTOR, EACH	HP		50
AIR COMPRESSOR	NUMBER		1+1
CAPACITY, EACH	SCFM		26
MOTOR, EACH	HP		7.5
HEAD, EACH	PSIG		125

UV SYSTEM

ITEM

NUMBER OF CHANNELS = 1
NUMBER OF BANKS = 3 (2 DUTY + 1 REDUNDANT)
DESIGN UVT = 65% (PER NWRI UV DISINFECTION GUIDELINES DOCUMENT)
DOSE = 80 MJ/CM2 UNDER MAXIMUM DAY FLOW (PER NWRI UV DISINFECTION GUIDELINES DOCUMENT)
CAPACITY = 0.5 MGD MBR FLOW

INTERNAL MIXED LIQUOR RECYCLE PUMPS

ITEM

NUMBER = 3 – 1 (SHELF SPARE)
CAPACITY, EACH = 3300 GPM
MOTOR, EAC H= 15 HP
HEAD, EACH = 5 FT

BIOSOLIDS PROCESSING

ITEM	UNIT	EXISTING	EXPANSION
MECHANICAL THICKENER	NUMBER	1	1
INFLUENT SLUDGE FLOW, EACH	GPM		40
DAILY SLUDGE GENERATION	LBS/DAY		4,500
NEAT POLYMER 40% FEED PUMP	NUMBER	2	1+1
CAPACITY, EACH	GPH	0–25	1
MOTOR, EACH	HP		0.5
HEAD, EACH	PSI		60
ANAEROBIC PRIMARY DIGESTERS	NUMBER	2	1(NOTE 2)
DIAMETER	FT	35	35
SIDE WATER DEPTH	FT	26	21
WATER SURFACE ELEVATION	FT	24	19
TOTAL VOLUME	GAL	172,718	136,735
SOLIDS RETENTION	DAYS	20	20
HEAT EXCHANGER	NUMBER		1
CAPACITY, EACH	GPM		100
MOTOR, EACH	HP		10
HEAD, EACH	FT		173
HOT WATER BOILER*	NUMBER	1	
CAPACITY, EACH	BTU/HR.	640,000	
HOT WATER CIRCULATION PUMPS	NUMBER	2	
CAPACITY, EACH	GPM	90	
HEAD, EACH	FT	90	
MOTOR, EACH	HP	–	
HEAT EXCHANGER	NUMBER	1	1
CAPACITY, EACH	BTU/HR.	300,000	415,000
SLUDGE DRYING BEDS	NUMBER	12	
DIMENSIONS OF EACH BED (L, W)	FT	135x25	

AECOM W.M. LYLES CO. a joint venture

PROJECT

BANNING WWTP RECYCLED WATER UPGRADES PROJECT
2242 Charles Street
Banning, CA

CLIENT

City of Banning, CA
2242 CHARLES STREET
BANNING, CA 92220
951.922.3100 tel
www.BANNING.CA.US.com

CONSULTANT

AECOM TECHNICAL SERVICES, INC.
250 APOLLO DRIVE
CHELMSFORD, MA 01824
PHONE: (978) 905-2100
www.aecom.com

REGISTRATION

CONCEPTUAL

ISSUE/REVISION

I/R	DATE	DESCRIPTION

PROJECT NUMBER

04191986

Designed By:	JF
Drawn By:	IB
Dept Check:	CB
Proj Check:	GP
Date:	OCTOBER 2024
Scale:	AS NOTED

DISCIPLINE

GENERAL

SHEET TITLE

DESIGN CRITERIA

SHEET NUMBER

00 G-004

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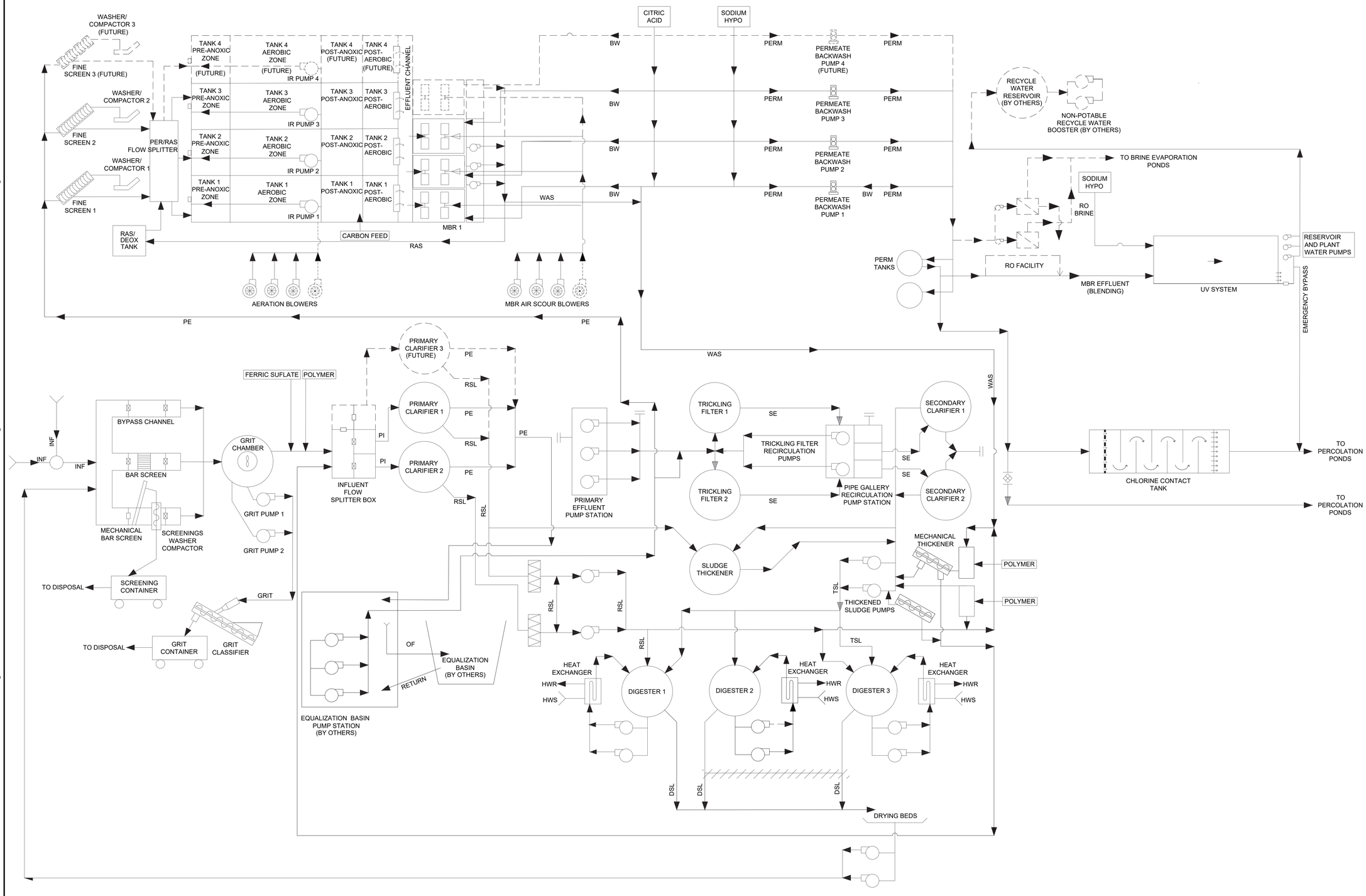
PLOT DATE: Tuesday, October 8, 2024 10:42:51 AM

1741



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CONCEPTUAL

ISSUE/REVISION

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04191986

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Drawn By:	IB
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Date:	OCTOBER 2024
Scale:	AS NOTED

DISCIPLINE

GENERAL

SHEET TITLE

PROCESS FLOW DIAGRAM

SHEET NUMBER

00 G-005

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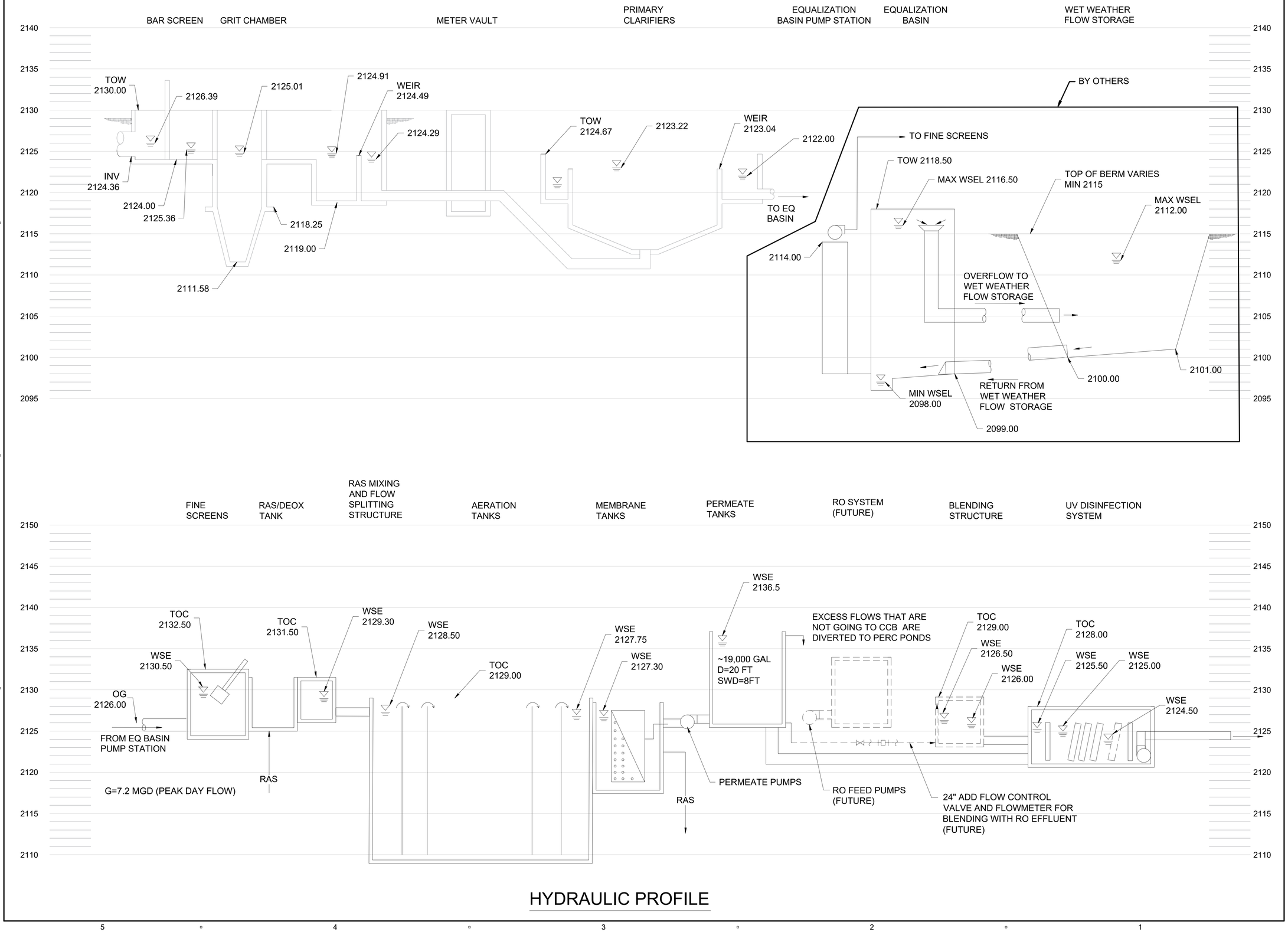

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LAST UPDATE: Monday, October 7, 2024 4:05:01 PM
PLOT DATE: Tuesday, October 8, 2024 11:06:24 AM

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CONCEPTUAL

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PROJECT NUMBER

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Dept Check:	CB
Proj Check:	GP
Date:	OCTOBER 2024
Scale:	AS NOTED

DISCIPLINE

GENERAL

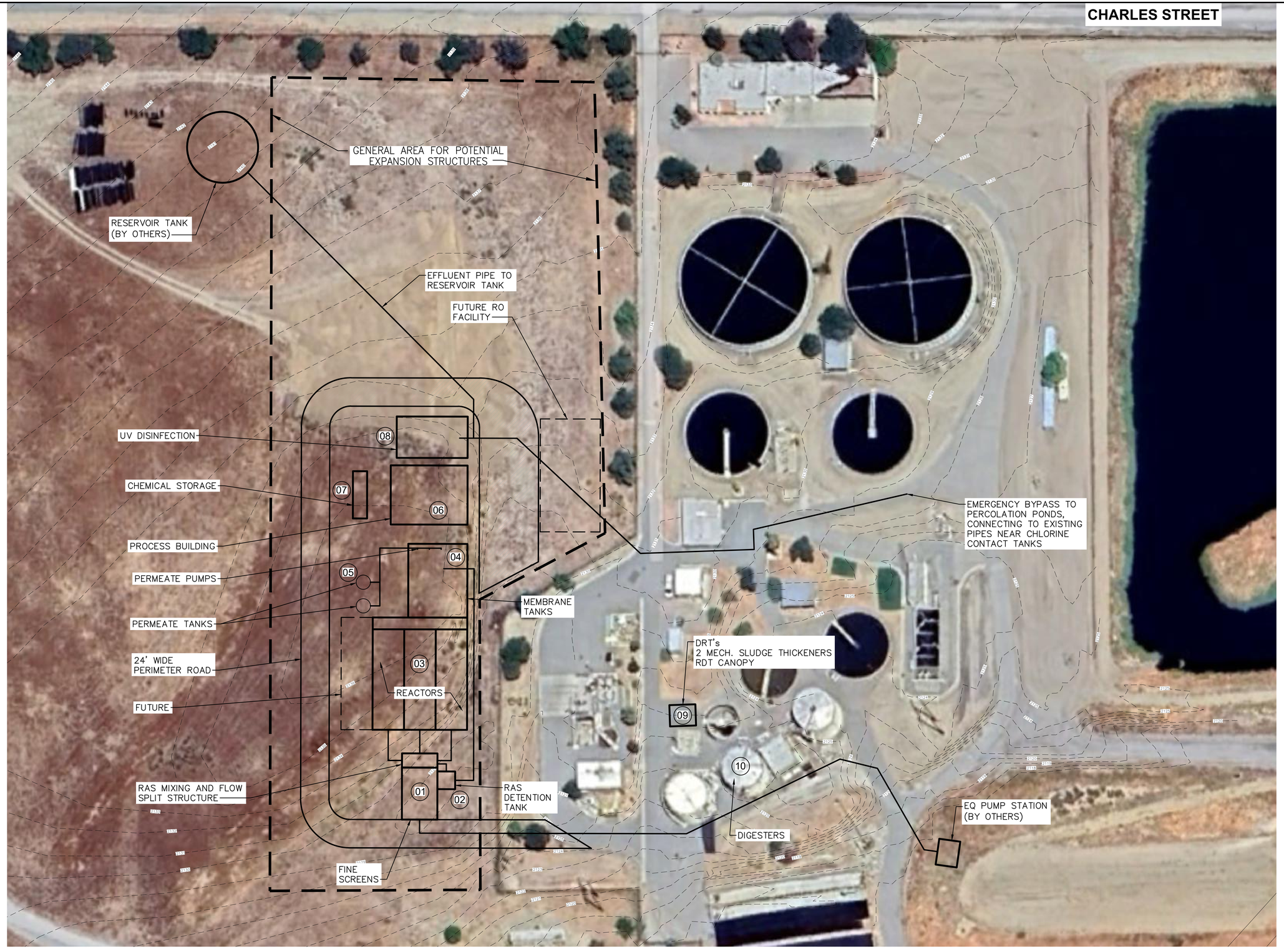
SHEET TITLE

HYDRAULIC PROFILE

SHEET NUMBER

00 G-006

1743



PLAN

SCALE: 1"=40'

1"=40' 40' 20' 0 40' 80'

PATH/FILENAME: C:\USERS\THIBODM\AECOM DIRECTORY\04191986_BANNING_WWTP\900_CAD_GIS\910_CAD\20-SHEETS\C\00 C-101.DWG
LAST UPDATE: Monday, October 7, 2024 3:59:57 PM
PLOT DATE: Tuesday, October 8, 2024 10:25:05 AM

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I/R	DATE	DESCRIPTION

PROJECT NUMBER

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Designed By:	JF
Drawn By:	IB
Dept Check:	CB
Proj Check:	GP
Date:	OCTOBER 2024
Scale:	AS NOTED

DISCIPLINE

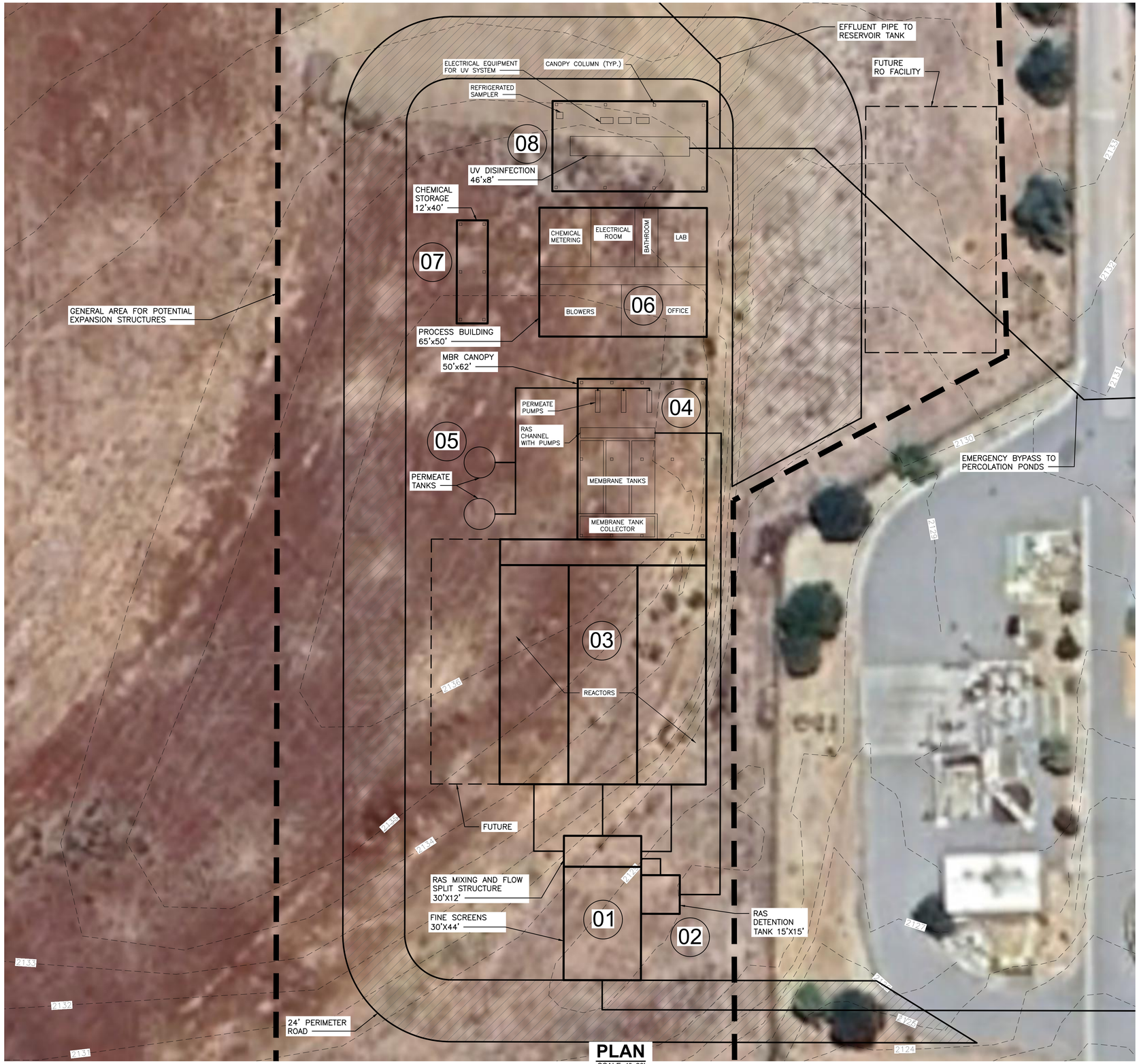
CIVIL

SHEET TITLE

SITE PLAN

SHEET NUMBER

00 C-101



PLAN
SCALE: 1"=20'

1"=20' 20' 10' 0 20' 40'

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LAST UPDATE: Tuesday, October 8, 2024 11:41:35 AM
PLOT DATE: Tuesday, October 8, 2024 1:46:26 PM

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CONCEPTUAL

ISSUE/REVISION

I/R	DATE	DESCRIPTION

PROJECT NUMBER

04191986

Designed By:	JF
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Dept Check:	CB
Proj Check:	GP
Date:	OCTOBER 2024
Scale:	AS NOTED

DISCIPLINE

CIVIL

SHEET TITLE

ENLARGED PLAN

SHEET NUMBER

00 C-102



VIEW - LOOKING NORTH EAST

NOT TO SCALE



VIEW - LOOKING SOUTH WEST

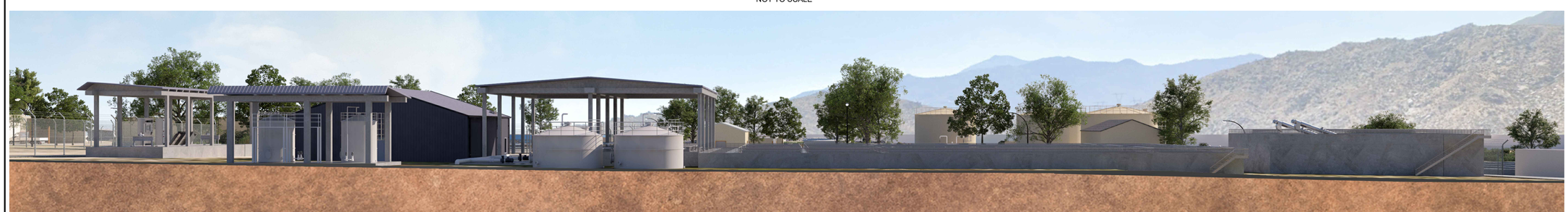
NOT TO SCALE

1 Fine Screens
2 RAS Deox Tank
3 Biological Reactors
4 MBR
5 Permeate Tanks
6 Process Building
7 Chemical Storage
8 UV Disinfection



ELEVATION - LOOKING WEST

NOT TO SCALE



ELEVATION - LOOKING EAST

NOT TO SCALE

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PROJECT

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04191986

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Proj Check:	GP
Date:	OCTOBER 2024
Scale:	AS NOTED

DISCIPLINE

ARCHITECTURAL

SHEET TITLE

ARCHITECTURAL VIEWS

SHEET NUMBER

00 A-101

PATH/FILENAME: C:\USERS\THIBODM\AECOM DIRECTORY\04191986_BANNING_WWTP600_CAD_GIS\610_CAD\20-SHEETS\A00 A-101.DWG
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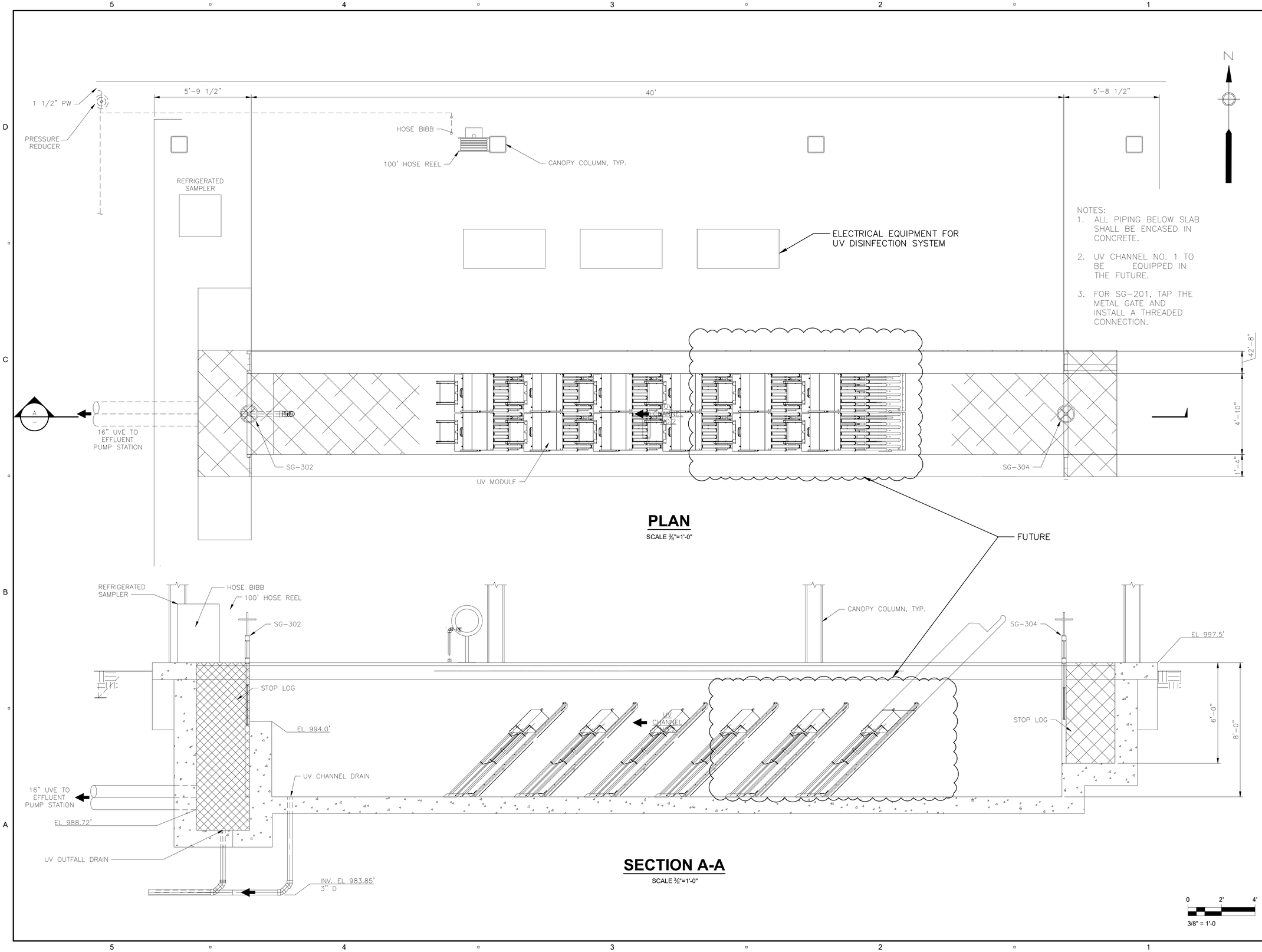

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PLOT DATE: Tuesday, October 8, 2024 10:58:44 AM

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PROJECT NUMBER

04191986

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Drawn By:	IB
Dept Check:	CB
Proj Check:	GP
Date:	OCTOBER 2024
Scale:	AS NOTED

DISCIPLINE

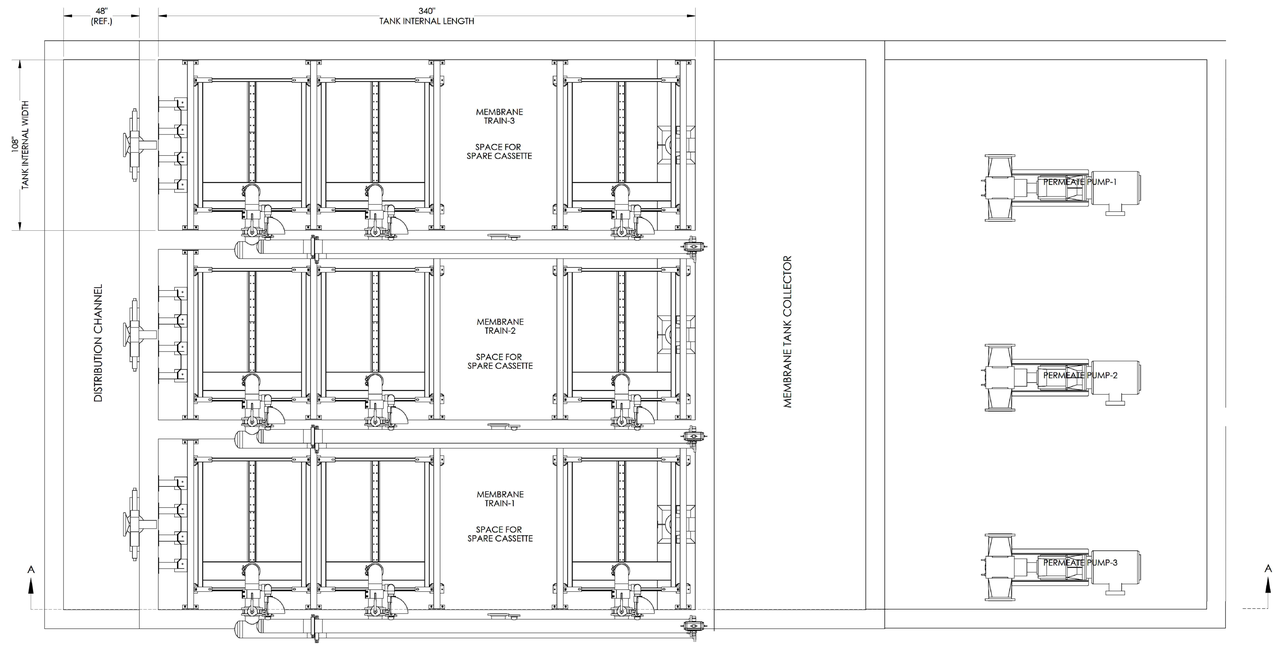
PROCESS

SHEET TITLE

UV CHANNEL PLAN AND SECTION

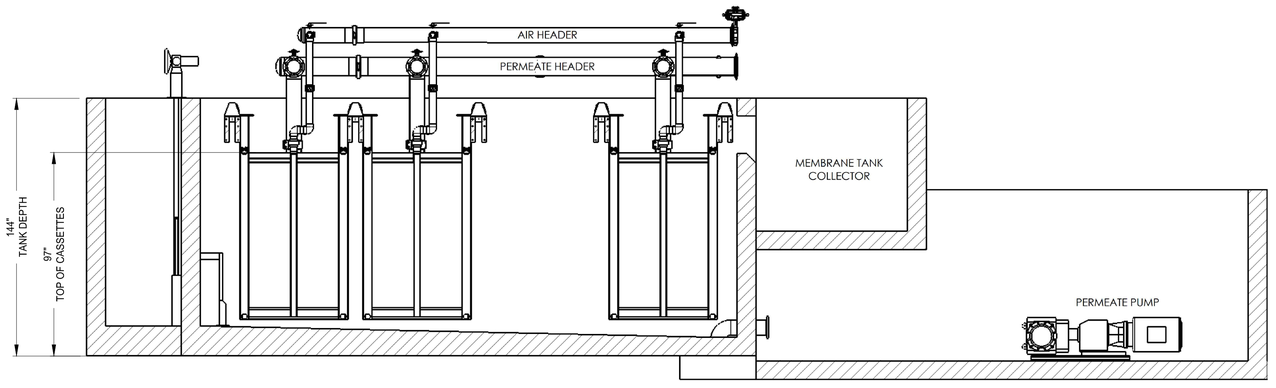
SHEET NUMBER

00 D-101



PLAN

SCALE: 1"=4'



SECTION A-A

SCALE: 1"=4'

1"=4' 4' 2' 0 4' 8'

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REGISTRATION

CONCEPTUAL

ISSUE/REVISION

I/R	DATE	DESCRIPTION

PROJECT NUMBER

04191986

Designed By:	JF
Drawn By:	IB
Dept Check:	CB
Proj Check:	GP
Date:	OCTOBER 2024
Scale:	AS NOTED

DISCIPLINE

PROCESS

SHEET TITLE

MBR
PLAN AND SECTION

SHEET NUMBER

00 D-102

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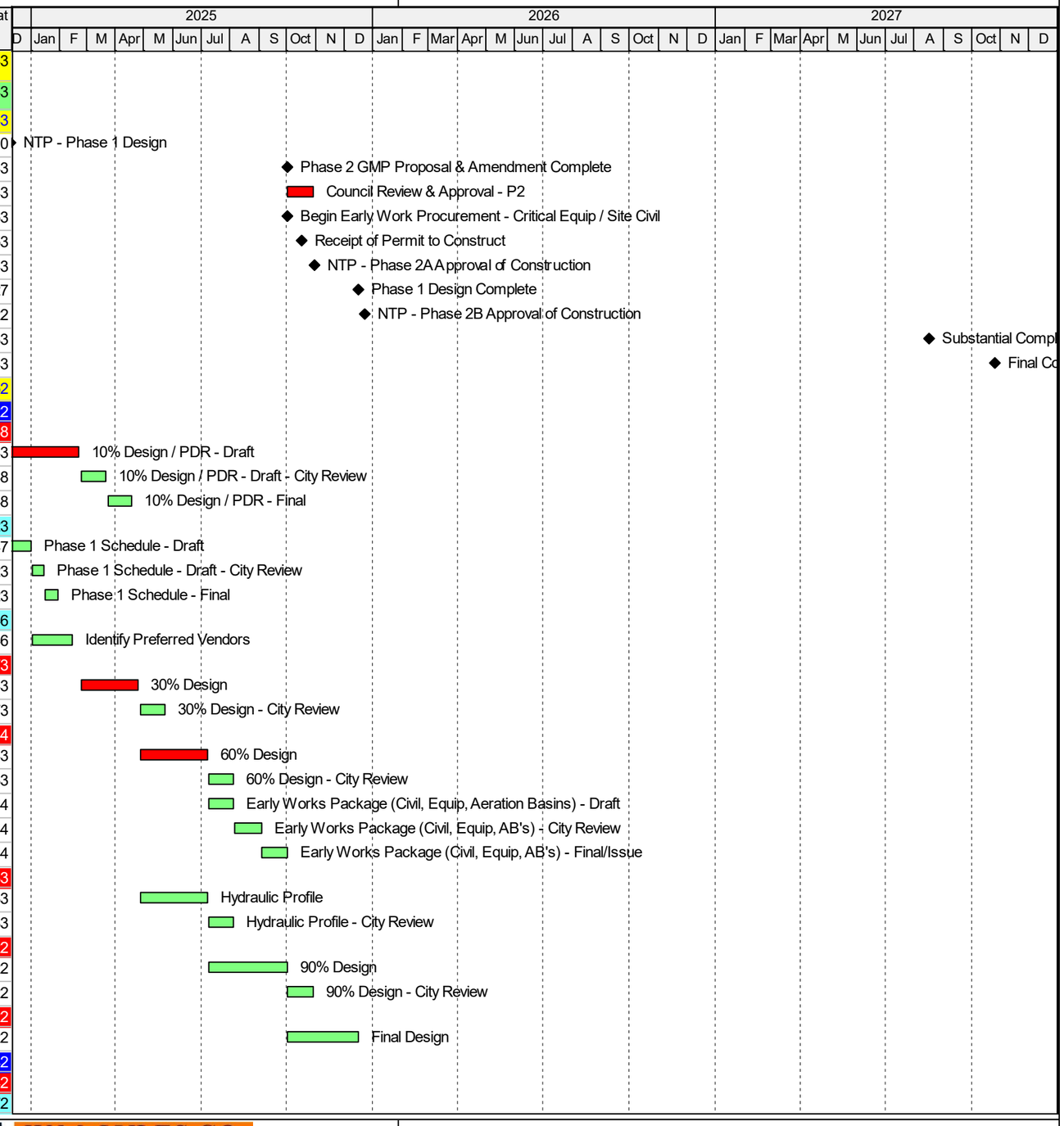
LAST UPDATE: Monday, October 7, 2024 2:41:31 PM
PLOT DATE: Tuesday, October 8, 2024 2:02:18 PM

Activity ID	Activity Name	Planned Duration	Start	Finish	Total Float
City of Banning - Wastewater Treatment Plant & Recycled W		724	10-Dec-24	26-Oct-27	43
Design & Construction Project		724	10-Dec-24	26-Oct-27	43
Key Milestones & Dates		724	10-Dec-24	26-Oct-27	43
ADM.10	NTP - Phase 1 Design	0	10-Dec-24*		0
ADM.20	Phase 2 GMP Proposal & Amendment Complete	0		01-Oct-25	43
ADM.30	Council Review & Approval - P2	20	02-Oct-25	29-Oct-25	43
ADM.50	Begin Early Work Procurement - Critical Equip / Site Civil	0	02-Oct-25		63
ADM.45	Receipt of Permit to Construct	0	16-Oct-25		53
ADM.40	NTP - Phase 2A Approval of Construction	0	30-Oct-25		43
ADM.60	Phase 1 Design Complete	0		15-Dec-25	127
ADM.70	NTP - Phase 2B Approval of Construction	0	23-Dec-25		122
ADM.80	Substantial Completion - Phase 2 Construction	0		16-Aug-27	83
ADM.90	Final Completion & Accept - Anticipated (Reqd End Q4 2(	0		26-Oct-27	43
Tasks		716	10-Dec-24	14-Oct-27	52
Design		255	10-Dec-24	15-Dec-25	122
Task 1.1: Preliminary Design Report (PDR) / 10% Design		90	10-Dec-24	18-Apr-25	68
P1D.1000	10% Design / PDR - Draft	50	10-Dec-24	21-Feb-25	43
P1D.1010	10% Design / PDR - Draft - City Review	20	24-Feb-25	21-Mar-25	48
P1D.1020	10% Design / PDR - Final	20	24-Mar-25	18-Apr-25	48
Phase 1 Schedule		35	10-Dec-24	30-Jan-25	123
P1D.1040	Phase 1 Schedule - Draft	15	10-Dec-24	31-Dec-24	47
P1D.1050	Phase 1 Schedule - Draft - City Review	10	02-Jan-25	15-Jan-25	123
P1D.1060	Phase 1 Schedule - Final	10	16-Jan-25	30-Jan-25	123
Preferred Vendor Identification		30	02-Jan-25	14-Feb-25	46
P1D.1030	Identify Preferred Vendors	30	02-Jan-25	14-Feb-25	46
Task 1.2: 30% Design Phase		65	24-Feb-25	23-May-25	73
P1D.1070	30% Design	45	24-Feb-25	25-Apr-25	43
P1D.1080	30% Design - City Review	20	28-Apr-25	23-May-25	73
Task 1.3: 60% Design Phase		110	28-Apr-25	01-Oct-25	44
P1D.1090	60% Design	50	28-Apr-25	08-Jul-25	43
P1D.1100	60% Design - City Review	20	09-Jul-25	05-Aug-25	83
P1D.1810	Early Works Package (Civil, Equip, Aeration Basins) - Dr	20	09-Jul-25	05-Aug-25	44
P1D.1820	Early Works Package (Civil, Equip, AB's) - City Review	20	06-Aug-25	03-Sep-25	44
P1D.1830	Early Works Package (Civil, Equip, AB's) - Final/Issue	20	04-Sep-25	01-Oct-25	44
Task 1.4: Hydraulic Profile Modeling		70	28-Apr-25	05-Aug-25	83
P1D.1110	Hydraulic Profile	50	28-Apr-25	08-Jul-25	83
P1D.1120	Hydraulic Profile - City Review	20	09-Jul-25	05-Aug-25	83
Task 1.5: 90% Design Phase		80	09-Jul-25	29-Oct-25	122
P1D.1130	90% Design	60	09-Jul-25	01-Oct-25	122
P1D.1140	90% Design - City Review	20	02-Oct-25	29-Oct-25	122
Task 1.6: Final Design Phase		50	02-Oct-25	15-Dec-25	122
P1D.1150	Final Design	50	02-Oct-25	15-Dec-25	122
Task 2.0: Cost Estimating		179	04-Mar-25	13-Nov-25	142
Task 2.1: Initial Baseline Cost Model & Updates		179	04-Mar-25	13-Nov-25	142
Initial Baseline Cost Estimate		30	04-Mar-25	14-Apr-25	72



Actual Level of Effort | Actual Work | Remaining Work | Critical Remaining Work | Milestone

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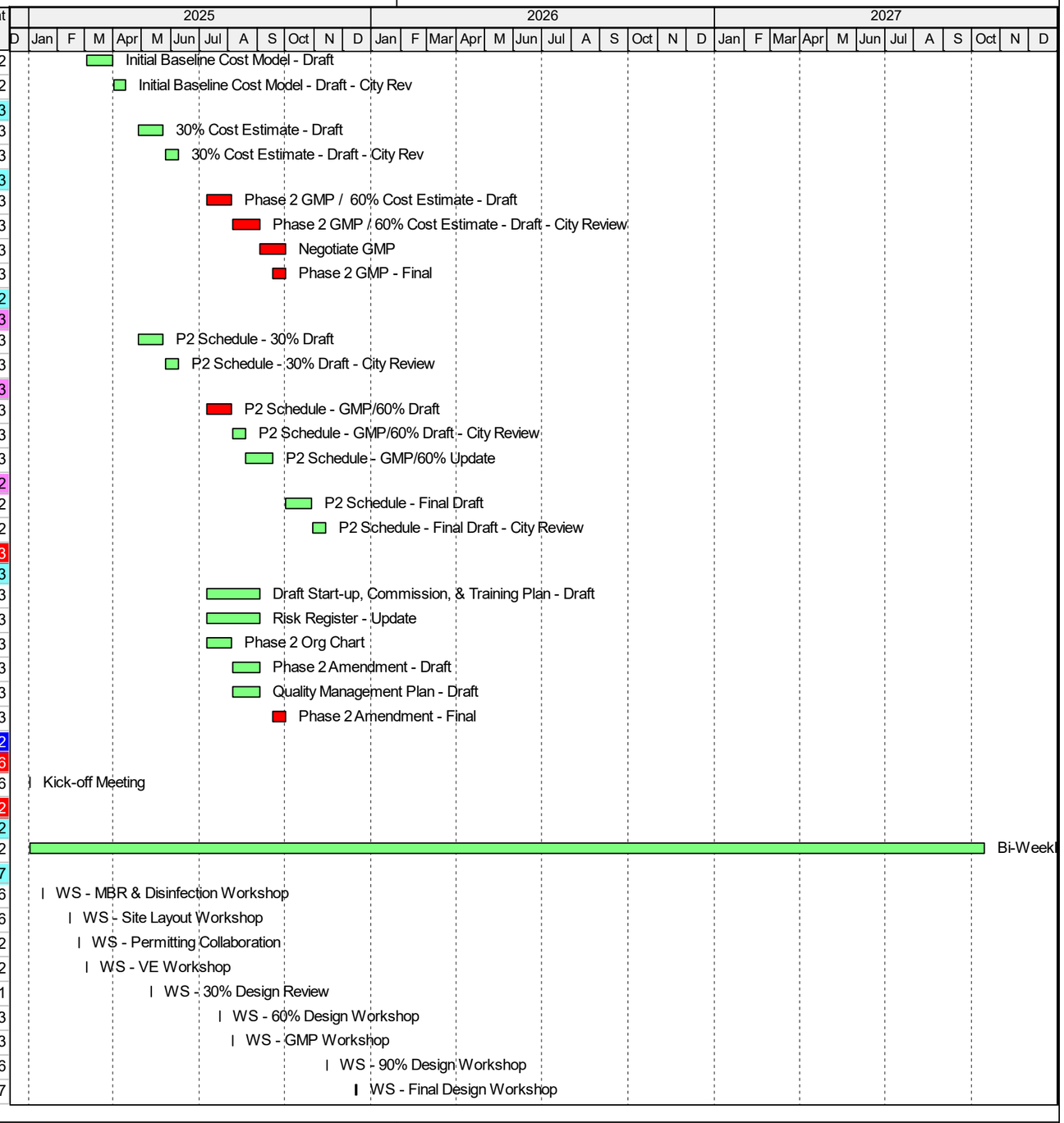
TASK filter: All Activities

Activity ID	Activity Name	Planned Duration	Start	Finish	Total Float
P1D.1160	Initial Baseline Cost Model - Draft	20	04-Mar-25	31-Mar-25	72
P1D.1170	Initial Baseline Cost Model - Draft - City Rev	10	01-Apr-25	14-Apr-25	72
30% Cost Estimate / Cost Update #1		30	28-Apr-25	09-Jun-25	63
P1D.1180	30% Cost Estimate - Draft	20	28-Apr-25	23-May-25	63
P1D.1190	30% Cost Estimate - Draft - City Rev	10	27-May-25	09-Jun-25	63
GMP / 60% Cost Estimate		60	09-Jul-25	01-Oct-25	43
P1D.1280	Phase 2 GMP / 60% Cost Estimate - Draft	20	09-Jul-25	05-Aug-25	43
P1D.1290	Phase 2 GMP / 60% Cost Estimate - Draft - City Review	20	06-Aug-25	03-Sep-25	43
P1D.1310	Negotiate GMP	20	04-Sep-25	01-Oct-25	43
P1D.1320	Phase 2 GMP - Final	10	18-Sep-25	01-Oct-25	43
Phase 2 CPM Schedules		140	28-Apr-25	13-Nov-25	142
Initial Phase 2 Schedule - 30%		30	28-Apr-25	09-Jun-25	63
P1D.1200	P2 Schedule - 30% Draft	20	28-Apr-25	23-May-25	63
P1D.1210	P2 Schedule - 30% Draft - City Review	10	27-May-25	09-Jun-25	63
Draft Baseline Phase 2 Schedule		50	09-Jul-25	17-Sep-25	53
P1D.1340	P2 Schedule - GMP/60% Draft	20	09-Jul-25	05-Aug-25	43
P1D.1350	P2 Schedule - GMP/60% Draft - City Review	10	06-Aug-25	19-Aug-25	53
P1D.1360	P2 Schedule - GMP/60% Update	20	20-Aug-25	17-Sep-25	53
Final Baseline Phase 2 Schedule		30	02-Oct-25	13-Nov-25	142
P1D.1260	P2 Schedule - Final Draft	20	02-Oct-25	29-Oct-25	142
P1D.1270	P2 Schedule - Final Draft - City Review	10	30-Oct-25	13-Nov-25	142
Task 2.2: GMP Development		60	09-Jul-25	01-Oct-25	43
Phase 2 GMP / Proposal Documents		60	09-Jul-25	01-Oct-25	43
P1D.1850	Draft Start-up, Commission, & Training Plan - Draft	40	09-Jul-25	03-Sep-25	53
P1D.1860	Risk Register - Update	40	09-Jul-25	03-Sep-25	53
P1D.1870	Phase 2 Org Chart	20	09-Jul-25	05-Aug-25	53
P1D.1300	Phase 2 Amendment - Draft	20	06-Aug-25	03-Sep-25	53
P1D.1840	Quality Management Plan - Draft	20	06-Aug-25	03-Sep-25	53
P1D.1330	Phase 2 Amendment - Final	10	18-Sep-25	01-Oct-25	43
Task 3.0: Meeting & Reports		701	02-Jan-25	14-Oct-27	52
Task 3.1: Kick-off Meeting/Workshop		1	02-Jan-25	02-Jan-25	46
P1D.1370	Kick-off Meeting	1	02-Jan-25	02-Jan-25	46
Task 3.2: Progress Meetings & Reports		700	02-Jan-25	14-Oct-27	52
Progress Meetings		700	02-Jan-25	14-Oct-27	52
P1D.1460	Bi-Weekly Progress Meetings	700	02-Jan-25	14-Oct-27	52
Technical Collaborations / Workshops		230	16-Jan-25	15-Dec-25	127
P1D.1380	WS - MBR & Disinfection Workshop	1	16-Jan-25	16-Jan-25	66
P1D.1390	WS - Site Layout Workshop	1	14-Feb-25	14-Feb-25	46
P1D.1400	WS - Permitting Collaboration	1	24-Feb-25	24-Feb-25	72
P1D.1410	WS - VE Workshop	1	03-Mar-25	03-Mar-25	72
P1D.1420	WS - 30% Design Review	1	12-May-25	12-May-25	61
P1D.1430	WS - 60% Design Workshop	1	23-Jul-25	23-Jul-25	93
P1D.1440	WS - GMP Workshop	1	06-Aug-25	06-Aug-25	83
P1D.1450	WS - 90% Design Workshop	1	14-Nov-25	14-Nov-25	146
P1D.1880	WS - Final Design Workshop	1	15-Dec-25	15-Dec-25	127



Actual Level of Effort | Actual Work | Remaining Work | Critical Remaining Work | Milestone

AECOM W.M. LYLES CO. a joint venture

TASK filter: All Activities

1750

Activity ID	Activity Name	Planned Duration	Start	Finish	Total Float
Task 3.3: Project Status Reports & Monthly Invoicing		700	02-Jan-25	14-Oct-27	52
P1D.1470	Monthly PSRs & Invoicing	700	02-Jan-25	14-Oct-27	52
Task 3.4: Risk Management Workshop		21	28-Apr-25	27-May-25	56
P1D.1890	Risk Register - Draft	20	28-Apr-25	23-May-25	56
P1D.1480	WS - Risk Management Workshop	1	27-May-25	27-May-25	56
Task 3.5: Constructability Review Workshops		36	03-Jun-25	23-Jul-25	92
P1D.1490	WS - Constructability Workshop #1	1	03-Jun-25	03-Jun-25	56
P1D.1500	WS - Constructability Workshop #2	1	23-Jul-25	23-Jul-25	92
Task 3.6: SCADA Development & Scoping Workshops		120	18-Feb-25	06-Aug-25	161
P1D.1510	WS - SCADA Workshop #1	1	18-Feb-25	18-Feb-25	46
P1D.1520	WS - SCADA Workshop #2	1	24-Mar-25	24-Mar-25	67
P1D.1530	WS - SCADA Workshop #3	1	18-Jun-25	18-Jun-25	56
P1D.1540	WS - SCADA Workshop #4	1	06-Aug-25	06-Aug-25	161
Task 4.0: Preliminary Investigations & Support		360	02-Jan-25	08-Jun-26	322
Task 4.1: Potholing & Cultural Monitoring		35	16-Jan-25	10-Mar-25	78
P1D.1550	Potholing	5	16-Jan-25	24-Jan-25	78
P1D.1560	Potholing Report	30	24-Jan-25	10-Mar-25	78
Task 4.2: Topographic Survey (Aerial, Title Report, Boundary Summary)		40	16-Jan-25	17-Mar-25	73
P1D.1570	Survey	20	16-Jan-25	14-Feb-25	73
P1D.1580	Survey Report	20	14-Feb-25	17-Mar-25	73
Task 4.3: Environmental Support (IS-MND)		30	02-Jan-25	14-Feb-25	48
P1D.1590	Environmental Support	30	02-Jan-25	14-Feb-25	48
Task 4.4: Geotechnical Investigation		65	16-Jan-25	18-Apr-25	48
P1D.1600	Geotechnical Report - Draft	30	16-Jan-25	03-Mar-25	53
P1D.1610	Geotechnical Report -Draft-City Rev	10	03-Mar-25	17-Mar-25	53
P1D.1620	Geotechnical Report - Final	20	24-Mar-25	18-Apr-25	48
Task 4.5: Permitting Support		280	28-Apr-25	08-Jun-26	322
City of Banning		80	09-Jul-25	29-Oct-25	157
P1D.1750	County Traffic Control Permit	40	09-Jul-25	03-Sep-25	83
P1D.1760	Community Development	30	09-Jul-25	19-Aug-25	152
P1D.1770	Building Permit	60	06-Aug-25	29-Oct-25	157
P1D.1780	Public Works Coordination	20	06-Aug-25	03-Sep-25	142
P1D.1790	Encroachment Permit Coordination	20	06-Aug-25	03-Sep-25	83
County of Riverside		150	09-Jul-25	12-Feb-26	397
P1D.1630	Health Dept. - Solid Waste Facility Reqs	20	09-Jul-25	05-Aug-25	162
P1D.1640	Flood Control & Water Conservation District	40	09-Jul-25	03-Sep-25	142
P1D.1650	Transport. & Land Management Agency & Planning	30	06-Aug-25	17-Sep-25	132
P1D.1660	Fire Dept. - Hazardous Material Business Plan	40	16-Dec-25	12-Feb-26	397
CA State Waterboard R7: Colorado River		90	24-Jun-25	29-Oct-25	152
Stormwater		50	24-Jun-25	03-Sep-25	142
P1D.1670	Industrial User Waste Discharge Permits	50	24-Jun-25	03-Sep-25	142
P1D.1680	Construction General Permit	40	09-Jul-25	03-Sep-25	83
P1D.1690	SWPPP Plan Development	40	09-Jul-25	03-Sep-25	83
P1D.1700	SWPPP Updates assoc. w/Industrial Activities	30	23-Jul-25	03-Sep-25	142
Recycled Water		60	06-Aug-25	29-Oct-25	152
P1D.1710	Title 22 Eng. Report for Prod., Dist. & Use of Rec. Water	60	06-Aug-25	29-Oct-25	152



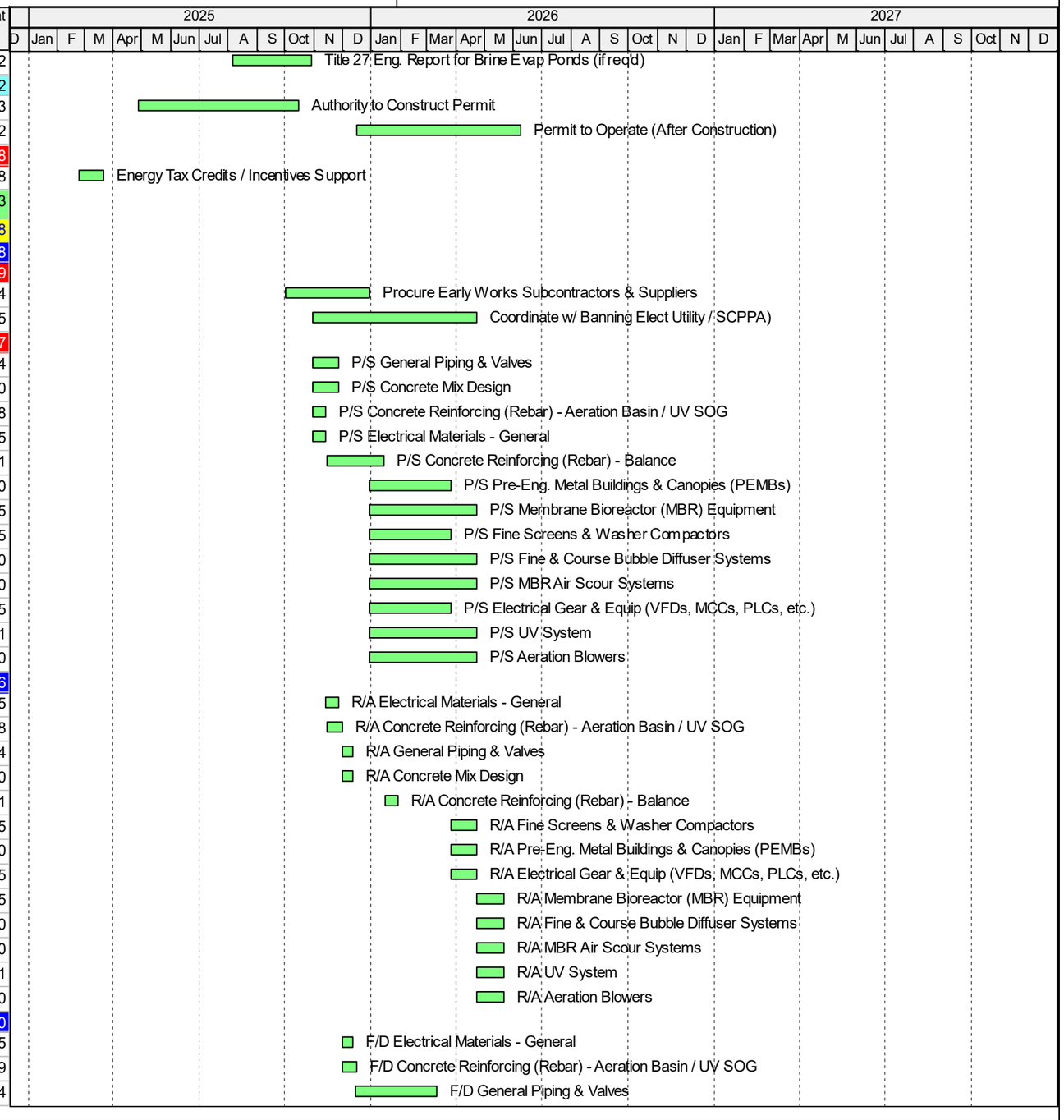
Actual Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

AECOM W.M. LYLES CO. a joint venture

TASK filter: All Activities

1751

Activity ID	Activity Name	Planned Duration	Start	Finish	Total Float
P1D.1720	Title 27 Eng. Report for Brine Evap Ponds (if req'd)	60	06-Aug-25	29-Oct-25	152
South Coast Air Quality Management District (AQMD)		280	28-Apr-25	08-Jun-26	322
P1D.1730	Authority to Construct Permit	120	28-Apr-25	15-Oct-25	53
P1D.1740	Permit to Operate (After Construction)	120	16-Dec-25	08-Jun-26	322
Energy Tax Credits / Incentives		20	24-Feb-25	21-Mar-25	48
P1D.1800	Energy Tax Credits / Incentives Support	20	24-Feb-25	21-Mar-25	48
CONSTRUCTION		519	02-Oct-25	26-Oct-27	43
Construction Phase 2A - Early Work		395	02-Oct-25	30-Apr-27	68
Early Procurement		139	02-Oct-25	23-Apr-26	308
Early Administative Tasks		138	02-Oct-25	22-Apr-26	309
C2A.1000	Procure Early Works Subcontractors & Suppliers	60	02-Oct-25	30-Dec-25	44
C2A.1010	Coordinate w/ Banning Elect Utility / SCPPA)	120	30-Oct-25	22-Apr-26	315
Prepare Early Submittals & Submit		119	30-Oct-25	23-Apr-26	187
C2A.1030	P/S General Piping & Valves	20	30-Oct-25	26-Nov-25	114
C2A.1040	P/S Concrete Mix Design	20	30-Oct-25	26-Nov-25	50
C2A.1020	P/S Concrete Reinforcing (Rebar) - Aeration Basin / UV S	10	30-Oct-25	13-Nov-25	48
C2A.1050	P/S Electrical Materials - General	10	30-Oct-25	12-Nov-25	45
C2A.1060	P/S Concrete Reinforcing (Rebar) - Balance	40	14-Nov-25	14-Jan-26	191
C2A.1070	P/S Pre-Eng. Metal Buildings & Canopies (PEMBs)	60	30-Dec-25	26-Mar-26	190
C2A.1080	P/S Membrane Bioreactor (MBR) Equipment	80	30-Dec-25	23-Apr-26	105
C2A.1100	P/S Fine Screens & Washer Compactors	60	30-Dec-25	26-Mar-26	205
C2A.1110	P/S Fine & Course Bubble Diffuser Systems	80	30-Dec-25	23-Apr-26	70
C2A.1120	P/S MBR Air Scour Systems	80	30-Dec-25	23-Apr-26	190
C2A.1130	P/S Electrical Gear & Equip (VFDs, MCCs, PLCs, etc.)	60	30-Dec-25	26-Mar-26	45
C2A.1170	P/S UV System	80	30-Dec-25	23-Apr-26	161
C2A.1180	P/S Aeration Blowers	80	30-Dec-25	23-Apr-26	70
Early Submittal Review & Approval		130	13-Nov-25	21-May-26	186
C2A.1470	R/A Electrical Materials - General	10	13-Nov-25	26-Nov-25	45
C2A.1440	R/A Concrete Reinforcing (Rebar) - Aeration Basin / UV S	10	14-Nov-25	01-Dec-25	48
C2A.1450	R/A General Piping & Valves	10	01-Dec-25	12-Dec-25	114
C2A.1460	R/A Concrete Mix Design	10	01-Dec-25	12-Dec-25	50
C2A.1480	R/A Concrete Reinforcing (Rebar) - Balance	10	15-Jan-26	29-Jan-26	191
C2A.1490	R/A Fine Screens & Washer Compactors	20	26-Mar-26	23-Apr-26	205
C2A.1500	R/A Pre-Eng. Metal Buildings & Canopies (PEMBs)	20	26-Mar-26	23-Apr-26	190
C2A.1510	R/A Electrical Gear & Equip (VFDs, MCCs, PLCs, etc.)	20	26-Mar-26	23-Apr-26	45
C2A.1560	R/A Membrane Bioreactor (MBR) Equipment	20	23-Apr-26	21-May-26	105
C2A.1580	R/A Fine & Course Bubble Diffuser Systems	20	23-Apr-26	21-May-26	70
C2A.1590	R/A MBR Air Scour Systems	20	23-Apr-26	21-May-26	190
C2A.1600	R/A UV System	20	23-Apr-26	21-May-26	161
C2A.1610	R/A Aeration Blowers	20	23-Apr-26	21-May-26	70
Early Fabrication & Delivery Release		361	01-Dec-25	30-Apr-27	70
C2A.1220	F/D Electrical Materials - General	10	01-Dec-25	12-Dec-25	45
C2A.1200	F/D Concrete Reinforcing (Rebar) - Aeration Basin / UV S	10	01-Dec-25	15-Dec-25	49
C2A.1210	F/D General Piping & Valves	60	15-Dec-25	11-Mar-26	114



Actual Level of Effort | Actual Work | Remaining Work | Critical Remaining Work | Milestone

AECOM W.M. LYLES CO. a joint venture

TASK filter: All Activities

Activity ID	Activity Name	Planned Duration	Start	Finish	Total Float
C2A.1230	F/D Concrete Reinforcing (Rebar) - Balance	20	29-Jan-26	27-Feb-26	191
C2A.1250	F/D Electrical Gear & Equip (VFDs, MCCs, PLCs, etc.)	260	23-Apr-26	30-Apr-27	45
C2A.1260	F/D Fine Screens & Washer Compactors	120	23-Apr-26	13-Oct-26	205
C2A.1270	F/D Pre-Eng. Metal Buildings & Canopies (PEMBs)	60	23-Apr-26	20-Jul-26	190
C2A.1300	F/D Membrane Bioreactor (MBR) Equipment	200	21-May-26	05-Mar-27	105
C2A.1320	F/D UV Sytem	120	21-May-26	10-Nov-26	161
C2A.1330	F/D MBR Air Scour Systems	120	21-May-26	10-Nov-26	190
C2A.1340	F/D Fine & Course Bubble Diffuser Systems	200	21-May-26	05-Mar-27	70
C2A.1350	F/D Aeration Blowers	240	21-May-26	30-Apr-27	70
Mobilization		6	30-Oct-25	06-Nov-25	43
C2A.1370	Mobilization	5	30-Oct-25	05-Nov-25	44
C2A.1380	Set-up Traffic Control	1	30-Oct-25	30-Oct-25	43
C2A.1400	Install Temp Facilities (Trailers, Toilets, Parking, etc.)	5	30-Oct-25	06-Nov-25	44
C2A.1390	Install SWPPP BMPs	3	30-Oct-25	04-Nov-25	44
Early Civil Site Work		30	06-Nov-25	22-Dec-25	163
C2A.1410	Clear & Grub @ Site	5	06-Nov-25	13-Nov-25	44
C2A.1420	Mass EXC @ Aeration Basins (elev 2109')	15	13-Nov-25	08-Dec-25	44
C2A.1430	Mass EXC @ UV Basin (elev 2120')	10	08-Dec-25	22-Dec-25	163
Early Aeration Basins / Reactors 1-3 Work		160	08-Dec-25	27-Jul-26	44
C2A.1620	Cut & Grade - Aeration Basins 1-3	5	08-Dec-25	15-Dec-25	44
C2A.1630	Install BG Utility Piping	5	15-Dec-25	22-Dec-25	44
C2A.1640	ELEC - Install BG / In-slab Conduit	15	15-Dec-25	07-Jan-26	44
C2A.1650	F/R/P - SOG, Walls, Deck - Aeration Basin 1-3	150	22-Dec-25	27-Jul-26	44
Construction Phase 2B		464	23-Dec-25	26-Oct-27	43
Procurement		239	23-Dec-25	04-Dec-26	193
Administrative Tasks		40	23-Dec-25	20-Feb-26	149
C2B.2350	Design - Issue For Construction Docs	10	23-Dec-25	07-Jan-26	122
C2B.2360	Procure Misc Subcontractors & Suppliers	40	23-Dec-25	20-Feb-26	149
Prepare Submittals & Submit		60	20-Feb-26	15-May-26	235
C2A.1140	P/S Digester Heat Exchangers	60	20-Feb-26	15-May-26	208
C2A.1150	P/S MBR Chemical Feed Systems - Citric Acid/Hypo	60	20-Feb-26	15-May-26	169
C2A.1190	P/S Rotary Drum Thickener (RDT) Equipment	60	20-Feb-26	15-May-26	239
C2B.2280	P/S RAS Pumps	60	20-Feb-26	15-May-26	209
C2B.2290	P/S Permeate Backwash Pumps	60	20-Feb-26	15-May-26	186
C2B.2300	P/S Permeate Tanks (Bolted Steel)	40	20-Feb-26	17-Apr-26	249
C2B.2310	P/S Plant Water Pumps	60	20-Feb-26	15-May-26	155
C2B.2320	P/S Polymer Feed Pumps	60	20-Feb-26	15-May-26	179
C2B.2330	P/S Chemical Feed Tanks	40	20-Feb-26	17-Apr-26	259
C2B.2340	P/S WAS Pumps	60	20-Feb-26	15-May-26	179
C2A.1160	P/S Grit / Cyclone Unit	60	23-Feb-26	15-May-26	149
C2A.1670	P/S Digester Hot Water Boiler	40	23-Feb-26	17-Apr-26	223
C2A.1700	P/S Primary Clarifier Equipment	60	23-Feb-26	15-May-26	194
C2A.1730	P/S Grit Pumps	60	23-Feb-26	15-May-26	209
Review & Approve Submittals		40	17-Apr-26	15-Jun-26	225
C2B.2230	R/A Permeate Tanks	10	17-Apr-26	01-May-26	249



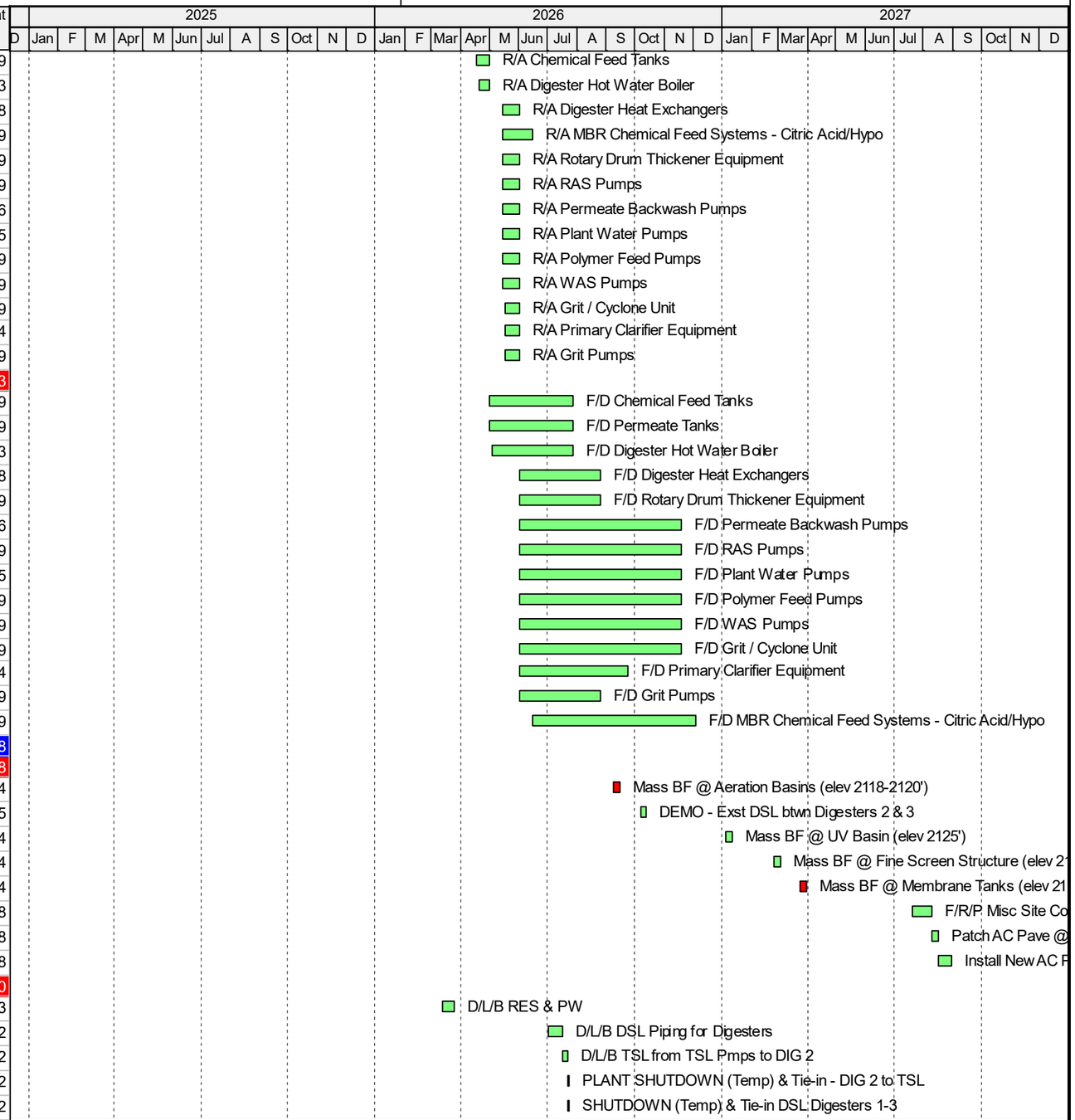
Actual Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

AECOM W.M. LYLES CO. a joint venture

TASK filter: All Activities

1753

Activity ID	Activity Name	Planned Duration	Start	Finish	Total Float
C2B.2260	R/A Chemical Feed Tanks	10	17-Apr-26	01-May-26	259
C2A.1680	R/A Digester Hot Water Boiler	10	20-Apr-26	01-May-26	223
C2A.1520	R/A Digester Heat Exchangers	10	15-May-26	01-Jun-26	208
C2A.1530	R/A MBR Chemical Feed Systems - Citric Acid/Hypo	20	15-May-26	15-Jun-26	169
C2A.1550	R/A Rotary Drum Thickener Equipment	10	15-May-26	01-Jun-26	239
C2B.2210	R/A RAS Pumps	10	15-May-26	01-Jun-26	209
C2B.2220	R/A Permeate Backwash Pumps	10	15-May-26	01-Jun-26	186
C2B.2240	R/A Plant Water Pumps	10	15-May-26	01-Jun-26	155
C2B.2250	R/A Polymer Feed Pumps	10	15-May-26	01-Jun-26	179
C2B.2270	R/A WAS Pumps	10	15-May-26	01-Jun-26	179
C2A.1290	R/A Grit / Cyclone Unit	10	18-May-26	01-Jun-26	149
C2A.1710	R/A Primary Clarifier Equipment	10	18-May-26	01-Jun-26	194
C2A.1740	R/A Grit Pumps	10	18-May-26	01-Jun-26	209
Fabrication & Delivery		149	01-May-26	04-Dec-26	193
C2B.2180	F/D Chemical Feed Tanks	60	01-May-26	28-Jul-26	259
C2B.2200	F/D Permeate Tanks	60	01-May-26	28-Jul-26	249
C2A.1690	F/D Digester Hot Water Boiler	60	04-May-26	28-Jul-26	223
C2A.1240	F/D Digester Heat Exchangers	60	01-Jun-26	25-Aug-26	208
C2A.1360	F/D Rotary Drum Thickener Equipment	60	01-Jun-26	25-Aug-26	239
C2B.2140	F/D Permeate Backwash Pumps	120	01-Jun-26	18-Nov-26	186
C2B.2150	F/D RAS Pumps	120	01-Jun-26	18-Nov-26	209
C2B.2160	F/D Plant Water Pumps	120	01-Jun-26	18-Nov-26	155
C2B.2170	F/D Polymer Feed Pumps	120	01-Jun-26	18-Nov-26	179
C2B.2190	F/D WAS Pumps	120	01-Jun-26	18-Nov-26	179
C2A.1660	F/D Grit / Cyclone Unit	120	02-Jun-26	19-Nov-26	149
C2A.1720	F/D Primary Clarifier Equipment	80	02-Jun-26	23-Sep-26	194
C2A.1750	F/D Grit Pumps	60	02-Jun-26	25-Aug-26	209
C2A.1280	F/D MBR Chemical Feed Systems - Citric Acid/Hypo	120	15-Jun-26	04-Dec-26	169
Civil Site Work		421	07-Jan-26	30-Aug-27	88
Misc Site Work		251	08-Sep-26	30-Aug-27	88
C2B.2370	Mass BF @ Aeration Basins (elev 2118-2120')	5	08-Sep-26	15-Sep-26	44
C2B.2380	DEMO - Exst DSL btwn Digesters 2 & 3	3	07-Oct-26	12-Oct-26	315
C2B.2390	Mass BF @ UV Basin (elev 2125')	5	05-Jan-27	11-Jan-27	114
C2B.2400	Mass BF @ Fine Screen Structure (elev 2125')	5	24-Feb-27	03-Mar-27	54
C2B.2410	Mass BF @ Membrane Tanks (elev 2125')	5	24-Mar-27	31-Mar-27	44
C2B.2420	F/R/P Misc Site Concrete @ MBR Facilities	15	20-Jul-27	09-Aug-27	88
C2B.2440	Patch AC Pave @ Existing Plant	5	10-Aug-27	16-Aug-27	88
C2B.2430	Install New AC Paving @ MBR Facilities	10	17-Aug-27	30-Aug-27	88
Below Grade Pipe Installation		305	12-Mar-26	20-May-27	160
C2B.2450	D/L/B RES & PW	10	12-Mar-26	25-Mar-26	343
C2B.2490	D/L/B DSL Piping for Digesters	10	02-Jul-26	17-Jul-26	292
C2B.2500	D/L/B TSL from TSL Pmps to DIG 2	3	17-Jul-26	22-Jul-26	292
C2B.2510	PLANT SHUTDOWN (Temp) & Tie-in - DIG 2 to TSL	1	22-Jul-26	23-Jul-26	292
C2B.2520	SHUTDOWN (Temp) & Tie-in DSL Digesters 1-3	1	22-Jul-26	23-Jul-26	292



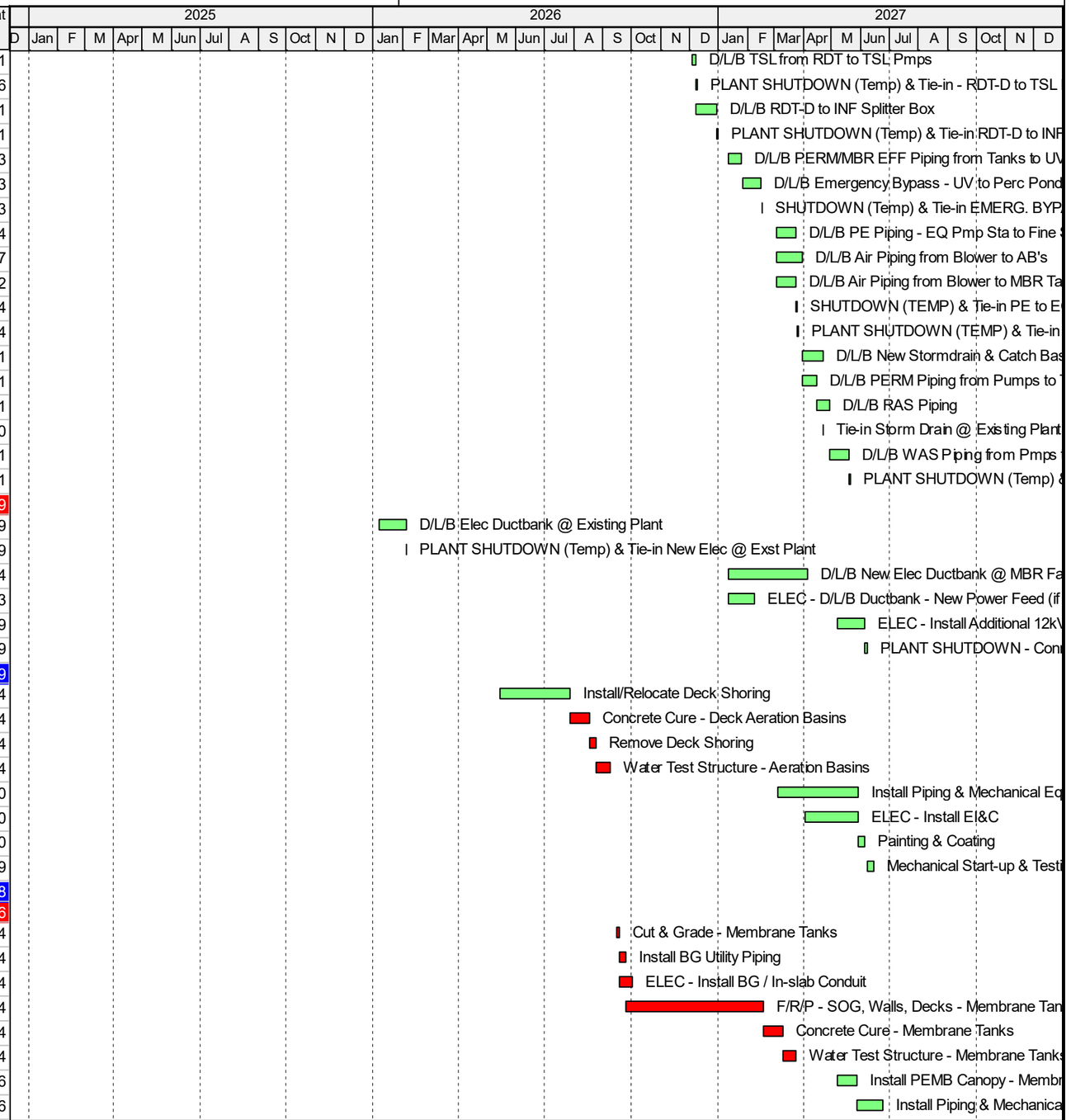
Actual Level of Effort | Actual Work | Remaining Work | Critical Remaining Work | Milestone

AECOM W.M. LYLES CO. a joint venture

TASK filter: All Activities

1754

Activity ID	Activity Name	Planned Duration	Start	Finish	Total Float
C2B.2530	D/L/B TSL from RDT to TSL Pmps	2	04-Dec-26	08-Dec-26	181
C2B.2540	PLANT SHUTDOWN (Temp) & Tie-in - RDT-D to TSL P	1	08-Dec-26	09-Dec-26	196
C2B.2550	D/L/B RDT-D to INF Splitter Box	15	08-Dec-26	30-Dec-26	181
C2B.2560	PLANT SHUTDOWN (Temp) & Tie-in RDT-D to INF Spli	1	30-Dec-26	31-Dec-26	181
C2B.2570	D/L/B PERM/MBR EFF Piping from Tanks to UV	10	12-Jan-27	25-Jan-27	153
C2B.2580	D/L/B Emergency Bypass - UV to Perc Ponds	15	26-Jan-27	15-Feb-27	153
C2B.2590	SHUTDOWN (Temp) & Tie-in EMERG. BYPASS to PEF	1	16-Feb-27	16-Feb-27	153
C2B.2460	D/L/B PE Piping - EQ Pmp Sta to Fine Screen	15	03-Mar-27	24-Mar-27	104
C2B.2600	D/L/B Air Piping from Blower to AB's	20	03-Mar-27	31-Mar-27	117
C2B.2610	D/L/B Air Piping from Blower to MBR Tanks	15	03-Mar-27	24-Mar-27	122
C2B.2470	SHUTDOWN (TEMP) & Tie-in PE to EQ Pmp Sta	1	24-Mar-27	25-Mar-27	104
C2B.2480	PLANT SHUTDOWN (TEMP) & Tie-in PE to TRIK Filter	1	25-Mar-27	26-Mar-27	104
C2B.2620	D/L/B New Stormdrain & Catch Basins	15	31-Mar-27	21-Apr-27	151
C2B.2630	D/L/B PERM Piping from Pumps to Tanks	10	31-Mar-27	14-Apr-27	81
C2B.2640	D/L/B RAS Piping	10	14-Apr-27	28-Apr-27	81
C2B.2650	Tie-in Storm Drain @ Existing Plant	1	21-Apr-27	22-Apr-27	180
C2B.2660	D/L/B WAS Piping from Pmps to Digesters	15	28-Apr-27	19-May-27	81
C2B.2670	PLANT SHUTDOWN (Temp) & Tie-in - RSL/WAS at DIC	1	19-May-27	20-May-27	81
Site Electrical		361	07-Jan-26	07-Jun-27	69
C2B.2680	D/L/B Elec Ductbank @ Existing Plant	20	07-Jan-26	04-Feb-26	409
C2B.2690	PLANT SHUTDOWN (Temp) & Tie-in New Elec @ Exst	1	04-Feb-26	05-Feb-26	409
C2B.2700	D/L/B New Elec Ductbank @ MBR Facilities	60	12-Jan-27	05-Apr-27	114
C2B.2710	ELEC - D/L/B Ductbank - New Power Feed (if needed)	20	12-Jan-27	08-Feb-27	133
C2B.2720	ELEC - Install Additional 12kV Power Feed (if needed)	20	07-May-27	04-Jun-27	69
C2B.2730	PLANT SHUTDOWN - Connect New Addtl Power Feed	1	04-Jun-27	07-Jun-27	69
Aeration Basins / Reactors 1-3		276	14-May-26	14-Jun-27	69
C2B.1390	Install/Relocate Deck Shoring	50	14-May-26	27-Jul-26	64
C2B.1400	Concrete Cure - Deck Aeration Basins	15	27-Jul-26	17-Aug-26	44
C2B.1410	Remove Deck Shoring	5	17-Aug-26	24-Aug-26	44
C2B.1420	Water Test Structure - Aeration Basins	10	24-Aug-26	08-Sep-26	44
C2B.1430	Install Piping & Mechanical Equipment	60	05-Mar-27	28-May-27	70
C2B.1440	ELEC - Install EI&C	40	02-Apr-27	28-May-27	70
C2B.1450	Painting & Coating	5	28-May-27	04-Jun-27	70
C2B.1460	Mechanical Start-up & Testing - Aeration Basins	5	07-Jun-27	14-Jun-27	69
Membrane Facilities		215	15-Sep-26	26-Jul-27	48
Membrane Tanks		214	15-Sep-26	15-Jul-27	46
C2B.1740	Cut & Grade - Membrane Tanks	3	15-Sep-26	18-Sep-26	44
C2B.1750	Install BG Utility Piping	5	18-Sep-26	25-Sep-26	44
C2B.1760	ELEC - Install BG / In-slab Conduit	10	18-Sep-26	02-Oct-26	44
C2B.1770	F/R/P - SOG, Walls, Decks - Membrane Tanks	100	25-Sep-26	17-Feb-27	44
C2B.1780	Concrete Cure - Membrane Tanks	15	17-Feb-27	10-Mar-27	44
C2B.1790	Water Test Structure - Membrane Tanks	10	10-Mar-27	24-Mar-27	44
C2B.1800	Install PEMB Canopy - Membrane / Permeate Pumps	15	06-May-27	27-May-27	46
C2B.1810	Install Piping & Mechanical Equipment	20	27-May-27	24-Jun-27	46



Actual Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

AECOM W.M. LYLES CO. a joint venture

TASK filter: All Activities

1755

Activity ID	Activity Name	Planned Duration	Start	Finish	Total Float
C2B.1820	ELEC - Install EI&C	20	10-Jun-27	08-Jul-27	46
C2B.1830	Mechanical Start-up & Testing - Membrane Tanks	5	08-Jul-27	15-Jul-27	46
Permeate Pumps		54	31-Mar-27	15-Jun-27	68
C2B.1840	Cut & Grade - Permeate Pumps	1	31-Mar-27	01-Apr-27	46
C2B.1850	Install BG Utility Piping	5	01-Apr-27	08-Apr-27	46
C2B.1860	ELEC - BG / In-slab Conduit	10	01-Apr-27	15-Apr-27	46
C2B.1870	F/R/P SOG - Permeate Pumps	5	15-Apr-27	22-Apr-27	46
C2B.1880	Concrete Cure - Permeate Pmp SOG	10	22-Apr-27	06-May-27	46
C2B.1890	Install Piping & Mechanical Equipment	10	06-May-27	20-May-27	68
C2B.1900	ELEC - Install EI&C	5	25-May-27	01-Jun-27	68
C2B.1920	Painting & Coating	5	01-Jun-27	08-Jun-27	68
C2B.1910	Mechanical Start-up & Testing - Permeate Pumps	5	08-Jun-27	15-Jun-27	68
Permeate Tanks		81	31-Mar-27	26-Jul-27	48
C2B.1930	Cut & Grade - Permeate Storage Tanks	3	31-Mar-27	05-Apr-27	44
C2B.1940	Install BG Utility Piping	2	05-Apr-27	07-Apr-27	44
C2B.1950	ELEC - Install BG / In-slab Conduit	3	07-Apr-27	12-Apr-27	44
C2B.1960	F/R/P - SOG - Permeate Tank #1	5	12-Apr-27	19-Apr-27	44
C2B.1970	Concrete Cure - Permeate Tank #1	20	19-Apr-27	17-May-27	44
C2B.1980	F/R/P - SOG - Permeate Tank #2	5	19-Apr-27	26-Apr-27	49
C2B.1990	Concrete Cure - Permeate Tank #2	20	26-Apr-27	24-May-27	49
C2B.2000	Install Bolted Steel Tank - Permeate Tank #1	10	17-May-27	31-May-27	44
C2B.2010	Water Test Tank - Permeate Tank #1	10	31-May-27	14-Jun-27	49
C2B.2020	Install Bolted Steel Tank - Permeate Tank #2	10	31-May-27	14-Jun-27	44
C2B.2030	Install Piping & Mechanical Equipment - Permeate Tank #	5	14-Jun-27	21-Jun-27	49
C2B.2040	Water Test Tank - Permeate Tank #2	10	14-Jun-27	28-Jun-27	44
C2B.2050	ELEC - Install EI&C - Permeate Tank #1	5	21-Jun-27	28-Jun-27	49
C2B.2060	Install Piping & Mechanical - Permeate Tank #2	5	28-Jun-27	05-Jul-27	44
C2B.2090	Painting & Coating - Permeate Tank #1	10	28-Jun-27	12-Jul-27	49
C2B.2070	ELEC - Install EI&C - Permeate Tank #2	5	05-Jul-27	12-Jul-27	44
C2B.2080	Mechanical Start-up & Testing - Permeate Tank #1	5	12-Jul-27	19-Jul-27	44
C2B.2100	Painting & Coating - Permeate Tank #2	10	12-Jul-27	26-Jul-27	49
C2B.2870	Mechancial Start-up & Testing - Permeate Tank #2	5	20-Jul-27	26-Jul-27	48
MBR Chemical Facilities		0			0
UV Dinsinfection Facility		334	20-Feb-26	11-Jun-27	70
C2B.2740	Cut & Grade - UV	5	20-Feb-26	27-Feb-26	122
C2B.2750	Install BG Utility Piping	15	12-Mar-26	01-Apr-26	114
C2B.2760	ELEC - Install BG / In-slab Piping	15	19-Mar-26	08-Apr-26	114
C2B.2770	F/R/P - SOG, Walls, Deckss - UV	160	02-Apr-26	16-Nov-26	114
C2B.2780	Install/Relocate Deck Shoring	20	20-Oct-26	16-Nov-26	114
C2B.2790	Concrete Cure - SOG, Walls, Decks - UV	20	17-Nov-26	16-Dec-26	114
C2B.2800	Remove Deck Shoring	2	17-Dec-26	18-Dec-26	114
C2B.2810	Water Test Structure - UV	10	21-Dec-26	04-Jan-27	114
C2B.2820	Install Piping & Mechanical Equipment	30	05-Jan-27	15-Feb-27	125
C2B.2830	ELEC - Install EI&C	40	19-Jan-27	15-Mar-27	125



Actual Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

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TASK filter: All Activities

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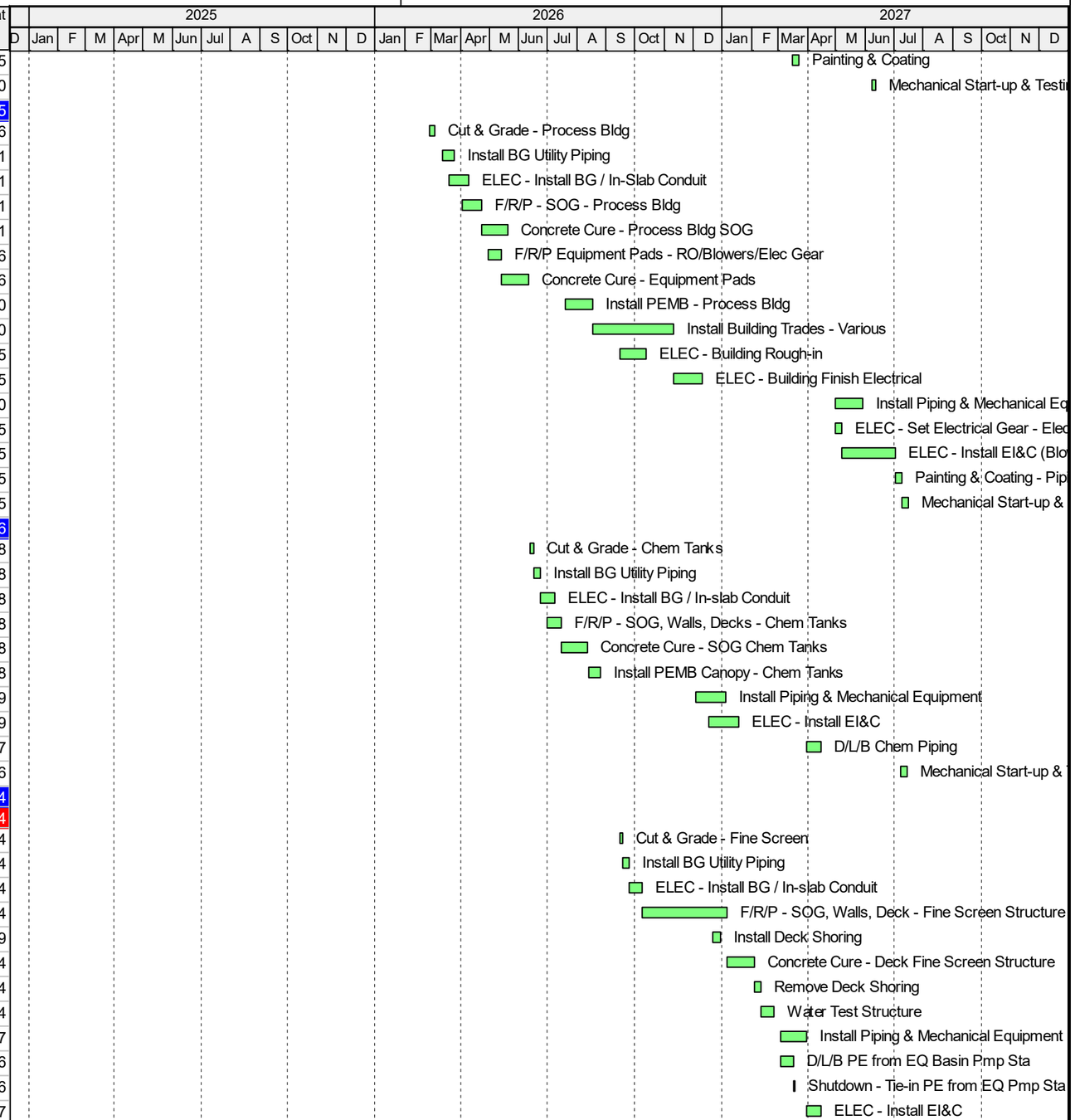
Activity ID	Activity Name	Planned Duration	Start	Finish	Total Float
C2B.2840	Painting & Coating	5	16-Mar-27	22-Mar-27	125
C2B.2850	Mechanical Start-up & Testing - UV	4	07-Jun-27	11-Jun-27	70
Process Bldg (Blower, Elec, Lab/Officel)		354	27-Feb-26	16-Jul-27	45
C2B.1580	Cut & Grade - Process Bldg	3	27-Feb-26	04-Mar-26	236
C2B.1590	Install BG Utility Piping	10	12-Mar-26	25-Mar-26	231
C2B.1600	ELEC - Install BG / In-Slab Conduit	15	19-Mar-26	08-Apr-26	231
C2B.1610	F/R/P - SOG - Process Bldg	15	02-Apr-26	22-Apr-26	231
C2B.1620	Concrete Cure - Process Bldg SOG	20	23-Apr-26	20-May-26	231
C2B.1630	F/R/P Equipment Pads - RO/Blowers/Elec Gear	10	30-Apr-26	13-May-26	236
C2B.1640	Concrete Cure - Equipment Pads	20	14-May-26	11-Jun-26	236
C2B.1650	Install PEMB - Process Bldg	20	20-Jul-26	17-Aug-26	190
C2B.1660	Install Building Trades - Various	60	17-Aug-26	10-Nov-26	190
C2B.1670	ELEC - Building Rough-in	20	15-Sep-26	13-Oct-26	215
C2B.1680	ELEC - Building Finish Electrical	20	10-Nov-26	10-Dec-26	195
C2B.1690	Install Piping & Mechanical Equipment - (Blowers, etc.)	20	30-Apr-27	28-May-27	70
C2B.1700	ELEC - Set Electrical Gear - Elec Rm	5	30-Apr-27	07-May-27	45
C2B.1710	ELEC - Install EI&C (Blowers, etc.)	40	07-May-27	02-Jul-27	45
C2B.1720	Painting & Coating - Piping	5	02-Jul-27	09-Jul-27	45
C2B.1730	Mechanical Start-up & Testing - Blowers	5	09-Jul-27	16-Jul-27	45
Chemical Storage Areas		280	12-Jun-26	15-Jul-27	46
C2B.1480	Cut & Grade - Chem Tanks	3	12-Jun-26	16-Jun-26	238
C2B.1490	Install BG Utility Piping	5	17-Jun-26	23-Jun-26	238
C2B.1500	ELEC - Install BG / In-slab Conduit	10	24-Jun-26	08-Jul-26	238
C2B.1510	F/R/P - SOG, Walls, Decks - Chem Tanks	10	01-Jul-26	15-Jul-26	238
C2B.1520	Concrete Cure - SOG Chem Tanks	20	16-Jul-26	12-Aug-26	238
C2B.1530	Install PEMB Canopy - Chem Tanks	10	13-Aug-26	26-Aug-26	238
C2B.1540	Install Piping & Mechanical Equipment	20	04-Dec-26	04-Jan-27	169
C2B.1550	ELEC - Install EI&C	20	18-Dec-26	18-Jan-27	169
C2B.1560	D/L/B Chem Piping	10	31-Mar-27	14-Apr-27	107
C2B.1570	Mechanical Start-up & Testing - Chem Tanks	5	08-Jul-27	15-Jul-27	46
Fine Screen Facility / RAS Mixing		206	15-Sep-26	05-Jul-27	54
Fine Screen Facility		206	15-Sep-26	05-Jul-27	54
C2B.1170	Cut & Grade - Fine Screen	3	15-Sep-26	18-Sep-26	54
C2B.1180	Install BG Utility Piping	5	18-Sep-26	25-Sep-26	54
C2B.1190	ELEC - Install BG / In-slab Conduit	10	25-Sep-26	09-Oct-26	54
C2B.1200	F/R/P - SOG, Walls, Deck - Fine Screen Structure	60	09-Oct-26	06-Jan-27	54
C2B.1210	Install Deck Shoring	5	22-Dec-26	30-Dec-26	79
C2B.1220	Concrete Cure - Deck Fine Screen Structure	20	06-Jan-27	03-Feb-27	54
C2B.1230	Remove Deck Shoring	5	03-Feb-27	10-Feb-27	54
C2B.1240	Water Test Structure	10	10-Feb-27	24-Feb-27	54
C2B.1250	Install Piping & Mechanical Equipment	20	03-Mar-27	31-Mar-27	107
C2B.1260	D/L/B PE from EQ Basin Pmp Sta	10	03-Mar-27	17-Mar-27	126
C2B.1270	Shutdown - Tie-in PE from EQ Pmp Sta PE to Fine Scre	1	17-Mar-27	18-Mar-27	126
C2B.1280	ELEC - Install EI&C	10	31-Mar-27	14-Apr-27	107



Actual Level of Effort | Actual Work | Remaining Work | Critical Remaining Work | Milestone

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TASK filter: All Activities

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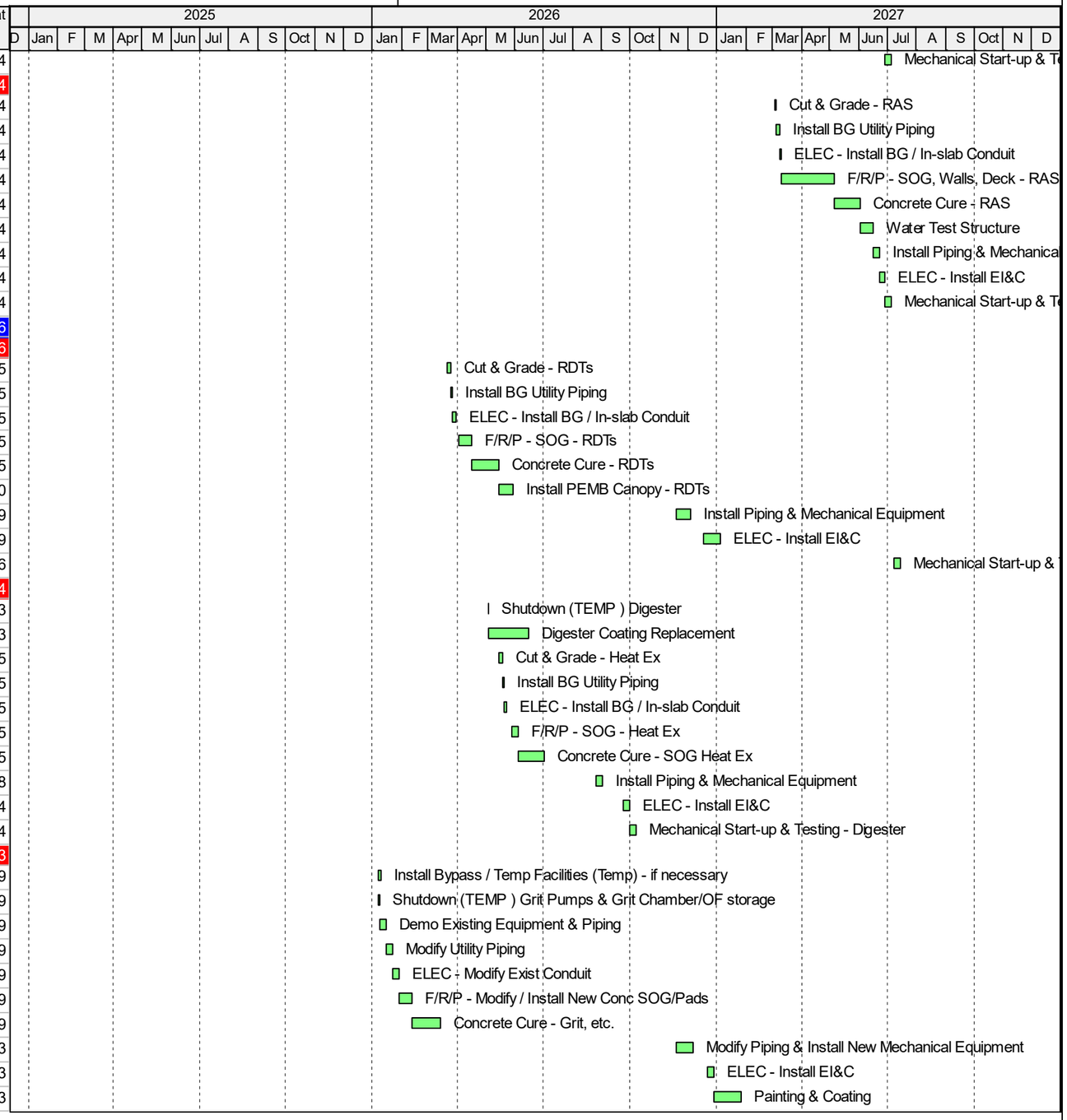
Activity ID	Activity Name	Planned Duration	Start	Finish	Total Float
C2B.1290	Mechanical Start-up & Testing - Fine Screens Struct	5	28-Jun-27	05-Jul-27	54
RAS / Flow Mix Structure		88	03-Mar-27	05-Jul-27	54
C2B.1300	Cut & Grade - RAS	1	03-Mar-27	04-Mar-27	54
C2B.1310	Install BG Utility Piping	2	04-Mar-27	08-Mar-27	54
C2B.1320	ELEC - Install BG / In-slab Conduit	2	08-Mar-27	10-Mar-27	54
C2B.1330	F/R/P - SOG, Walls, Deck - RAS	40	10-Mar-27	05-May-27	54
C2B.1340	Concrete Cure - RAS	20	05-May-27	02-Jun-27	54
C2B.1350	Water Test Structure	10	02-Jun-27	16-Jun-27	54
C2B.1360	Install Piping & Mechanical Equipment	5	16-Jun-27	23-Jun-27	54
C2B.1370	ELEC - Install EI&C	3	23-Jun-27	28-Jun-27	54
C2B.1380	Mechanical Start-up & Testing - RAS	5	28-Jun-27	05-Jul-27	54
Modifcations with Existing Plant Facilities		389	07-Jan-26	15-Jul-27	46
Rotary Drum Thickeners (RDTs)		338	20-Mar-26	15-Jul-27	46
C2B.1080	Cut & Grade - RDTs	2	20-Mar-26	24-Mar-26	245
C2B.1090	Install BG Utility Piping	2	24-Mar-26	26-Mar-26	245
C2B.1100	ELEC - Install BG / In-slab Conduit	2	26-Mar-26	30-Mar-26	245
C2B.1110	F/R/P - SOG - RDTs	10	02-Apr-26	16-Apr-26	245
C2B.1120	Concrete Cure - RDTs	20	16-Apr-26	14-May-26	245
C2B.1130	Install PEMB Canopy - RDTs	10	14-May-26	29-May-26	300
C2B.1140	Install Piping & Mechanical Equipment	10	18-Nov-26	04-Dec-26	179
C2B.1150	ELEC - Install EI&C	10	18-Dec-26	04-Jan-27	179
C2B.1160	Mechanical Start-up & Testing - RDTs	5	08-Jul-27	15-Jul-27	46
Digester		110	04-May-26	07-Oct-26	244
C2B.10009	Shutdown (TEMP) Digester	1	04-May-26	04-May-26	253
C2B.10119	Digester Coating Replacement	30	04-May-26*	15-Jun-26	253
C2B.1000	Cut & Grade - Heat Ex	2	14-May-26	18-May-26	245
C2B.1010	Install BG Utility Piping	2	18-May-26	20-May-26	245
C2B.1020	ELEC - Install BG / In-slab Conduit	2	20-May-26	22-May-26	245
C2B.1030	F/R/P - SOG - Heat Ex	5	28-May-26	04-Jun-26	245
C2B.1040	Concrete Cure - SOG Heat Ex	20	04-Jun-26	02-Jul-26	245
C2B.1050	Install Piping & Mechanical Equipment	5	25-Aug-26	01-Sep-26	208
C2B.1060	ELEC - Install EI&C	5	23-Sep-26	30-Sep-26	244
C2B.1070	Mechanical Start-up & Testing - Digester	5	30-Sep-26	07-Oct-26	244
Grit Facilities		282	07-Jan-26	16-Feb-27	153
C2B.10089	Install Bypass / Temp Facilities (Temp) - if necessary	2	07-Jan-26	09-Jan-26	329
C2B.10129	Shutdown (TEMP) Grit Pumps & Grit Chamber/OF stor	1	07-Jan-26	08-Jan-26	329
C2B.10019	Demo Existing Equipment & Piping	5	08-Jan-26	15-Jan-26	329
C2B.10099	Modify Utility Piping	5	15-Jan-26	22-Jan-26	329
C2B.10029	ELEC - Modify Exist Conduit	5	22-Jan-26	29-Jan-26	329
C2B.10039	F/R/P - Modify / Install New Conc SOG/Pads	10	29-Jan-26	12-Feb-26	329
C2B.10049	Concrete Cure - Grit, etc.	20	12-Feb-26	13-Mar-26	329
C2B.10059	Modify Piping & Install New Mechanical Equipment	10	19-Nov-26	07-Dec-26	153
C2B.10069	ELEC - Install EI&C	5	21-Dec-26	29-Dec-26	153
C2B.10109	Painting & Coating	20	29-Dec-26	26-Jan-27	153



Actual Level of Effort | Remaining Work | ◆ Milestone
Actual Work | Critical Remaining Work

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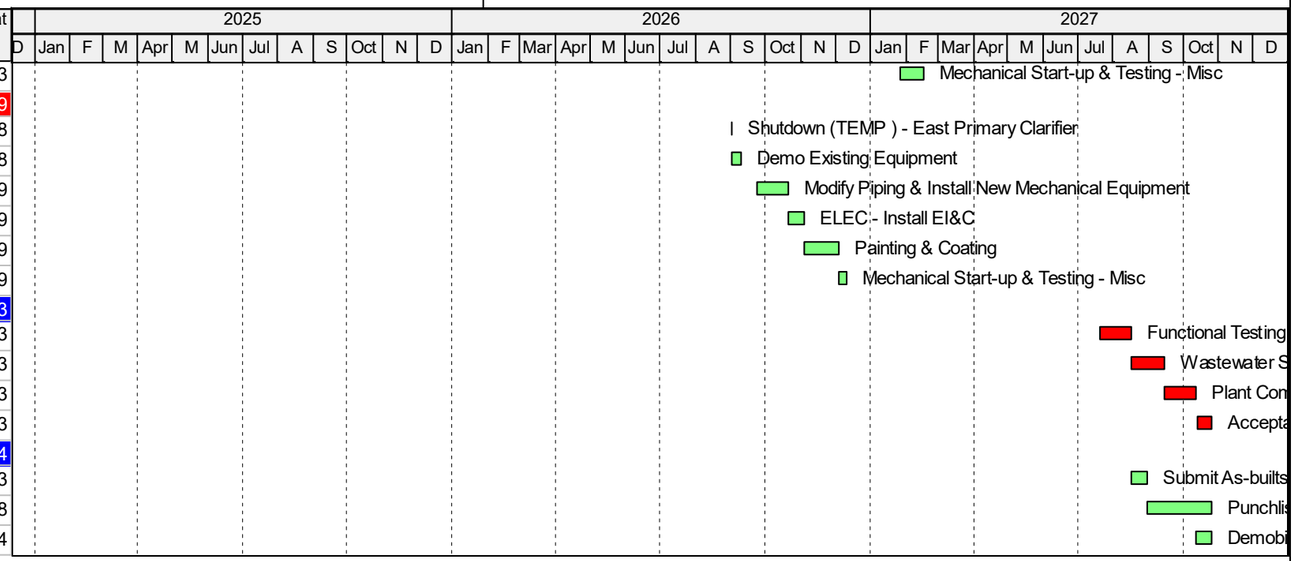
TASK filter: All Activities

1758

Activity ID	Activity Name	Planned Duration	Start	Finish	Total Float
C2B.10079	Mechanical Start-up & Testing - Misc	15	26-Jan-27	16-Feb-27	153
East Primary Clarifier		70	01-Sep-26	11-Dec-26	199
C2B.10149	Shutdown (TEMP) - East Primary Clarifier	1	01-Sep-26	02-Sep-26	208
C2B.10159	Demo Existing Equipment	5	02-Sep-26	10-Sep-26	208
C2B.10209	Modify Piping & Install New Mechanical Equipment	20	23-Sep-26	21-Oct-26	199
C2B.10219	ELEC - Install EI&C	10	21-Oct-26	04-Nov-26	199
C2B.10229	Painting & Coating	20	04-Nov-26	04-Dec-26	199
C2B.10239	Mechanical Start-up & Testing - Misc	5	04-Dec-26	11-Dec-26	199
Commissioning		70	20-Jul-27	26-Oct-27	43
C2B.1470	Functional Testing (30 cal Days)	20	20-Jul-27	16-Aug-27	43
C2B.2880	Wastewater Start-up (30 cal Days)	20	17-Aug-27	14-Sep-27	43
C2B.9999	Plant Commissiong & Acceptance 30 cal Days)	20	15-Sep-27	12-Oct-27	43
C2B.2860	Acceptance Testing Report	10	13-Oct-27	26-Oct-27	43
Project Close-out		49	17-Aug-27	25-Oct-27	44
C2B.2120	Submit As-builts	10	17-Aug-27	30-Aug-27	83
C2B.2110	Punchlist	40	30-Aug-27	25-Oct-27	48
C2B.2130	Demobilization	10	12-Oct-27	25-Oct-27	44



Actual Level of Effort | Actual Work | Remaining Work | Critical Remaining Work | ◆ Milestone

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TASK filter: All Activities

1759

APPENDIX

B

Resumes



Joe Lawrence

Project Manager



Joe is a Senior Vice President at W. M. Lyles and Collaborative Delivery Manager with over 22 years of experience in managing and delivering large-scale water and wastewater treatment projects. He has a proven track record in pre-construction planning, cost controls, and project execution. He has extensive experience with progressive design-build and design-bid-build delivery methods, overseeing advanced water purification, wastewater treatment plant expansions, and SCADA upgrades. Joe is committed to delivering high-quality infrastructure while leading teams and managing complex project requirements.

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Education/Academic Qualifications
BBS, Construction Management
California State University Fresno, 2001

Professional Registrations
Contractor's License – Class A
General Engineering – State of Hawaii

Community Involvement
ACE Mentoring Program of Central California

Tenure with AECOM: 22
Total Years in Industry: 22

Why Joe?

- ✓ Extensive background in advanced water purification systems and recycled water projects, such as the ECAWP
- ✓ Advanced understanding of various delivery methods, including PDB and DBB
- ✓ Deep technical expertise, particularly in SCADA upgrades, biological treatment, tertiary filtration, and disinfection processes

Owner/Client References

① East County Advanced Water Purification (ECAWP) Packages 1 and 3, Progressive Design-Build, Santee, CA

Client: ECAWP/Padre Dam Municipal Water District
Alfred Pedroza, PE
AWP Engineer (Owner's Project Manager)
T: 619.540.9313 | E: apedroza@padre.org

Role: Pre-Construction and cost controls/budgeting.

To reduce the East County Water District's reliance on water from outside sources, the East County Advanced Purification Project (ECAWP) will treat East County's wastewater locally for potable reuse. Joe managed pre-construction, cost control and budgeting for Package 1, which involves design and construction of a water recycling facility, advanced water purification facility, visitor center, product water pump station, solids handling facility, and system integration across Packages 1-4 of the ECAWP.

② Stockton Regional Wastewater Control Facility, Progressive Design-Build Modifications, Stockton, CA

Client: City of Stockton
Art O'Brien
T: 209.937.8787 | E: aobrien@robertson-bryan.com

Role: Construction Manager.

Joe was the primary lead for this progressive design-build project that involved the construction of new influent pumping, screening, and grit removal systems; new secondary biological treatment systems; new tertiary filtration and disinfection systems; and new solids handling facilities to replace an existing oxidation pond and overland flow treatment system. Major process equipment included large vertical turbine solids handling pumps, perforated fine screens, conical tray grit removal systems, primary and secondary clarifier mechanisms, aeration blowers and diffusers, submersible mixers, tertiary disc filters, UV disinfection system, sludge centrifuge, and associated electrical, control, and SCADA upgrades.

Joe Lawrence

Project Manager

③ Davis - WWTP Secondary and Tertiary Improvements, Design-Build, Davis, CA

Client: City of Davis
Michael Lindquist
T: 530.747.8287 | E: lindquist4water@gmail.com

Role: Role: Construction Manager.

Design-Build construction of new secondary biological treatment systems, new tertiary filtration and disinfection systems, and new solids handling facilities to replace an existing oxidation pond and overland flow treatment system. The secondary treatment processes consist of four new extended aeration basins and four new 85' diameter secondary clarifiers. Tertiary filtration and disinfection facilities consist of four new 6 MGD disc filters, two new chlorine contact tanks, and a new sodium hypochlorite and sodium bisulfite storage and pumping facility. Sludge handling facilities consist of two new rotary drum thickeners, two new screw presses, chemical storage facilities, and a 48,000 SF sludge storage facility. Also included were a new cogeneration plant, a new emergency power generator, and numerous other electrical, control, and SCADA upgrades.

Additional Experience

Graham Hill Water Treatment Plant Upgrades, Progressive Design-Build, Santa Cruz, CA. Pre-Construction Manager. The WTP was built in 1960s and had not been significantly upgraded since the 1980s. The City recognized that in order to secure their water future, significant upgrades to the WTP had to be undertaken. Joe is the vital link between the design, project owner, and construction teams, ensuring that the project is well-planned, cost-effective, and set up for successful execution once construction begins. The project scope includes: high-rate clarification through the use of space-efficient plate settlers, ozone system, granular activated carbon (GAC), reclaimed water clarifiers, provisions for future UV disinfection, and new chemical feed systems; new administration and maintenance buildings, and new ozone building; upgraded operations building and upgraded filter gallery building; electrical upgrades; demolition of some existing buildings and site improvements including landscaping and vehicular access improvements. Construction is anticipated to begin in late 2024, and substantial completion is expected by Spring 2028.

Wastewater Treatment Plant Upgrade & Expansion, Design Bid Build, Linda County Water District, Marysville CA. Executive Sponsor for construction of a new 5 MGD wastewater treatment plant on a 27 acre site adjacent to an existing treatment plant. New facilities include a headworks, two primary clarifiers, four activated sludge basins, two secondary clarifiers, filter pump station, six effluent filters, sludge thickening system, sludge drying beds, sludge lagoons, site grading, and associated piping, electrical, and instrumentation systems. Upgrades to the existing plant include the demolition of existing facilities and modifications to the existing effluent pump station.

WWTP Tertiary Filtration, UV Disinfection and Biosolids Improvements, City of Galt, CA. Project Manager for expansion of 3 MGD wastewater treatment system to 6 MGD, including tertiary filtration and ultraviolet disinfection capabilities, biosolids dewatering facility, biosolids storage and transfer facilities, operations and electrical building, pump stations, backup power generation, and additional infrastructure. Expedited delivery: 12 month contract time. **American Public Works Association (APWA) Project of the Year 2010.**

5 MGD WWTP Expansion and Upgrade, Design Bid Build, City of Reedley, CA. Project Manager/Estimator for expansion and upgrade to 5 MGD, including influent pump station, headworks, anoxic basin recycle pump station, oxidation ditch, RAS pump station, sludge storage facility, effluent pump station, and secondary clarifiers. Construction also included structural concrete, equipment delivery and installation, underground utilities, above-ground piping, and total project administration.

Copper River Wastewater Reclamation, Design-Build, Copper River Development Co. Project Manager/Estimator for 0.75 MGD wastewater reclamation facility, including SBR structure, chlorine contact structure, effluent distribution structure and pump station, metal buildings, administration/laboratory building, associated equipment, and process piping.

Fresno County Juvenile Justice Facility Wastewater Treatment Plant, Fresno County, CA. Project Engineer/Estimator for 0.12 MGD wastewater treatment plant to service the new Fresno County Juvenile Facility, including new concrete structures, lined storage ponds, yard piping (26' deep), associated equipment, and process piping.

Gabriel Perigault, PHD, PE

Engineering Manager



Gabriel brings experience on more than 25 water/wastewater treatment plants, including process selection, piloting, detailed design, construction, start-up and commissioning, and performance validation and optimization. He will lead the design, working closely with our Project Manager Joe Lawrence and Process Technical Lead Alex Franchi and specialty design disciplines similar to our other PDB projects in California. Gabriel has a project first and client centric mindset. He is an organized, responsive and committed multi-discipline design manager with extensive experience overseeing complex water and wastewater projects. He is an excellent communicator and is fluent in all the major disciplines with special focus on process mechanical and instrumentation.

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AECOM

Education/Academic Qualifications
PhD, Environmental Engineering, Stanford University, 2001

MS, Environmental Engineering, Stanford University, 1995

BS, Mechanical Engineering, University of Chile, 1990

Professional Registrations
Professional Engineer, Civil, CA #68471

Tenure with AECOM: 8
Total Years in Industry: 25

Why Gabriel?

- ✓ Will lead our multi-discipline design team through lessons learned from collaboration on recent and current design-build projects with AECOM/ Lyles JV – East County AWP, Davis, Stockton, Rialto plus many other design-build utility projects in California
- ✓ Extensive experience managing the design of MBR and RO facilities

Owner/Client References

① Stockton Regional Wastewater Control Facility Progressive Design-Build Modifications, Stockton, CA

Client: City of Stockton
Art O'Brien, Project Manager
T: 916-790-0218 | E: aobrien@robertson-bryan.com

Role: As Design Manager, led the design of multiple improvements to treat 40 mgd (average dry weather flow, 105 mgd peak) and meet more stringent nitrogen limits, reduce effluent salinity, and improve overall energy efficiency and operational reliability using a progressive design-build delivery approach.

Design is complete and construction is due to be complete in 2024. Improvements include: new influent pumping station and headworks; replacing the existing biotowers, facultative ponds and wetlands with new activated sludge secondary treatment process with nitrogen removal; replacing the existing nitrifying biotowers, DAF thickeners, gravity filters, and chlorine contact canal with new tertiary disk filters and UV disinfection; providing new dewatering facilities using centrifuge technology; new buildings for administration, engineering, laboratory, safety, operations and maintenance functions; and optimizing overall plant hydraulics to reduce the multiple pumping steps (currently 7) across the plant to only two pumping steps and rely on gravity flow for most conveyance through the treatment train.

② East County Advanced Water Purification (ECAWP) Packages 1 and 3 Progressive Design-Build, Santee, CA

Client: ECAWP/Padre Dam Municipal Water District
Alfred Pedroza, PE
AWP Engineer (Owner's Project Manager)
T: 619.540.9313 | E: apedroza@padre.org

Role: As Design Manager for Package 3 and Engineering Advisor for Package 1, Gabe has been involved throughout the project.

Gabriel Perigault, PHD, PE

Engineering Manager

The AECOM/Lyles JV is providing PDB services for the heart of the program, which includes the design and construction of a water reclamation facility and an advanced water purification facility (Package 1), and conveyance infrastructure (Package 3).

- **Package 1** involves the design and construction of a 16-mgd WRF, 13.5-mgd wastewater and advanced water purification facility, visitor center, product water pump station, and solids handling facility. Gabe is working closely with the treatment systems design team in a technical advisory role.
- **Package 3** includes the rehabilitation and upgrading of the Influent Pump Station and the East Mission Gorge Pump Station (new pumps, odor control systems, ferric feed system, several metering and flow control vaults, backup power), new WRF force main (14,000 ft open cut, 3,500 ft horizontal directional drilling), and new residuals bypass system (pumping station and conveyance system). Gabe served as the overall design manager as well as the AECOM project manager for the entire package.

③ **Santa Cruz WTP Progressive Design-Build, Santa Cruz CA**

Client: City of Santa Cruz
Matt Zeman, Engineering Associate
T: 629.540.9313 | E: apedroza@padre.org

Role: Design Manager.

The AECOM/Lyles JV is providing PDB services for $100M+ upgrade to the Graham Hill WTP. The WTP was built in 1960s and had not been significantly upgraded since the 1980s. The City recognized that in order to secure their water future, significant upgrades to the WTP had to be undertaken. Joe is the vital link between the design, project owner, and construction teams, ensuring that the project is well-planned, cost-effective, and set up for successful execution once construction begins. The project scope includes: high-rate clarification through the use of space-efficient plate settlers, ozone system, granular activated carbon (GAC), reclaimed water clarifiers, provisions for future UV disinfection, and new chemical feed systems; new administration and maintenance buildings, and new ozone building; upgraded operations building and upgraded filter gallery building; electrical upgrades; demolition of some existing buildings and site improvements including landscaping and vehicular access improvements.

Additional Experience

Wastewater Treatment Plant Progressive Design-Build Improvements, City of Rialto, CA. Design Manager. Led the production of the Basis of Design Report, including 50 percent design drawings, and GMP for expanded headworks and secondary treatment facilities, new disk filters and UV system, as well as several retrofits to the existing thickening and solids handling facilities to provide treatment capacity for 12 mgd average annual flow. This was the first phase of the progressive design-build delivery approach selected to procure this project. Cost $26M. (2020)

Wastewater Treatment Plant Secondary and Tertiary Improvement Design-Build, City of Davis, CA. Served as the Engineer-of-Record for the performance acceptance report, which included the following process: modified Ludzack-Ettinger Nitrogen Removal Process, tertiary filtration with disk filters, chlorine disinfection, WAS thickening with rotatory drum thickeners, sludge dewatering with screw presses, and miscellaneous pumping, storage and conveyance facilities within the existing WWTP. Cost: $72M. (2018)

Montevina Water Treatment Plant Progressive Design-Build, Los Gatos, San Jose Water Company, CA. As Design Lead, coordinated design activities at project's design center and served as process and mechanical designer for solids handling facilities. Project included upgrading 43-year-old plant to convert the existing 30 mgd direct filtration process to a 30 mgd membrane filtration process. This plant is the primary supplier of drinking water for the Town of Los Gatos and surrounding west Silicon Valley communities. Specific duties for this progressive design-build project included coordination of design duties for the overall design effort and detail design of thickening and dewatering facilities and associated ancillary facilities (miscellaneous pumping and polymer storage and feed systems). Thickening and dewatering included two gravity thickeners and two screw presses, respectively. Cost: $58M (2015)

Sun City Tehama Water Reclamation Facility – Pulte Homes, Tehama, CA. Prepared a facility plan, a Title 22 engineering report, and regulatory compliance studies and reports to secure Waste Discharge Requirements to permit effluent disposal for agricultural irrigation for a new community in Tehama County. ***Conducted 30 percent design for a package MBR treatment plant*** and chlorine disinfection system as well as aerated solids stabilization pond. $300,000 (2006)

Alessandro (Alex) Franchi, PHD, PE

Process Technical Lead



Alex's technical experience encompasses conventional and advanced processes in wastewater, water reuse and potable treatment including oxidation, chemical and ultraviolet disinfection (UV), membrane technologies, advanced oxidation, activated sludge, membrane biological reactors, media filtration, coagulation, headworks, and pump stations. Alex will lead the process design team in preparing deliverables and recommending technology solutions. His most recent MBR design was for the Inland Empire Utilities Agency Regional Plant 5, where he developed the layout, preliminary design, and final design of the fine screens facilities. Alex was intimately involved with the design of two additional MBR in Southern California. Alex is currently providing services for the East County Advanced Water Purification (PDB project which includes a 4-stage bardenpho, MF, RO, and UV/AOP.

Firm
AECOM

Education/Academic Qualifications
PhD, Environmental Engineering, Johns Hopkins University, 2000

MS, Environmental Engineering, Johns Hopkins University, 1995

BS, Civil/Chemical Engineering, University of Maryland - College Park, 1992

Professional Registrations
Professional Engineer, Civil, CA #75225

Tenure with AECOM: 6
Total Years in Industry: 30

Why Alex?

- ✓ MBR and RO design
- ✓ Led successful designs of Title 22 projects across California
- ✓ Lead designer for large (>$150M) progressive design-build projects
- ✓ Wastewater, drinking water and water reuse facilities process design

Owner/Client References

① Silicon Valley Clean Water, RESCU Front of Plant Progressive Design-Build Project, Redwood, CA

Client: Silicon Valley Clean Water
Teresa Herrera, P.E. – Manager
T: 650.591.7121 | E: therrera@svcw.org

Role: As Design Lead, Alex completed design to construction package level.

Progressive design-build project involving the design and construction of a new 80-mgd front of the plant facilities, including deep-lift pump station (90 feet), new headworks with screenings, grit removal, solids loadout, chemicals storage, electrical room, and connection pipeline to existing plant.

② East County Advanced Water Purification Program (ECAWP) Package 1 Progressive Design-Build, Santee, CA

Client: ECAWP JPA/Padre Dam Municipal Water District
Seval Sen, PE - AWP Engineering Manager
T: 619.258.4631 | E: ssen@padre.org

Role: Lead Process Engineer for 11.5 advanced treatment facility including MF, RO and UV/AOP.

This progressive design-build project is one of the first in the country for the augmentation of a surface water supply with treated wastewater for potable reuse. Components of Package 1 include: a 16-mgd Water Recycling Facility, an 11.5-mgd Advanced Water Purification Facility including MF, RO and UV/AOP, a solids handling facility, a product water pump station and a new visitor's center.

③ PFAS treatment System at Well OPA-1

Client: Orange County Water District
Ryan Bouley, Principal Engineer
(714) 378-8207 Email: rbouley@ocwd.com

Role: Project Manager and Lead Process Engineer for OPA-1 PFAS removal system.

Alessandro (Alex) Franchi, PHD, PE

Process Technical Lead

Preliminary design, final design services, bid phase, and engineering during construction services for a PFAS treatment system at Well OPA-1. The treatment system includes lead/lag ion exchange treatment system capable of treating a flow rate of approximately 3 mgd, including appurtenant facilities. The design incorporates provisions to accommodate intermittent operations of the well. The ion exchange vessels are located in a depressed structural concrete pit to minimize the visual impact of the vessels on the adjacent residential community.

Additional Experience

Regional Wastewater Control Facility Progressive Design- Build Modifications, City of Stockton Municipal Utilities, Stockton, CA. Senior reviewer of UV facilities and leading the design of multiple improvements to treat 40-mgd (average dry weather flow, 105-mgd peak hour flow) and meet more stringent nitrogen limits, reduce effluent salinity, and improve overall energy efficiency and operational reliability using a progressive design- build delivery approach. Improvements include: new influent pumping station and headworks; new activated sludge secondary treatment for biological nutrient removal, including aeration system (nitrification/denitrification); new tertiary disk filters and UV disinfection; new dewatering facilities with centrifuges; new buildings for administration, engineering, laboratory, safety, operations and maintenance; new lime system; and optimizing overall plant hydraulics. $194M (2024)

RP5 and RP1 Upgrades, Advanced Treatment, UV/ Chlorine Disinfection, and Cost Estimates, Inland Empire Utility Agency, Chino, CA. Task lead for a multi-phase project involved the design and economic analysis for expansion and upgrades at four water recycling facilities ranging between 10 and 60 mgd. Tasks included general site planning, design, and economic analysis of wastewater treatment processes to produce California Title 22 water. The RP-5 upgrade included the preliminary design of a 45-mgd UV facility. The groundwater injection component of the project included the predesign of a 3-mgd facility with MBR, microfiltration, reverse osmosis (RO), UV, AOP, and stabilization. Cost $11M (2019)

Regional Water Reclamation Facility Expansion and Upgrade, Elsinore Valley Municipal Water District, Lake Elsinore, CA. UV disinfection and hydraulics task Lead for the rehabilitation and expansion from 16- up to 26-mgd of an existing wastewater treatment plant, including headworks upgrades, the addition of a new 8-mgd MBR treatment train, new UV system, equalization basin for secondary effluent, off-spec water management, and upgrades of solids processing facility. The plant effluent is discharged into Lake Elsinore and must meet strict standards for low phosphorous and California Title 22 reclaimed water for recreational uses. The project included a new aeration basin and membrane bioreactor for the expansion. Worked extensively with EVWMD staff to evaluate and select blower and diffuser equipment to meet the needs and preferences of the staff. Cost $8.7M (2019)

South Coast Water Reclamation, Barbados Water Authority, Barbados. The Barbados Water Authority (BWA) evaluated the feasibility of upgrading its South Coast Sewage Treatment Plant to a tertiary/advanced treatment plant capable of producing water suitable for groundwater recharge in a potable aquifer and/or a non-potable aquifer, or suitable for edible food crop irrigation. The goals of the Project include: augmenting existing groundwater water supplies, mitigating climate change effects, addressing seawater intrusion and sea level rise, diversifying potable water sources, enhancing water supply resiliency, and reducing the impact of treated effluent on marine life and the environment. Alex led the conceptual design of a 1.6 MGD advanced water treatment facility including disk filters, UV disinfection, ultrafiltration (UF), reverse osmosis (RO), stabilization of pH and alkalinity control, and final disinfection. Cost $140,000 (2022)

Airport Satellite Water Reclamation Plant Feasibility Study, City of Fresno, CA. Advanced treatment process lead for a feasibility study for a 5-mgd water reclamation facility that included MBR, RO, UV, and AOP and industrial source treatment. Water from this facility will be used for groundwater injection to recharge a depleted aquifer and public or agricultural irrigation. The intake points from the sewer system, located near a winery, discharge 800,000 gallons per day to 2.7-mgd of partially treated wastewater to the sewer system. The feasibility study evaluated the possibility of converting partially treated discharge into high-quality recycled water using membrane bioreactor treatment, followed by UV light disinfection; and using the recycled water for irrigation of the airport golf course, groundwater recharge, and industrial uses. Alex conducted a senior review of the membrane bioreactor system and the advanced treatment facility. Cost $0.5M (2019)

Marcos Reyes

Construction Manager



Marcos is a dynamic professional with a strong foundation in engineering principles, he has progressively advanced within the wastewater treatment plant construction industry, starting as a Superintendent in 2009 and transitioning through roles as Project Engineer/ Assistant Project Manager before assuming his current position as Project Manager. Through his career journey, he has demonstrated adeptness in project management, engineering, and leadership, consistently delivering successful outcomes on various projects. His background includes experience working alongside AECOM on the ECAWP Advanced Water Purification Project and Rialto WWTP Improvements project. He brings a combination of technical expertise and managerial skills to drive projects to completion efficiently and effectively.

Firm
W. M. Lyles Co.

Education/Academic Qualifications
BS, Civil Engineering,
San Diego State University, 2008

Tenure with Lyles: 7
Total Years in Industry: 15

Why Marcos?

- ✓ Worked with AECOM staff on design-build projects including East County Advanced Water Purification $260M joint venture project
- ✓ Worked with AECOM staff on design-build projects including Rialto $25M WWTP improvements project including site upgrades and piping
- ✓ San Diego County experience includes pipeline project consisting of upgrading of 27,000 feet of existing 72- and 75-inch pipe
- ✓ Extensive underground utility and pump station experience

Owner/Client References

① East County Advanced Water Purification Program (ECAWP) Package 1 Progressive Design-Build, Santee, CA

Client: ECAWP/Padre Dam Municipal Water District
Kyle Swanson
T: 619.528.4766 | E: kswanson@padre.org

Role: Marcos is the Sr. Construction Manger for the East County Advanced Purification Project (ECAWP)

This progressive design-build project is one of the first in the country for the augmentation of a surface water supply with treated wastewater for potable reuse. Components of Package 1 include: a 16-mgd Water Recycling Facility, an 11.5-mgd Advanced Water Purification Facility including MF, RO and UV/AOP, a solids handling facility, a product water pump station and a new visitor's center.

② Inland Empire Utilities Agency – Regional WRP No. 5 Liquids Expansion to 22.5 MGD, DDB, Chino, CA

Client: Inland Empire Utilities Agency
Jason Marseilles
T: 909.993.1600 | E: jmarseilles@ieua.org

Role: As Construction Manager, Marcos worked on the construction of the upgrade and expansion of the Agency's existing RP-5 plant from a conventional activated sludge wastewater treatment plant to a 22.5 MGD water recycling treatment plant, and with the capability of being further expanded to 30 MGD in the future. The major items of work to be performed include the liquids treatment processes, solids treatment processes, common facilities, and off-site facilities. Construction Cost $329M.

Marcos Reyes

Construction Manager

③ Rialto Wastewater Treatment Plant Improvements, Design-Build, Rialto, CA

Client: City of Rialto
Thomas Crowley, Utilities Manager
T: 909.421.7210 | E: tcrowley@rialtoca.gov

Role: As the Construction Manger, Macros worked on the $25M Design-Build expansion project, is a Joint Venture between W. M. Lyles Co. and AECOM.

Construction activities include the expansion to an existing conventional WWTP, increasing the treatment capacity from 7.3 MGD current average to 11.7 MGD future average. Work also includes headwork's expansion with new bar screens, washer compacter, one primary clarifiers, equalization basin improvements, one secondary clarifier, cloth disc tertiary filters, chlorine contact basin, RAS Pump Station, electrical buildings and associated site electrical upgrades, instrumentation, piping, paving, and fencing. Construction Cost $25M.

Additional Experience

Headworks and Primary Clarifier Upgrade, DBB, City of Palm Springs, CA. Project Manager. Construction of a new headworks facility, including new barscreens equipment, washer compacter, grit classifiers, two 100' diameter primary clarifiers, two scum pump stations, one sludge degritting facility, a prefabricated electrical building and an odor control system. The new upgrades to the existing wastewater treatment plant will increase the treatment capacity from 10.9 MGD to 21.8 MGD. Cost $20M. (2018)

Western Riverside County Regional WW Authority 14 MGD Plant Expansion, DBB, Riverside, CA. Project Engineer. Construction of a 6.0 MGD expansion to an existing conventional WWTP that increases the treatment capacity up to 14.0 MGD. Construction activities include headwork's expansion with new bar screens, washer compacter, grit classifier, two primary clarifiers, equalization basin, bioreactor, bio filter, secondary clarifier, cloth disc tertiary filters, chlorine contact basin, recycle water pump station, masonry digester building, solar drying beds and odor control system, five electrical buildings and associated site electrical, instrumentation, piping, paving, and fencing. Upgrades to the existing plant include new centrifuges, fixed steel digester covers, odor control facilities, masonry thickener building and chemical building upgrades. Cost $26M. (2016)

What Marcos' Clients Say

"Marcos Reyes served as the on-site construction managerfor the $25M Rialto Progressive Design Build WWTP with AECOM. ***His project first mentality, coupled with extensive construction knowledge, expertise and experience provided the project with numerous well reasoned, cost effective and workable solutions to overcome the interface challenges on a retrofit project.*** *Timely and cost effective solutions to tie-ins, resolving conflicts with existing utilities, and working out design issues associated with an upgrade while maintaining continuous operation of the existing plant were invaluable."*

Bill Hanley, PE, Veolia North America

Nob Hill Improvements Project for SDCWA, DBB, San Diego, CA. Project Engineer. Construction of approximately 900ft of two sections of existing pipelines with one pipeline at a lower elevation. The new pipelines were constructed by tunneling and excavation. This allowed the water authority the ability to operate and maintain its pipelines and structures, eliminating the likelihood of future uncontrolled release of water in the area. The project added a new access road to Nob Hill, and as a result, SDCWA vehicles will no longer need to use the private roads for access to SDCWA facilities. Cost $10M. (2017)

Pipeline 3 Desal Relining San Marcos to Twin Oaks Project for SDCWA, DBB, San Diego, CA. Project Engineer. The Pipeline 3 Desalination Relining project included upgrading 27,000 feet of existing 72- and 75-inch diameter pipe with new welded steel liners; fabricating and installing 494 feet of 69-inch outside diameter welded steel pipe at seven access portals; fabricating and installing 448 feet of 67 ¾-inch outside diameter welded steel pipe at eight access portals; and replacing 47 feet of 72-inch steel pipe with new 67 ¾-inch outside diameter welded steel pipe. As a result of this project, this accommodated pressurized flows from the new Carlsbad 50MG Seawater Desalination RO Treatment Plant. Cost $25M. (2015)

I-405 Sepulveda Pass Widening, DB, Los Angeles, CA. Superintendent. This $721 million design-build project involved constructing one 10-mile high-occupancy vehicle (HOV) lane northbound on Interstate 405 from Interstate 10 to U.S.-101. The project realigned existing on and off ramps, reconstruct or modify 23 bridge and ramp structures, build approximately 18 miles of retaining walls, and perform road improvements on the adjacent city streets. Cost $721M. (2014)

Vince Guillama

Preconstruction Services Manager



Vince brings more than 20 years of experience in the water / wastewater industry. During this time, he has overseen and provided preconstruction services for numerous design-build projects, including the $200M Stockton RWCF project, a joint venture with AECOM. His focus on communication and collaboration encourages innovation to create cost savings and gain schedule. Vince brings a unique perspective having managed design-build projects from pre-construction through completion.

Firm
W. M. Lyles Co.

Education/Academic Qualifications
MS, Construction Management, Arizona State University, 2006

BS, Civil Engineering, University of California Davis, 2004

Professional Registrations
Engineer-in-Training, CA #117946

Tenure with Lyles: 16
Total Years in Industry: 20

Why Vince?

- ✓ Current and previous experience working on AECOM/Lyles JV design-build projects including Stockton Regional Wastewater Control Facility Modifications
- ✓ Experienced in innovative preconstruction to save time and money
- ✓ Proven Value Engineering results
- ✓ Preconstruction and construction phase oversight for multiple water and wastewater treatment facilities throughout California

Owner/Client References

① East County Advanced Water Purification Program (ECAWP) Package 1 Progressive Design-Build, Santee, CA

Client: ECAWP/Padre Dam Municipal Water District
Kyle Swanson
T: 619.528.4766 | E: kswanson@padre.org

Role: Vince was the Pre-construction Manger providing first-hand constructability through the design process.

This progressive design-build project is one of the first in the country for the augmentation of a surface water supply with treated wastewater for potable reuse. **Components of Package 1 include**: a 16-mgd Water Recycling Facility, an 11.5-mgd Advanced Water Purification Facility including MF, RO and UV/AOP, a solids handling facility, a product water pump station and a new visitor's center.

② Stockton Regional Wastewater Control Facility Modifications, Progressive Design-Build, Stockton, CA

Client: City of Stockton
Deedee Antypas, Deputy Director of Wastewater Operations
T: 209.937.7425 | E: deedee.antypas@stocktonca.gov

Role: As the Pre-Construction Manager, Vince led the development of the GMP, capitalizing on his background in construction to provide first-hand constructability consulting throughout the design process.

Progressive design-build of new influent pumping, screening, and grit removal systems; new secondary biological treatment systems; tertiary filtration and disinfection systems; and solids handling facilities to replace an existing oxidation pond and overland flow treatment system. Includes installation of major process equipment such as vertical turbine pumps, perforated fine screens, conical tray grit removal systems, circular and rectangular primary and secondary clarifier mechanisms, aeration blowers and diffusers, submersible mixers, tertiary disc filters, UV disinfection system, sludge centrifuge, and associated electrical, control, and SCADA upgrades. Construction Cost $209M.

Vince Guillama

Preconstruction Services Manager

③ Graham Hill Water Treatment Plant Upgrades, Progressive Design-Build, Santa Cruz, CA

Client: City of Santa Cruz
Matt Zeman, Project Manager
T: 858.610.7478 | mzeman@cityofsantacruz.com

Role: In the role of Pre-Construction Manager, Vince is leading the development of the GMP, capitalizing on his background in construction to provide first hand constructability constulting throughout the design process.

The WTP was built in 1960s and had not been significantly upgraded since the 1980s. **The City recognized that in order to secure their water future, significant upgrades to the WTP had to be undertaken. Vince is leading the AECOM/Lyles construction team, worked closely with the client and its advisor through many iterations of layouts and process trains to arrive at the right solution for the City. Over 20 workshops were held on a wide range of topics that cover unit processes and constructability, among many others. The project scope includes**: high-rate clarification through the use of space-efficient plate settlers, ozone system, granular activated carbon (GAC), reclaimed water clarifiers, provisions for future UV disinfection, and new chemical feed systems; new administration and maintenance buildings, and new ozone building; upgraded operations building and upgraded filter gallery building; electrical upgrades; demolition of some existing buildings and site improvements including landscaping and vehicular access improvements. Construction is anticipated to begin in late 2024, and substantial completion is expected by Spring 2028.

Additional Experience

WWTP Secondary and Tertiary Improvements Design-Build, City of Davis, CA. Estimator/Project Manager. Design-build construction of new secondary biological treatment systems, new tertiary filtration and disinfection systems, and new solids handling facilities to replace an existing oxidation pond and overland flow treatment system. The secondary treatment processes consist of four new extended aeration basins and four new 85' diameter secondary clarifiers. Tertiary filtration and disinfection facilities consist of four new 6 MGD disc filters, two new chlorine contact tanks, and new a sodium hypochlorite and sodium bisulfite storage and pumping facility. Sludge handling facilities consist of two new rotary drum thickeners, two new screw presses, chemical storage facilities, and a 48,000 square foot sludge storage facility. Also included are a new cogeneration plant, a new emergency power generator, and numerous other electrical, control, and SCADA upgrades. Project Cost: $71M. (2018)

Orange County Sanitation District – P1-101 Sludge Dewatering and Odor Control Project, Orange County, CA. Project Manager - Mechanical. Construction of a new 32,000 SF thickening and dewatering structure on CIDH piles, including equipment, odor control, mechanical, fire, plumbing, electrical and instrumentation and control systems. Addition of two new concrete pipe tunnels along with a 1200 LF precast screen wall and fabricated above grade pipe rack, modifications to existing tunnel piping, rehabilitation of exiting silos and Truck Load Out Facility, as well as new underground piping, paving, demolition, and all other site improvements required to replace the existing sludge handling systems. Construction Cost: $127M. (2019)

Regional Water Reclamation Plant Upgrade, City of Moreno Valley, CA. Upgrade of existing 15.8 MGD water reclamation plant to 18.5 MGD, including yard structures, headworks, influent pump station, grit basins, power and blower buildings, chemical scrubber odor control facility, secondary effluent pump station, tertiary effluent/utility water pump station, tertiary effluent meter vault, acid-phase digester and fare, methane-phase digester, digested sludge storage tanks, low pressure digester gas holder, 15 kW generator, boiler facility, electrical buildings, and related appurtenances. Construction Cost: $29.7M. (2012)

Water Treatment Facility Improvements, City of El Centro, CA. Expansion of existing 10.5 MGD facility to 21 MGD, including clarifier units, gravity filters, waste wash-water recovery basin, raw water structure, operations and chemical buildings, dividing berm and connecting piping of two 25 MG earthen storage reservoirs, clearwell and backwash recovery pump stations, and site improvements including site piping, grading, paving, electrical instrumentation, and controls. Construction Cost: $26.6M. (2009)

Staffing Availability for Banning



Staffing Availability

Prior to selection of specific staff for our team, we examined the existing and projected workload of each person and confirmed their availability for this assignment. We have determined they have no obligations, either current or projected, that would prevent them from performing with excellence to meet the requirements and schedule for this project.

Staff/Role	Availabity	Responsibilities	Benefit to Banning
Joe Lawrence **Design-Build Project Manager**	Phase 1 - 75% Phase 2 - 100%	Single point of responsibility	Successful track record in DB project management, including multiple projects with AECOM (ECAWP, Stockton, Santa Cruz)
Gabriel Perigault, PhD, PE **Design Manager**	Phase 1 - 60% Phase 2 - 30%	Manage design development	Led the design of 25 water and wastewater treatment plants; proven track record delivering successful DB projects with Lyles (ECAWP, Santa Cruz)
Marcos Reyes **Construction Manager**	Phase 1 - 25% Phase 2 - 100%	Onsite construction management	Lives within 25 miles of the project; proven track record delivering successful DBs with AECOM (Rialto, ECAWP)
Vince Guillama **Preconstruction Manager**	Phase 1 - 100% Phase 2 - 20%	Manage early works packages, ensures budget adherence during design	Lessons-learned managing early works packages; proven track record delivering successful DB projects with AECOM (Stockton, ECAWP, Davis, Santa Cruz)
Alex Franchi, PhD, PE **Treatment Process Lead**	Phase 1 - 60% Phase 2 - 25%	Treatment technology selection/design	Led successful designs of Title 22 projects across California; Proven track record delivering successful DB projects with Lyles (ECAWP)
Rosaida Harris **QA/QCLead**	Phase 1 - 40% Phase 2 - 40%	QA/QC management and discipline coordination	Extensive experience in QC for both design and construction on DB projects
Anthony Pilato **Superintendent**	Phase 1 - 5% Phase 2 - 100%	Manage onsite activities during construction	Seasoned superintendent with extensive experience coordinating multiple trades and managing large-scale projects, such as the $57M City of Beaumont
Matt Cain **Estimator/Cost Controls**	Phase 1 - 80% Phase 2 - 15%	Budget control and management	Design-to-budget experience from Beaumont and Rialto projects, backed by a successful track record with AECOM on the Rialto and ECAWP projects
Ryan Priestman **Lead Scheduler**	Phase 1 - 40% Phase 2 - 40%	Project Scheduling	Proven ability to work with AECOM to solve scheduling hurdles on the ECAWP DB project
Vijay Kumar **Commissioning Lead**	Phase 1 - 20% Phase 2 - 60%	Startup and commissioning plans and coordination	Proven ability to work with AECOM on commissioning and startup activities
Tyler Payne, SMS, CHST, CIT, STS, CUSP - Safety Director	Phase 1 - 15% Phase 2 -80%	Safety Management	Proven ability to provide Safety Management on successful local DB projects with AECOM (ECAWP)
T.J. Catalano, PE **Structural**	Phase 1 - 50% Phase 2 - 20%	Structural engineering lead	Brings experience upgrading WWTPs all aspects of structural engineering design and construction services on DBP projects such as ECAWP.
Steven Fitzwilliam, PE **Geotechnical/Civil**	Phase 1 - 50% Phase 2 - 20%	Geotechnical and Site/Civil Engineering	28 years of geotechnical experience, including design-build treatment plant projects
Barbara Bartholomae **Permitting Lead**	Phase 1 - 50% Phase 2 - 30%	Permit Management	Proven track record delivering permitting services on successful DB projects with Lyles (ECAWP, Santa Cruz)
William Goryl, RA **Architectural**	Phase 1 - 50% Phase 2 - 20%	Architectural design	30 years of architectural experience, including Design-build WWTPs such as Davis, CA and Rialto,A
Yasser Rizk, PE **Electrical/I&C**	Phase 1 - 50% Phase 2 - 20%	Electrical and SCADA/I&C Design	Extensive DB experience, highly skilled in electrical design, coordination of HVAC, mechanical process, and control systems for innovative, effective design
Karen Bettencourt, PE **Mechanical**	Phase 1 - 50% Phase 2 - 20%	Mechanical Process Design	20+ years of treatment plant mechnical process engineering, including the Stockton WWTP DB
Executive Management Board			
Grant Gourley **Executive Management Board**	Phase 1 - 10% Phase 2 - 10%	Executive Oversight	Decades of lessons-learned providing executive oversight on DB projects throughout CA and with AECOM (ECAWP, Stockton, Santa Cruz, Davis
Brian Daly, PE **Executive Management Board**	Phase 1 - 10% Phase 2 - 10%	Executive Oversight	National DB Leader with 30 years of DB experience, serves on all AECOM/Lyles JV Management Boards

Single Point of Contact for the AECOM/Lyles JV:
Joe Lawrence
Design-Build Project Manager
26501 Madison Avenue
Murrieta, CA 92562
916.375.1833
jlawrence@wmlylesco.com



AECOM W.M. LYLES CO.
a joint venture

Exhibit F

Permits and Approvals

Exhibit F – Permits and Approvals

Agency	Permit or Type of Approval	Permittee Approval Holder		Supporting Parties	Fee Payment Responsibility	Anticipated Timing of Permit Submittal
Federal / State Agencies						
California State Waterboard Region 7: Colorado River	National Pollutant Discharge Elimination System (NPDES) Construction General Permit	Design-Builder	Design- Builder	City	Design-Builder (To be included in Phase 2 GMP)	Phase 2: Notice to Proceed (NTP)
	National Pollutant Discharge Elimination System (NPDES) Construction General Permit	Design-Builder	Design- Builder	City	Design-Builder (To be included in Phase 2 GMP)	Phase 2: Notice to Proceed (NTP)
	Stormwater Pollution Prevention Plan (SWPPP) Updates - Proposed changes to the facility that may affect the existing National Pollution Discharge	Design-Builder	Design- Builder	City	Design-Builder (To be included in Phase 2 GMP)	Phase 2: Notice to Proceed (NTP)
	Salinity and Nitrogen Technical Memorandum	Design-Builder	Design- Builder	City	No Fee Payment Required	Phase 1
	Title 22 Engineering Report for the Production, Distribution, and Use of Recycled Water	Design-Builder	Design- Builder	City	No Fee Payment Required	Phase 1
	Title27 Engineering Report for Brine Evaporation Ponds	Design-Builder	Design- Builder	City	No Fee Payment Required	Phase 1
	Report of Waste Discharge and Waste Discharge Requirements	City	City	Design-Builder	City	Phase 1 (After 60% Design)
City of Banning						
Community Development	Encroachment Permits (Community Develop	City	City	Design- Builder	Design-Builder (To be included in Phase 2 GMP)	Permit submission preparation Phase 1: Before 100 Percent Design Submittal Submission and fee payment Phase 2
Building Department	Building Permit (including ADA Requirements, Architectural, Electrical, Site, Fire Department and Public Works	Design-Builder	Design- Builder	City	Design-Builder (To be included in Phase 2 GMP)	Permit submission preparation Phase 1: Before 100 Percent Design Submittal Submission and fee payment Phase 2
Community Development	Traffic Control Permits	Design-Builder	Design- Builder	City	Design-Builder (To be included in Phase 2 GMP)	Permit submission preparation Phase 1: Before 100 Percent Design Submittal Submission and fee payment Phase 2
Air District						
South Coast Air Quality Management District	Authority to Construct	Design-Builder	Design-Builder	City	Design-Builder (To be included in Phase 2 GMP)	Phase 2: NTP
	Permit to Operate	Design-Builder	Design-Builder	City	Design-Builder (To be included in Phase 2 GMP)	Phase 2: NTP
County of Riverside						
Department of Environmental Health	Solid Waste Facility Requirements	Design-Builder	Design-Builder	City	Design-Builder (To be included in Phase 2 GMP)	Phase 2: NTP
Fire Department – Hazardous Materials Division	Hazardous Material Business Plan	Design-Builder	Design-Builder	City	Design-Builder (To be included in Phase 2 GMP)	Phase 2: NTP

Exhibit H

Insurance Terms

Insurance Terms

1. General Liability - Commercial General Liability (CGL) - Insurance Services Office (ISO) Commercial General Liability Coverage (Occurrence Form CG 00 01) including products and completed operations, property damage, bodily injury, personal and advertising injury with limit of at least twenty million dollars ($20,000,000) per occurrence or the full per occurrence limits of the policies available, whichever is greater. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location (coverage as broad as the ISO CG 25 03, or ISO CG 25 04 endorsement provided to City of Banning or the general aggregate limit shall be twice the required occurrence limit.
2. Automobile Liability - Insurance Services Office (ISO) Business Auto Coverage (Form CA 00 01), covering Symbol 1 (any auto) with limit of one million dollars ($1,000,000) for bodily injury and property damage each accident.
3. Workers' Compensation Insurance - The Contractor shall provide workers' compensation coverage as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less than $1,000,000 per accident for bodily injury or disease. Waiver of Subrogation (also known as Transfer of Rights of Recovery Against Others to Us): The Contractor hereby agrees to waive rights of subrogation to obtain endorsement necessary to affect this waiver of subrogation in favor of the City of Banning, its directors, officers, employees, and authorized volunteers, for losses paid under the terms of this coverage which arise from work performed by the Named Insured for the City of Banning; this provision applies regardless of whether or not the City of Banning has received a waiver of subrogation from the insurer.
4. Builder's Risk - (Course of Construction) if necessary- insurance utilizing an "All Risk" (Special Perils) coverage form with limits equal to the completed value of the project and no coinsurance penalty provision.
5. Professional Liability - with limits no less than $5,000,000 per occurrence or claim, and $5,000,000 policy aggregate.
6. Professional Liability Claims Made Policies – include the following provisions. The Retroactive Date must be shown and must be before the date of the contract or the beginning of contract work.
7. Insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of the contract of work.
8. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a Retroactive Date prior to the contract effective date, the Consultant must purchase "extended reporting" coverage for a minimum of ten (10) years after completion of contract work.
9. Contractors' Pollution Liability and/or Asbestos Liability and/or Errors and Omissions (if project involves environmental hazards) - with limits no less than $2,000,000 per occurrence or claim, and $2,000,000 policy aggregate. If the Contractor maintains broader coverage and or/higher limits than the minimums shown above, the City of Banning requires and shall be entitled to the broader coverage and/or higher limits maintained by the Contractor. Any available insurance proceeds in excess of the specified minimum of insurance and coverage shall be available to the City of Banning.

Exhibit K

Form of Performance Bond

Bond No. _____

PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS that:

WHEREAS the City of Banning ("City"), has awarded to _____

_____ ("Principal")

(Name and address of Contractor)

a contract (the "Contract") for the Work described as follows:

_____

(Project name)

WHEREAS, Principal is required under the terms of the Contract to furnish a Bond for the faithful performance of the Contract.

NOW, THEREFORE, we, the undersigned Principal, and _____

_____,

(Name and address of Surety)

("Surety") a duly admitted surety insurer under the laws of the State of California, as Surety, are held and firmly bound unto the City in the penal sum of _____

Dollars ($_____), this amount being not less than the total Contract Price, in lawful money of the United States of America, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, successors executors and administrators, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT, if the hereby bounded Principal, his, her or its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and provisions in the Contract and any alteration thereof made as therein provided, on the Principal's part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the City, its officers, agents and employees, as therein stipulated, then this obligation shall become null and void; otherwise, it shall be and remain in full force and effect.

As a part of the obligation secured hereby and in addition to the face amount specified therefor, there shall be included costs and reasonable expenses and fees, including reasonable attorneys' fees, incurred by City in successfully enforcing such obligation, all to be taxed as costs and included in any judgment rendered. Surety hereby waives any statute of limitations as it applies to an action on this Bond.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or of the Work to be performed thereunder or the specifications accompanying the same shall in anywise affect its obligations under this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the Work or to the specifications. Surety hereby waives the provisions of California

Civil Code Sections 2845 and 2849. The City is the principal beneficiary of this Bond and has all rights of a party hereto.

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original hereof, have been duly executed by Principal and Surety, on the date set forth below, the name of each corporate party being hereto affixed and these presents duly signed by its undersigned representative(s) pursuant to authority of its governing body.

Dated: _____

"Principal"	"Surety"
_____	_____
_____	_____
By: _____	By: _____
Its	Its
By: _____	By: _____
Its	Its
(Seal)	*(Seal)*

Note: This Bond must be executed in duplicate and dated, all signatures must be notarized, and evidence of the authority of any person signing as attorney-in-fact must be attached. ***DATE OF BOND MUST NOT BE BEFORE DATE OF CONTRACT****. Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the project is located.*

Exhibit L

Form of Payment Bond

Bond No. _____

PAYMENT BOND
(LABOR AND MATERIALS)

KNOW ALL PERSONS BY THESE PRESENTS that:

WHEREAS the City of Banning ("City"), State of California, has awarded to _____

_____ ("Principal")

(Name and address of Contractor)

a contract (the "Contract") for the Work described as follows:

_____

(Project name)

WHEREAS, under the terms of the Contract, the Principal is required before entering upon the performance of the Work, to file a good and sufficient payment Bond with the City to secure the claims to which reference is made in Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code.

NOW, THEREFORE, we, the undersigned Principal, and _____

_____

(Name and address of Surety)

("Surety") a duly admitted surety insurer under the laws of the State of California, as Surety, are held and firmly bound unto the City and all contractors, subcontractors, laborers, material suppliers, and other persons employed in the performance of the Contract and referred to in Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code in the penal sum of _

_____

Dollars ($_____), for materials furnished or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to this Work or labor, that the Surety will pay the same in an amount not exceeding the amount hereinabove set forth, and also in case suit is brought upon this Bond, will pay, in addition to the face amount thereof, costs and reasonable expenses and fees, including reasonable attorneys' fees, incurred by City in successfully enforcing this obligation, to be awarded and fixed by the court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this Bond shall inure to the benefit of any and all persons, companies, and corporations entitled to file claims under Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this Bond.

Upon expiration of the time within which the California Labor Commissioner may serve a civil wage and penalty assessment against the principal, any of its subcontractors, or both the principal and its subcontractors pursuant to Labor Code Section 1741, and upon expiration of the time within which a joint labor management committee may commence an action against the principal, any of its subcontractors, or both the principal and its subcontractors pursuant to Labor Code Section 1771.2, if the condition of this Bond be fully performed, then this obligation shall become null and void; otherwise, it shall be and remain in full force and effect.

The Surety hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Contract or the Specifications accompanying the same shall in any manner affect its obligations on this Bond, and it does hereby waive notice of any such change, extension, alteration, or addition.

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original hereof, have been duly executed by Principal and Surety, on the date set forth below, the name of each corporate party being hereto affixed and these presents duly signed by its undersigned representative(s) pursuant to authority of its governing body.

Dated: _____

"Principal"	"Surety"
_____	_____
_____	_____
By: _____	By: _____
Its	Its
By: _____	By: _____
Its	Its
(Seal)	*(Seal)*

Note: This Bond must be executed in duplicate and dated, all signatures must be notarized, and evidence of the authority of any person signing as attorney-in-fact must be attached. ***DATE OF BOND MUST NOT BE BEFORE DATE OF CONTRACT.*** Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the project is located.

Exhibit M

Wage Determination Schedules

"General Decision Number: CA20240025 12/06/2024

Superseded General Decision Number: CA20230025

State: California

Construction Types: Building, Heavy (Heavy and Dredging) and Highway

County: Riverside County in California.

BUILDING CONSTRUCTION PROJECTS; DREDGING PROJECTS (does not include hopper dredge work); HEAVY CONSTRUCTION PROJECTS (does not include water well drilling); HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024.

|_____|_____|

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/05/2024
1	01/12/2024
2	01/19/2024
3	02/23/2024
4	03/08/2024
5	05/24/2024
6	06/28/2024
7	07/05/2024
8	07/12/2024
9	08/09/2024
10	08/16/2024
11	08/23/2024
12	09/06/2024
13	09/13/2024
14	09/20/2024
15	10/18/2024
16	11/08/2024
17	11/29/2024
18	12/06/2024

ASBE0005-002 09/01/2023

	Rates	Fringes
Asbestos Workers/Insulator (Includes the application of all insulating materials, protective coverings, coatings, and finishes to all types of mechanical systems)	$ 49.58	25.27
Fire Stop Technician (Application of Firestopping Materials for wall openings and penetrations in walls, floors, ceilings and curtain		

walls).....$ 36.97 20.36

ASBE0005-004 07/04/2022

	Rates	Fringes
Asbestos Removal worker/hazardous material handler (Includes preparation, wetting, stripping, removal, scrapping, vacuuming, bagging and disposing of all insulation materials from mechanical systems, whether they contain asbestos or not)....	$ 23.52	13.37

BOIL0092-003 01/01/2024

	Rates	Fringes
BOILERMAKER.....	$ 51.98	42.11

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* BRCA0004-011 05/01/2024

	Rates	Fringes
BRICKLAYER; MARBLE SETTER.....	$ 45.53	20.29

*The wage scale for prevailing wage projects performed in Blythe, China lake, Death Valley, Fort Irwin, Twenty-Nine Palms, Needles and 1-15 corridor (Barstow to the Nevada State Line) will be Three Dollars ($3.00) above the standard San Bernardino/Riverside County hourly wage rate

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BRCA0018-004 06/01/2023

	Rates	Fringes
MARBLE FINISHER.....	$ 40.21	15.23
TILE FINISHER.....	$ 34.78	13.64
TILE LAYER.....	$ 48.29	19.18

BRCA0018-010 09/01/2023

	Rates	Fringes
TERRAZZO FINISHER.....	$ 39.95	14.65
TERRAZZO WORKER/SETTER.....	$ 47.85	15.14

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* CARP0213-001 01/01/2024

	Rates	Fringes
CARPENTER		
(1) Carpenter, Cabinet Installer, Insulation Installer, Hardwood Floor Worker and acoustical installer	$ 48.86	22.88
(2) Millwright	$ 49.36	22.88
(3) Piledrivermen/Derrick Bargeman, Bridge or Dock Carpenter, Heavy Framer, Rock Bargeman or Scowman, Rockslinger, Shingler (Commercial)	$ 48.99	22.88
(4) Pneumatic Nailer, Power Stapler	$ 51.85	16.28
(5) Sawfiler	$ 51.69	16.28
(6) Scaffold Builder	$ 40.77	22.38
(7) Table Power Saw Operator	$ 51.70	16.28

FOOTNOTE: Work of forming in the construction of open cut sewers or storm drains, on operations in which horizontal lagging is used in conjunction with steel H-Beams driven or placed in pre- drilled holes, for that portion of a lagged trench against which concrete is poured, namely, as a substitute for back forms (which work is performed by piledrivers): $0.13 per hour additional.

CARP0213-002 07/01/2021

	Rates	Fringes
Diver		
(1) Wet	$ 834.40	16.28
(2) Standby	$ 445.84	16.28
(3) Tender	$ 437.84	16.28
(4) Assistant Tender	$ 413.84	16.28

Amounts in ""Rates' column are per day

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* CARP0213-004 01/01/2024

	Rates	Fringes

Drywall
DRYWALL INSTALLER/LATHER....$ 48.86 22.88
STOCKER/SCRAPPER.....$ 20.80 9.97

CARP0721-001 07/01/2021

	Rates	Fringes
Modular Furniture Installer.....$	21.85	7.15

ELEC0440-001 01/01/2024

	Rates	Fringes
ELECTRICIAN		
INSIDE ELECTRICIAN.....$	53.76	3%+27.50
INTELLIGENT TRANSPORTATION SYSTEMS		
Electrician.....$	36.99	3%+23.18
Technician.....$	27.75	3%+23.18

ZONE PAY: Zone A: Free travel zone for all contractors performing work in Zone A.
Zone B:Any work performed in Zone (B) shall add $12.00 per hour to the current wage scale. Zone (B) shall be the area from the eastern perimeter of Zone (A) to a line which runs north and south begininng at Little Morongo Canyon (San Bernardino/Riverside County Line), Southeast along the Coachella Tunnels, Colorado River Aqueduct and Mecca Tunnels to Pinkham Wash then South to Box Canyon Road, then southwest along Box Canyon Road to Highway 195 west onto 195 south to Highway 86 to Riverside/Imperial County Line.

ELEC1245-001 06/01/2024

	Rates	Fringes
LINE CONSTRUCTION		
(1) Lineman; Cable splicer..$	70.16	24.46
(2) Equipment specialist (operates crawler tractors, commercial motor vehicles, backhoes, trenchers, cranes (50 tons and below), overhead & underground distribution line equipment).....$	53.30	22.01
(3) Groundman.....$	40.76	21.51
(4) Powderman.....$	51.87	18.79

HOLIDAYS: New Year's Day, M.L. King Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day and day after Thanksgiving, Christmas Day

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ELEV0018-001 01/01/2024

	Rates	Fringes
ELEVATOR MECHANIC	$ 66.63	37.885+a+b

FOOTNOTE:

a. PAID VACATION: Employer contributes 8% of regular hourly rate as vacation pay credit for employees with more than 5 years of service, and 6% for 6 months to 5 years of service.

b. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, Friday after Thanksgiving, and Christmas Day.

ENGI0012-004 08/01/2024

	Rates	Fringes
OPERATOR: Power Equipment (DREDGING)		
(1) Leverman	$ 64.10	38.75
(2) Dredge dozer	$ 58.13	38.75
(3) Deckmate	$ 58.02	38.75
(4) Winch operator (stern winch on dredge)	$ 57.47	38.75
(5) Fireman-Oiler, Deckhand, Bargeman, Leveehand	$ 56.93	38.75
(6) Barge Mate	$ 57.54	38.75

ENGI0012-024 07/01/2023

	Rates	Fringes
OPERATOR: Power Equipment (All Other Work)		
GROUP 1	$ 53.90	32.80
GROUP 2	$ 54.68	32.80
GROUP 3	$ 54.97	32.80
GROUP 4	$ 56.46	32.80
GROUP 6	$ 56.68	32.80
GROUP 8	$ 56.79	32.80

GROUP 10.....$ 56.91 32.80
GROUP 12.....$ 57.08 32.80
GROUP 13.....$ 57.18 32.80
GROUP 14.....$ 57.21 32.80
GROUP 15.....$ 57.29 32.80
GROUP 16.....$ 57.41 32.80
GROUP 17.....$ 57.58 32.80
GROUP 18.....$ 57.68 32.80
GROUP 19.....$ 57.79 32.80
GROUP 20.....$ 57.91 32.80
GROUP 21.....$ 58.08 32.80
GROUP 22.....$ 58.18 32.80
GROUP 23.....$ 58.29 32.80
GROUP 24.....$ 58.41 32.80
GROUP 25.....$ 58.58 32.80

OPERATOR: Power Equipment
(Cranes, Piledriving &
Hoisting)

GROUP 1.....$ 55.25 32.80
GROUP 2.....$ 56.03 32.80
GROUP 3.....$ 56.32 32.80
GROUP 4.....$ 56.46 32.80
GROUP 5.....$ 56.68 32.80
GROUP 6.....$ 56.79 32.80
GROUP 7.....$ 56.91 32.80
GROUP 8.....$ 57.08 32.80
GROUP 9.....$ 57.25 32.80
GROUP 10.....$ 58.25 32.80
GROUP 11.....$ 59.25 32.80
GROUP 12.....$ 60.25 32.80
GROUP 13.....$ 61.25 32.80

OPERATOR: Power Equipment
(Tunnel Work)

GROUP 1.....$ 55.75 32.80
GROUP 2.....$ 56.53 32.80
GROUP 3.....$ 56.82 32.80
GROUP 4.....$ 56.96 32.80
GROUP 5.....$ 57.18 32.80
GROUP 6.....$ 57.29 32.80
GROUP 7.....$ 57.41 32.80

PREMIUM PAY:
$10.00 per hour shall be paid on all Power Equipment Operator work on the followng Military Bases: China Lake Naval Reserve, Vandenberg AFB, Point Arguello, Seely Naval Base, Fort Irwin, Nebo Annex Marine Base, Marine Corp Logistics Base Yermo, Edwards AFB, 29 Palms Marine Base and Camp Pendleton

Workers required to suit up and work in a hazardous material

environment: $2.00 per hour additional. Combination mixer and compressor operator on gunite work shall be classified as a concrete mobile mixer operator.

SEE ZONE DEFINITIONS AFTER CLASSIFICATIONS

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Bargeman; Brakeman; Compressor operator; Ditch Witch, with seat or similar type equipment; Elevator operator-inside; Engineer Oiler; Forklift operator (includes loed, lull or similar types under 5 tons; Generator operator; Generator, pump or compressor plant operator; Pump operator; Signalman; Switchman

GROUP 2: Asphalt-rubber plant operator (nurse tank operator);Coil Tubing Rig Operator, Concrete mixer operator-skip type; Conveyor operator; Fireman; Forklift operator (includes loed, lull or similar types over 5 tons; Hydrostatic pump operator; oiler crusher (asphalt or concrete plant); Petromat laydown machine; PJU side dum jack; Screening and conveyor machine operator (or similar types); Skiploader (wheel type up to 3/4 yd. without attachment); Tar pot fireman; Temporary heating plant operator; Trenching machine oiler

GROUP 3: Asphalt-rubber blend operator; Bobcat or similar type (Skid steer); Equipment greaser (rack); Ford Ferguson (with dragtype attachments); Helicopter radioman (ground); Stationary pipe wrapping and cleaning machine operator

GROUP 4: Asphalt plant fireman; Backhoe operator (mini-max or similar type); Boring machine operator; Boxman or mixerman (asphalt or concrete); Chip spreading machine operator; Concrete cleaning decontamination machine operator; Concrete Pump Operator (small portable);Direct Push Operator (Geoprobe or similar types) Drilling machine operator, small auger types (Texoma super economatic or similar types - Hughes 100 or 200 or similar types - drilling depth of 30' maximum); Equipment greaser (grease truck); Guard rail post driver operator; Highline cableway signalman; Hydra-hammer-aero stomper; Micro Tunneling (above ground tunnel); Power concrete curing machine operator; Power concrete saw operator; Power-driven jumbo form setter operator; Power sweeper operator; Rock Wheel Saw/Trencher; Roller operator (compacting); Screed operator (asphalt or concrete); Trenching machine operator (up to 6 ft.); Vacuum or much truck

GROUP 6: Articulating material hauler; Asphalt plant engineer; Batch plant operator; Bit sharpener; Concrete joint machine operator (canal and similar type); Concrete planer operator; Dandy digger; Deck engine operator; Derrickman (oilfield type); Drilling machine operator, bucket or auger types (Calweld 100 bucket or similar types - Watson 1000 auger or similar types - Texoma 330, 500 or 600 auger or similar types - drilling depth of 45' maximum); Drilling machine operator; Hydrographic seeder machine operator (straw, pulp or seed), Jackson track maintainer, or similar type; Kalamazoo Switch tamper, or similar type; Machine tool operator; Maginnis internal full slab vibrator, Mechanical berm, curb or gutter(concrete or asphalt); Mechanical finisher operator (concrete, Clary-Johnson-Bidwell or similar); Micro tunnel system (below ground); Pavement breaker operator (truck mounted); Road oil mixing machine operator; Roller operator (asphalt or finish), rubber-tired earth moving equipment (single engine, up to and including 25 yds. struck); Self-propelled tar pipelining machine operator; Skiploader operator (crawler and wheel type, over 3/4 yd. and up to and including 1-1/2 yds.); Slip form pump operator (power driven hydraulic lifting device for concrete forms); Tractor operator-bulldozer, tamper-scraper (single engine, up to 100 h.p. flywheel and similar types, up to and including D-5 and similar types); Tugger hoist operator (1 drum); Ultra high pressure waterjet cutting tool system operator; Vacuum blasting machine operator

GROUP 8: Asphalt or concrete spreading operator (tamping or finishing); Asphalt paving machine operator (Barber Greene or similar type); Asphalt-rubber distribution operator; Backhoe operator (up to and including 3/4 yd.), small ford, Case or similar types; Cable Bundling Machine Operator (excluding handheld); Cable Trenching Machine Operator (Spider Plow or similar types) Cast-in-place pipe laying machine operator; Combination mixer and compressor operator (gunite work); Compactor operator (self-propelled); Concrete mixer operator (paving); Crushing plant operator; Drill Doctor; Drilling machine operator, Bucket or auger types (Calweld 150 bucket or similar types - Watson 1500, 2000 2500 auger or similar types - Texoma 700, 800 auger or similar types - drilling depth of 60' maximum); Elevating grader operator; Grade checker; Gradall operator; Grouting machine operator; Heavy-duty repairman; Heavy equipment robotics operator; Kalamazoo balliste regulator or similar type; Kolman belt loader and similar type; Le Tourneau blob compactor or similar type; Loader operator (Athey, Euclid, Sierra and similar types); Mobark Chipper or similar; Ozzie padder or similar types; P.C. slot saw; Pneumatic concrete

placing machine operator (Hackley-Presswell or similar type); Pumpcrete gun operator; RCM Cementing Unit Operator, Rail/Switch Grinder Operator (Harsco or similar types) Rock Drill or similar types; Rotary drill operator (excluding caisson type); Rubber-tired earth-moving equipment operator (single engine, caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. up to and including 50 cu. yds. struck); Rubber-tired earth-moving equipment operator (multiple engine up to and including 25 yds. struck); Rubber-tired scraper operator (self-loading paddle wheel type-John Deere, 1040 and similar single unit); Self- propelled curb and gutter machine operator; Shuttle buggy; Skiploader operator (crawler and wheel type over 1-1/2 yds. up to and including 6-1/2 yds.); Soil remediation plant operator; Surface heaters and planer operator; Tractor compressor drill combination operator; Tractor operator (any type larger than D-5 - 100 flywheel h.p. and over, or similar-bulldozer, tamper, scraper and push tractor single engine); Tractor operator (boom attachments), Traveling pipe wrapping, cleaning and bendng machine operator; Trenching machine operator (over 6 ft. depth capacity, manufacturer's rating); trenching Machine with Road Miner attachment (over 6 ft depth capacity): Ultra high pressure waterjet cutting tool system mechanic; Water pull (compaction) operator

GROUP 10: Drilling machine operator, Bucket or auger types (Calweld 200 B bucket or similar types-Watson 3000 or 5000 auger or similar types-Texoma 900 auger or similar types-drilling depth of 105' maximum); Dual drum mixer, dynamic compactor LDC350 (or similar types); Monorail locomotive operator (diesel, gas or electric); Motor patrol-blade operator (single engine); Multiple engine tractor operator (Euclid and similar type-except Quad 9 cat.); Rubber-tired earth-moving equipment operator (single engine, over 50 yds. struck); Pneumatic pipe ramming tool and similar types; Prestressed wrapping machine operator; Rubber-tired earth-moving equipment operator (single engine, over 50 yds. struck); Rubber tired earth moving equipment operator (multiple engine, Euclid, caterpillar and similar over 25 yds. and up to 50 yds. struck), Tower crane repairman; Tractor loader operator (crawler and wheel type over 6-1/2 yds.); Woods mixer operator (and similar Pugmill equipment)

GROUP 12: Auto grader operator; Automatic slip form operator; Drilling machine operator, bucket or auger types (Calweld, auger 200 CA or similar types - Watson, auger 6000 or similar types - Hughes Super Duty, auger 200 or similar

types - drilling depth of 175' maximum); Hoe ram or similar with compressor; Mass excavator operator less tha 750 cu. yards; Mechanical finishing machine operator; Mobile form traveler operator; Motor patrol operator (multi-engine); Pipe mobile machine operator; Rubber-tired earth- moving equipment operator (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck); Rubber-tired self- loading scraper operator (paddle-wheel-auger type self-loading - two (2) or more units)

GROUP 13: Rubber-tired earth-moving equipment operator operating equipment with push-pull system (single engine, up to and including 25 yds. struck)

GROUP 14: Canal liner operator; Canal trimmer operator; Remote- control earth-moving equipment operator (operating a second piece of equipment: $1.00 per hour additional); Wheel excavator operator (over 750 cu. yds.)

GROUP 15: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine-up to and including 25 yds. struck)

GROUP 16: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 17: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine, Euclid, Caterpillar and similar, over 50 cu. yds. struck); Tandem tractor operator (operating crawler type tractors in tandem - Quad 9 and similar type)

GROUP 18: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, up to and including 25 yds. struck)

GROUP 19: Rotex concrete belt operator (or similar types); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, Caterpillar, Euclid, Athey Wagon and similar types with any

and all attachments over 25 yds.and up to and including 50 cu. yds. struck); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - multiple engine, up to and including 25 yds. struck)

GROUP 20: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps, and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 21: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)

GROUP 22: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, up to and including 25 yds. struck)

GROUP 23: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 yds. struck); Rubber-tired earth-moving equipment operator, operating with the tandem push-pull system (multiple engine, up to and including 25 yds. struck)

GROUP 24: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 25: Concrete pump operator-truck mounted; Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck); Spyder Excavator Operator, with all attachments

CRANES, PILEDRIVING AND HOISTING EQUIPMENT CLASSIFICATIONS

GROUP 1: Engineer oiler; Fork lift operator (includes loed, lull or similar types)

GROUP 2: Truck crane oiler

GROUP 3: A-frame or winch truck operator; Ross carrier operator (jobsite)

GROUP 4: Bridge-type unloader and turntable operator; Helicopter hoist operator

GROUP 5: Hydraulic boom truck; Stinger crane (Austin-Western or similar type); Tugger hoist operator (1 drum)

GROUP 6: Bridge crane operator; Cretor crane operator; Hoist operator (Chicago boom and similar type); Lift mobile operator; Lift slab machine operator (Vagtborg and similar types); Material hoist and/or manlift operator; Polar gantry crane operator; Self Climbing scaffold (or similar type); Shovel, backhoe, dragline, clamshell operator (over 3/4 yd. and up to 5 cu. yds. mrc); Tugger hoist operator

GROUP 7: Pedestal crane operator; Shovel, backhoe, dragline, clamshell operator (over 5 cu. yds. mrc); Tower crane repair; Tugger hoist operator (3 drum)

GROUP 8: Crane operator (up to and including 25 ton capacity); Crawler transporter operator; Derrick barge operator (up to and including 25 ton capacity); Hoist operator, stiff legs, Guy derrick or similar type (up to and including 25 ton capacity); Shovel, backhoe, dragline, clamshell operator (over 7 cu. yds., M.R.C.)

GROUP 9: Crane operator (over 25 tons and up to and including 50 tons mrc); Derrick barge operator (over 25 tons up to and including 50 tons mrc); Highline cableway operator; Hoist operator, stiff legs, Guy derrick or similar type (over 25 tons up to and including 50 tons mrc); K-crane operator; Polar crane operator; Self erecting tower crane operator maximum lifting capacity ten tons

GROUP 10: Crane operator (over 50 tons and up to and including 100 tons mrc); Derrick barge operator (over 50 tons up to and including 100 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 50 tons up to and including 100 tons mrc), Mobile tower crane operator (over 50 tons, up to and including 100 tons M.R.C.);

GROUP 11: Crane operator (over 100 tons and up to and

including 200 tons mrc); Derrick barge operator (over 100 tons up to and including 200 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 100 tons up to and including 200 tons mrc); Mobile tower crane operator (over 100 tons up to and including 200 tons mrc) ; Tower crane operator and tower gantry

GROUP 12: Crane operator (over 200 tons up to and including 300 tons mrc); Derrick barge operator (over 200 tons up to and including 300 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 200 tons, up to and including 300 tons mrc); Mobile tower crane operator (over 200 tons, up to and including 300 tons mrc)

GROUP 13: Crane operator (over 300 tons); Derrick barge operator (over 300 tons); Helicopter pilot; Hoist operator, stiff legs, Guy derrick or similar type (over 300 tons); Mobile tower crane operator (over 300 tons)

TUNNEL CLASSIFICATIONS

GROUP 1: Skiploader (wheel type up to 3/4 yd. without attachment)

GROUP 2: Power-driven jumbo form setter operator

GROUP 3: Dinkey locomotive or motorperson (up to and including 10 tons)

GROUP 4: Bit sharpener; Equipment greaser (grease truck); Slip form pump operator (power-driven hydraulic lifting device for concrete forms); Tugger hoist operator (1 drum); Tunnel locomotive operator (over 10 and up to and including 30 tons)

GROUP 5: Backhoe operator (up to and including 3/4 yd.); Small Ford, Case or similar; Drill doctor; Grouting machine operator; Heading shield operator; Heavy-duty repairperson; Loader operator (Athey, Euclid, Sierra and similar types); Mucking machine operator (1/4 yd., rubber-tired, rail or track type); Pneumatic concrete placing machine operator (Hackley-Presswell or similar type); Pneumatic heading shield (tunnel); Pumpcrete gun operator; Tractor compressor drill combination operator; Tugger hoist operator (2 drum); Tunnel locomotive operator (over 30 tons)

GROUP 6: Heavy Duty Repairman

GROUP 7: Tunnel mole boring machine operator

ENGINEERS ZONES

$1.00 additional per hour for all of IMPERIAL County and the portions of KERN, RIVERSIDE & SAN BERNARDINO Counties as defined below:

That area within the following Boundary: Begin in San Bernardino County, approximately 3 miles NE of the intersection of I-15 and the California State line at that point which is the NW corner of Section 1, T17N,m R14E, San Bernardino Meridian. Continue W in a straight line to that point which is the SW corner of the northwest quarter of Section 6, T27S, R42E, Mt. Diablo Meridian. Continue North to the intersection with the Inyo County Boundary at that point which is the NE corner of the western half of the northern quarter of Section 6, T25S, R42E, MDM. Continue W along the Inyo and San Bernardino County boundary until the intersection with Kern County, as that point which is the SE corner of Section 34, T24S, R40E, MDM. Continue W along the Inyo and Kern County boundary until the intersection with Tulare County, at that point which is the SW corner of the SE quarter of Section 32, T24S, R37E, MDM. Continue W along the Kern and Tulare County boundary, until that point which is the NW corner of T25S, R32E, MDM. Continue S following R32E lines to the NW corner of T31S, R32E, MDM. Continue W to the NW corner of T31S, R31E, MDM. Continue S to the SW corner of T32S, R31E, MDM. Continue W to SW corner of SE quarter of Section 34, T32S, R30E, MDM. Continue S to SW corner of T11N, R17W, SBM. Continue E along south boundary of T11N, SBM to SW corner of T11N, R7W, SBM. Continue S to SW corner of T9N, R7W, SBM. Continue E along south boundary of T9N, SBM to SW corner of T9N, R1E, SBM. Continue S along west boundary of R1E, SMB to Riverside County line at the SW corner of T1S, R1E, SBM. Continue E along south boundary of T1s, SBM (Riverside County Line) to SW corner of T1S, R10E, SBM. Continue S along west boundary of R10E, SBM to Imperial County line at the SW corner of T8S, R10E, SBM. Continue W along Imperial and Riverside county line to NW corner of T9S, R9E, SBM. Continue S along the boundary between Imperial and San Diego Counties, along the west edge of R9E, SBM to the south boundary of Imperial County/California state line. Follow the California state line west to Arizona state line, then north to Nevada state line, then continuing NW back to start at the point which is the NW corner of Section 1, T17N, R14E, SBM

$1.00 additional per hour for portions of SAN LUIS OBISPO, KERN, SANTA BARBARA & VENTURA as defined below:

That area within the following Boundary: Begin approximately 5 miles north of the community of Cholame, on the Monterey County

and San Luis Obispo County boundary at the NW corner of T25S, R16E, Mt. Diablo Meridian. Continue south along the west side of R16E to the SW corner of T30S, R16E, MDM. Continue E to SW corner of T30S, R17E, MDM. Continue S to SW corner of T31S, R17E, MDM. Continue E to SW corner of T31S, R18E, MDM. Continue S along West side of R18E, MDM as it crosses into San Bernardino Meridian numbering area and becomes R30W. Follow the west side of R30W, SBM to the SW corner of T9N, R30W, SBM. Continue E along the south edge of T9N, SBM to the Santa Barbara County and Ventura County boundary at that point whch is the SW corner of Section 34.T9N, R24W, SBM, continue S along the Ventura County line to that point which is the SW corner of the SE quarter of Section 32, T7N, R24W, SBM. Continue E along the south edge of T7N, SBM to the SE corner to T7N, R21W, SBM. Continue N along East side of R21W, SBM to Ventura County and Kern County boundary at the NE corner of T8N, R21W. Continue W along the Ventura County and Kern County boundary to the SE corner of T9N, R21W. Continue North along the East edge of R21W, SBM to the NE corner of T12N, R21W, SBM. Continue West along the north edge of T12N, SBM to the SE corner of T32S, R21E, MDM. [T12N SBM is a think strip between T11N SBM and T32S MDM]. Continue North along the East side of R21E, MDM to the Kings County and Kern County border at the NE corner of T25S, R21E, MDM, continue West along the Kings County and Kern County Boundary until the intersection of San Luis Obispo County. Continue west along the Kings County and San Luis Obispo County boundary until the intersection with Monterey County. Continue West along the Monterey County and San Luis Obispo County boundary to the beginning point at the NW corner of T25S, R16E, MDM.

$2.00 additional per hour for INYO and MONO Counties and the Northern portion of SAN BERNARDINO County as defined below:

That area within the following Boundary: Begin at the intersection of the northern boundary of Mono County and the California state line at the point which is the center of Section 17, T10N, R22E, Mt. Diablo Meridian. Continue S then SE along the entire western boundary of Mono County, until it reaches Inyo County at the point which is the NE corner of the Western half of the NW quarter of Section 2, T8S, R29E, MDM. Continue SSE along the entire western boundary of Inyo County, until the intersection with Kern County at the point which is the SW corner of the SE 1/4 of Section 32, T24S, R37E, MDM. Continue E along the Inyo and Kern County boundary until the intersection with San Bernardino County at that point which is the SE corner of section 34, T24S, R40E, MDM. Continue E along the Inyo and San Bernardino County boundary until the point which is the NE corner of the Western half of the NW quarter of

Section 6, T25S, R42E, MDM. Continue S to that point which is the SW corner of the NW quarter of Section 6, T27S, R42E, MDM. Continue E in a straight line to the California and Nevada state border at the point which is the NW corner of Section 1, T17N, R14E, San Bernardino Meridian. Then continue NW along the state line to the starting point, which is the center of Section 18, T10N, R22E, MDM.

REMAINING AREA NOT DEFINED ABOVE RECIEVES BASE RATE

IRON0433-006 01/01/2024

	Rates	Fringes
IRONWORKER		
Fence Erector	$ 42.53	26.26
Ornamental, Reinforcing and Structural	$ 47.45	34.90

PREMIUM PAY:

$9.00 additional per hour at the following locations:

China Lake Naval Test Station, Chocolate Mountains Naval Reserve-Niland,
Edwards AFB, Fort Irwin Military Station, Fort Irwin Training Center-Goldstone, San Clemente Island, San Nicholas Island, Susanville Federal Prison, 29 Palms - Marine Corps, U.S. Marine Base - Barstow, U.S. Naval Air Facility - Sealey, Vandenberg AFB Army Defense Language Institute - Monterey, Fallon Air Base, Naval Post Graduate School - Monterey, Yermo Marine Corps Logistics Center
Port Hueneme, Port Mugu, U.S. Coast Guard Station - Two Rock

LABO0300-005 07/01/2024

	Rates	Fringes
Asbestos Removal Laborer	$ 43.88	25.13

SCOPE OF WORK: Includes site mobilization, initial site cleanup, site preparation, removal of asbestos-containing material and toxic waste, encapsulation, enclosure and disposal of asbestos- containing materials and toxic waste by hand or with equipment or machinery; scaffolding, fabrication of temporary wooden barriers and assembly of

decontamination stations.

LABO0345-001 07/01/2022

	Rates	Fringes
LABORER (GUNITE)		
GROUP 1	$ 48.50	21.37
GROUP 2	$ 47.55	21.37
GROUP 3	$ 44.01	21.37

FOOTNOTE: GUNITE PREMIUM PAY: Workers working from a Bosn'n's Chair or suspended from a rope or cable shall receive 40 cents per hour above the foregoing applicable classification rates. Workers doing gunite and/or shotcrete work in a tunnel shall receive 35 cents per hour above the foregoing applicable classification rates, paid on a portal-to-portal basis. Any work performed on, in or above any smoke stack, silo, storage elevator or similar type of structure, when such structure is in excess of 75'-0"" above base level and which work must be performed in whole or in part more than 75'-0"" above base level, that work performed above the 75'-0"" level shall be compensated for at 35 cents per hour above the applicable classification wage rate.

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Rodmen, Nozzlemen

GROUP 2: Gunmen

GROUP 3: Reboundmen

LABO1184-001 07/01/2022

	Rates	Fringes
Laborers: (HORIZONTAL DIRECTIONAL DRILLING)		
(1) Drilling Crew Laborer	$ 40.69	18.25
(2) Vehicle Operator/Hauler	$ 40.86	18.25
(3) Horizontal Directional Drill Operator	$ 42.71	18.25
(4) Electronic Tracking Locator	$ 44.71	18.25
Laborers: (STRIPING/SLURRY SEAL)		

GROUP 1	$ 41.90	21.32
GROUP 2	$ 43.20	21.32
GROUP 3	$ 45.21	21.32
GROUP 4	$ 46.95	21.32

LABORERS - STRIPING CLASSIFICATIONS

GROUP 1: Protective coating, pavement sealing, including repair and filling of cracks by any method on any surface in parking lots, game courts and playgrounds; carstops; operation of all related machinery and equipment; equipment repair technician

GROUP 2: Traffic surface abrasive blaster; pot tender - removal of all traffic lines and markings by any method (sandblasting, waterblasting, grinding, etc.) and preparation of surface for coatings. Traffic control person: controlling and directing traffic through both conventional and moving lane closures; operation of all related machinery and equipment

GROUP 3: Traffic delineating device applicator: Layout and application of pavement markers, delineating signs, rumble and traffic bars, adhesives, guide markers, other traffic delineating devices including traffic control. This category includes all traffic related surface preparation (sandblasting, waterblasting, grinding) as part of the application process. Traffic protective delineating system installer: removes, relocates, installs, permanently affixed roadside and parking delineation barricades, fencing, cable anchor, guard rail, reference signs, monument markers; operation of all related machinery and equipment; power broom sweeper

GROUP 4: Striper: layout and application of traffic stripes and markings; hot thermo plastic; tape traffic stripes and markings, including traffic control; operation of all related machinery and equipment

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LABO1184-002 07/01/2022

	Rates	Fringes
LABORER (TUNNEL)		
GROUP 1	$ 45.68	23.30
GROUP 2	$ 46.00	23.30
GROUP 3	$ 46.46	23.30
GROUP 4	$ 47.15	23.30

LABORER

GROUP 1	$ 36.39	21.04
GROUP 2	$ 36.94	21.04
GROUP 3	$ 37.49	21.04
GROUP 4	$ 39.04	21.04
GROUP 5	$ 39.39	21.04

LABORER CLASSIFICATIONS

GROUP 1: Cleaning and handling of panel forms; Concrete screeding for rough strike-off; Concrete, water curing; Demolition laborer, the cleaning of brick if performed by a worker performing any other phase of demolition work, and the cleaning of lumber; Fire watcher, limber, brush loader, piler and debris handler; Flag person; Gas, oil and/or water pipeline laborer; Laborer, asphalt-rubber material loader; Laborer, general or construction; Laborer, general clean-up; Laborer, landscaping; Laborer, jetting; Laborer, temporary water and air lines; Material hose operator (walls, slabs, floors and decks); Plugging, filling of shee bolt holes; Dry packing of concrete; Railroad maintenance, repair track person and road beds; Streetcar and railroad construction track laborers; Rigging and signaling; Scaler; Slip form raiser; Tar and mortar; Tool crib or tool house laborer; Traffic control by any method; Window cleaner; Wire mesh pulling - all concrete pouring operations

GROUP 2: Asphalt shoveler; Cement dumper (on 1 yd. or larger mixer and handling bulk cement); Cesspool digger and installer; Chucktender; Chute handler, pouring concrete, the handling of the chute from readymix trucks, such as walls, slabs, decks, floors, foundation, footings, curbs, gutters and sidewalks; Concrete curer, impervious membrane and form oiler; Cutting torch operator (demolition); Fine grader, highways and street paving, airport, runways and similar type heavy construction; Gas, oil and/or water pipeline wrapper - pot tender and form person; Guinea chaser; Headerboard person - asphalt; Laborer, packing rod steel and pans; Membrane vapor barrier installer; Power broom sweeper (small); Riprap stonepaver, placing stone or wet sacked concrete; Roto scraper and tiller; Sandblaster (pot tender); Septic tank digger and installer(lead); Tank scaler and cleaner; Tree climber, faller, chain saw operator, Pittsburgh chipper and similar type brush shredder; Underground laborer, including caisson bellower

GROUP 3: Buggymobile person; Concrete cutting torch; Concrete pile cutter; Driller, jackhammer, 2-1/2 ft. drill steel or longer; Dri-pak-it machine; Gas, oil and/or water pipeline wrapper, 6-in. pipe and over, by any method, inside and out; High scaler (including drilling of same); Hydro seeder

and similar type; Impact wrench multi-plate; Kettle person, pot person and workers applying asphalt, lay-kold, creosote, lime caustic and similar type materials (""applying"" means applying, dipping, brushing or handling of such materials for pipe wrapping and waterproofing); Operator of pneumatic, gas, electric tools, vibrating machine, pavement breaker, air blasting, come-alongs, and similar mechanical tools not separately classified herein; Pipelayer's backup person, coating, grouting, making of joints, sealing, caulking, diapering and including rubber gasket joints, pointing and any and all other services; Rock slinger; Rotary scarifier or multiple head concrete chipping scarifier; Steel headerboard and guideline setter; Tamper, Barko, Wacker and similar type; Trenching machine, hand-propelled

GROUP 4: Asphalt raker, lute person, ironer, asphalt dump person, and asphalt spreader boxes (all types); Concrete core cutter (walls, floors or ceilings), grinder or sander; Concrete saw person, cutting walls or flat work, scoring old or new concrete; Cribber, shorer, lagging, sheeting and trench bracing, hand-guided lagging hammer; Head rock slinger; Laborer, asphalt- rubber distributor boot person; Laser beam in connection with laborers' work; Oversize concrete vibrator operator, 70 lbs. and over; Pipelayer performing all services in the laying and installation of pipe from the point of receiving pipe in the ditch until completion of operation, including any and all forms of tubular material, whether pipe, metallic or non-metallic, conduit and any other stationary type of tubular device used for the conveying of any substance or element, whether water, sewage, solid gas, air, or other product whatsoever and without regard to the nature of material from which the tubular material is fabricated; No-joint pipe and stripping of same; Prefabricated manhole installer; Sandblaster (nozzle person), water blasting, Porta Shot-Blast

GROUP 5: Blaster powder, all work of loading holes, placing and blasting of all powder and explosives of whatever type, regardless of method used for such loading and placing; Driller: All power drills, excluding jackhammer, whether core, diamond, wagon, track, multiple unit, and any and all other types of mechanical drills without regard to the form of motive power; Toxic waste removal

TUNNEL LABORER CLASSIFICATIONS

GROUP 1: Batch plant laborer; Changehouse person; Dump person; Dump person (outside); Swamper (brake person and switch person on tunnel work); Tunnel materials handling

person; Nipper; Pot tender, using mastic or other materials (for example, but not by way of limitation, shotcrete, etc.)

GROUP 2: Chucktender, cabletender; Loading and unloading agitator cars; Vibrator person, jack hammer, pneumatic tools (except driller); Bull gang mucker, track person; Concrete crew, including rodder and spreader

GROUP 3: Blaster, driller, powder person; Chemical grout jet person; Cherry picker person; Grout gun person; Grout mixer person; Grout pump person; Jackleg miner; Jumbo person; Kemper and other pneumatic concrete placer operator; Miner, tunnel (hand or machine); Nozzle person; Operating of troweling and/or grouting machines; Powder person (primer house); Primer person; Sandblaster; Shotcrete person; Steel form raiser and setter; Timber person, retimber person, wood or steel; Tunnel Concrete finisher

GROUP 4: Diamond driller; Sandblaster; Shaft and raise work

LABO1184-004 07/01/2022

	Rates	Fringes
Brick Tender	$ 37.32	21.45

LABO1414-001 08/03/2022

	Rates	Fringes
LABORER		
PLASTER CLEAN-UP LABORER	$ 38.92	23.32
PLASTER TENDER	$ 41.47	23.32

Work on a swing stage scaffold: $1.00 per hour additional.

PAIN0036-001 07/01/2023

	Rates	Fringes
Painters: (Including Lead Abatement)		
(1) Repaint (excludes San Diego County)	$ 29.59	17.12
(2) All Other Work	$ 38.52	18.64

REPAINT of any previously painted structure. Exceptions: work involving the aerospace industry, breweries, commercial recreational facilities, hotels which operate

commercial establishments as part of hotel service, and sports facilities.

PAIN0036-008 09/01/2024

	Rates	Fringes
DRYWALL FINISHER/TAPER	$ 49.33	26.82

PAIN0036-015 06/01/2024

	Rates	Fringes
GLAZIER	$ 58.00	26.25

FOOTNOTE: Additional $1.25 per hour for work in a condor, from the third (3rd) floor and up Additional $1.25 per hour for work on the outside of the building from a swing stage or any suspended contrivance, from the ground up

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PLAS0200-009 08/03/2022

	Rates	Fringes
PLASTERER	$ 47.37	19.64

PLAS0500-002 07/01/2023

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 44.00	27.11

PLUM0016-001 09/01/2024

	Rates	Fringes
PLUMBER/PIPEFITTER		
Work ONLY on new additions and remodeling of bars, restaurant, stores and commercial buildings not to exceed 5,000 sq. ft. of floor space	$ 57.67	25.63
Work ONLY on strip malls, light commercial, tenant improvement and remodel work	$ 44.24	23.96
All other work except work		

on new additions and
remodeling of bars,
restaurant, stores and
commercial buildings not
to exceed 5,000 sq. ft. of
floor space and work on
strip malls, light
commercial, tenant
improvement and remodel
work.....$ 59.48 26.61

PLUM0345-001 09/01/2023

	Rates	Fringes
PLUMBER		
Landscape/Irrigation Fitter	$ 40.20	25.90
Sewer & Storm Drain Work	$ 44.29	23.28

ROOF0036-002 08/01/2024

	Rates	Fringes
ROOFER	$ 49.43	20.58

FOOTNOTE: Pitch premium: Work on which employees are exposed to pitch fumes or required to handle pitch, pitch base or pitch impregnated products, or any material containing coal tar pitch, the entire roofing crew shall receive $1.75 per hour ""pitch premium"" pay.

SFCA0669-002 01/01/2024

	Rates	Fringes
SPRINKLER FITTER	$ 45.31	27.91

SHEE0105-003 07/01/2024

LOS ANGELES (South of a straight line drawn between Gorman and Big Pines)and Catalina Island, INYO, KERN (Northeast part, East of Hwy 395), MONO ORANGE, RIVERSIDE, AND SAN BERNARDINO COUNTIES

	Rates	Fringes
SHEET METAL WORKER		
(1) Commercial - New Construction and Remodel		

work.....$ 59.40 30.34
(2) Industrial work
including air pollution
control systems, noise
abatement, hand rails,
guard rails, excluding
aritechtural sheet metal
work, excluding A-C,
heating, ventilating
systems for human comfort...$ 56.95 30.04

TEAM0011-002 07/01/2024

	Rates	Fringes
TRUCK DRIVER		
GROUP 1	$ 39.59	34.34
GROUP 2	$ 39.74	34.34
GROUP 3	$ 39.87	34.34
GROUP 4	$ 40.06	34.34
GROUP 5	$ 40.09	34.34
GROUP 6	$ 40.12	34.34
GROUP 7	$ 40.37	34.34
GROUP 8	$ 40.62	34.34
GROUP 9	$ 40.82	34.34
GROUP 10	$ 41.12	34.34
GROUP 11	$ 41.62	34.34
GROUP 12	$ 42.05	34.34

WORK ON ALL MILITARY BASES:
PREMIUM PAY: $3.00 per hour additional.
[29 palms Marine Base, Camp Roberts, China Lake, Edwards AFB, El Centro Naval Facility, Fort Irwin, Marine Corps Logistics Base at Nebo & Yermo, Mountain Warfare Training Center, Bridgeport, Point Arguello, Point Conception, Vandenberg AFB]

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1: Truck driver

GROUP 2: Driver of vehicle or combination of vehicles - 2 axles; Traffic control pilot car excluding moving heavy equipment permit load; Truck mounted broom

GROUP 3: Driver of vehicle or combination of vehicles - 3 axles; Boot person; Cement mason distribution truck; Fuel truck driver; Water truck - 2 axle; Dump truck, less than

16 yds. water level; Erosion control driver

GROUP 4: Driver of transit mix truck, under 3 yds.; Dumpcrete truck, less than 6-1/2 yds. water level

GROUP 5: Water truck, 3 or more axles; Truck greaser and tire person ($0.50 additional for tire person); Pipeline and utility working truck driver, including winch truck and plastic fusion, limited to pipeline and utility work; Slurry truck driver

GROUP 6: Transit mix truck, 3 yds. or more; Dumpcrete truck, 6-1/2 yds. water level and over; Vehicle or combination of vehicles - 4 or more axles; Oil spreader truck; Dump truck, 16 yds. to 25 yds. water level

GROUP 7: A Frame, Swedish crane or similar; Forklift driver; Ross carrier driver

GROUP 8: Dump truck, 25 yds. to 49 yds. water level; Truck repair person; Water pull - single engine; Welder

GROUP 9: Truck repair person/welder; Low bed driver, 9 axles or over

GROUP 10: Dump truck - 50 yds. or more water level; Water pull - single engine with attachment

GROUP 11: Water pull - twin engine; Water pull - twin engine with attachments; Winch truck driver - $1.25 additional when operating winch or similar special attachments

GROUP 12: Boom Truck 17K and above

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including

preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

State Adopted Rate Identifiers

Classifications listed under the ""SA"" identifier indicate that the prevailing wage rate set by a state (or local) government was adopted under 29 C.F.R   1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 01/03/2024 reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor

200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

RESOLUTION NO. 2021-50

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BANNING, CALIFORNIA ADOPTING THE 2020 URBAN WATER MANAGEMENT PLAN

WHEREAS, the California Legislature enacted Assembly Bill 797 (Water Code Section 10610 et seq.), known as the Urban Water Management Planning Act, during the 1983-1984 Regular Session, and as amended subsequently, which mandates that every supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, prepare an Urban Water Management Plan (UWMP), the primary objective of which is to plan for the conservation and efficient use of water; and

WHEREAS, the City of Banning (City) is an urban supplier of water providing water; and

WHEREAS, the UWMP shall be periodically reviewed at least once every five years, and that the City shall make any amendments or changes to its plan which are indicated by the review; and

WHEREAS, the UWMP must be adopted after public review and hearing, and filed with the California Department of Water Resources within thirty days of adoption; and

WHEREAS, the City has therefore, prepared and circulated for public review a draft UWMP, and a properly noticed public hearing regarding said UWMP was held by the City Council on June 8, 2021; and

WHEREAS, the City Council shall have filed said UWMP with the California Department of Water Resources within 30 days of adoption.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Banning as follows:

SECTION 1. The City of Banning is in conformance with all applicable requirements of the Urban Water Management Planning Act.

SECTION 2. The 2020 UWMP is hereby adopted and ordered filed with the City Clerk.

SECTION 3. This resolution shall be in full force and effect immediately upon its passage and adoption thereof.

SECTION 4. The Public Works Director is hereby authorized and directed to file the 2020 UWMP with the California Department of Water Resources within 30 days after adoption of this resolution.

PASSED, APPROVED AND ADOPTED this 8th day of June 2021.

Colleen Wallace, Mayor
City of Banning

ATTEST:

Caroline Patton, Deputy City Clerk
City of Banning

APPROVED AS TO FORM AND LEGAL CONTENT:

Kevin G. Ennis, City Attorney
Richards, Watson & Gershon

CERTIFICATION:

I, Caroline Patton, Deputy City Clerk of the City Council, do hereby certify that the foregoing Resolution 2021-50, was duly adopted by the City Council of the City of Banning, California, at a regular meeting thereof held on the 8th day of June 2021 by the following vote, to wit:

AYES: Council Members Hamlin, Happe, Pingree, Sanchez, and Mayor Wallace

NOES:

ABSENT:

ABSTAIN:

Caroline Patton, Deputy City Clerk
City of Banning

RESOLUTION 2022-14 UA

A RESOLUTION OF THE UTILITY AUTHORITY OF THE CITY OF BANNING, CALIFORNIA AWARDING A PROFESSIONAL SERVICES AGREEMENT TO N2W ENGINEERING TO PROVIDE OWNER ADVISOR SERVICES AND PRELIMINARY ENGINEERING FOR THE WASTEWATER TREATMENT PLANT IMPROVEMENT PROJECT IN A NOT-TO-EXCEED AMOUNT OF $1,576,430

WHEREAS, the City of Banning owns and operates a wastewater treatment plant (WWTP) also knows as the Water Reclamation Facility which includes a current treatment process consisting of preliminary, primary, secondary, disinfection and sludge disposal; and

WHEREAS, the WWTP has a design treatment capacity of 3.6 million gallons per day (MGD) and typical average daily discharges ranging from 2.0 MGD to 2.1 MGD into 10 unlined evaporation/percolation ponds; and

WHEREAS, the City has recognized a need to construct major improvements to the WWTP in order to comply with California Regional Water Quality Control Board, Colorado River Basin Region (RWQCB) Board Order R7-2016-0015; to increase treatment capacity to support increasing demands; and to enhance the City's water supply portfolio by developing a recycled water supply; and

WHEREAS, due to staff resources the City desires to hire an Owner Advisor to manage the WWTP improvement project as it progresses through the various phases (i.e. planning, environmental, design and construction); and

WHEREAS, on July 21, 2022 the City released a request for qualifications (RFQ) and received one submittal from N2W Engineering. Based on the qualifications of N2W Engineering and the results of an interview conducted by City staff, it has been determined that N2W Engineering has the qualifications and experience to successfully complete the scope of services as the City's Owner Advisor on the WWTP improvement project; and

WHEREAS, the Professional Services Agreement with N2W Engineering to provide Owner Advisor services for the WWTP Improvement project is in an amount of "not-to-exceed" $1,576,430; and

WHEREAS, appropriations in the amount of $460,000 from Fund 680 (Wastewater Operations) and $756,430 from Fund 681 (Wastewater Capital Facility) are required to fund the Professional Services Agreement.

NOW, THEREFORE, BE IT RESOLVED by the Banning Utility Authority of the City of Banning as follows:

SECTION 1. Resolution 2022-14 UA is hereby adopted awarding a Professional Services Agreement to N2W Engineering to provide Owner Advisor services for the Wastewater Treatment Plant Improvement project in the "not-to-exceed" amount of $1,576,430.

SECTION 2. The City Manager or his designee is hereby authorized and directed to execute the Professional Services Agreement with N2W Engineering of Irvine, CA and to make all necessary budget adjustments, appropriations and transfers related to the Professional Services Agreement.

PASSED, APPROVED AND ADOPTED this 13th day of December 2022.

Chairperson
Banning Utility Authority

ATTEST:

Caroline Patton, Secretary
Banning Utility Authority

APPROVED AS TO FORM AND LEGAL CONTENT:

Serita R. Young, Authority Counsel
Richards, Watson & Gershon

CERTIFICATION:

I, Caroline Patton, Secretary of the Banning Utility Authority, do hereby certify that the foregoing Resolution 2022-14 UA, was duly adopted by the Utility Authority of the City of Banning, California, at a regular meeting thereof held on the 13th day of December 2022 by the following vote, to wit:

AYES: Gonzales, Minjares, Sanchez, and Wallace.

NOES:

ABSENT:

ABSTAIN:

Caroline Patton, Secretary
Banning Utility Authority

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER R7-2016-0015

WASTE DISCHARGE REQUIREMENTS
FOR
CITY OF BANNING, OWNER
SUEZ WATER ENVIRONMENTAL SERVICES, OPERATOR
BANNING WASTEWATER TREATMENT PLANT
BANNING-RIVERSIDE COUNTY

The California Regional Water Quality Control Board, Colorado River Basin Region (Colorado River Basin Water Board), finds that:

1. The City of Banning (Owner), 99 East Ramsey Street, Banning, California 92220, and Suez Water Environmental Services, Inc., a Delaware-based business entity (Operator), (collectively or individually referred to as Discharger) submitted an application to update the Waste Discharge Requirements (WDRs) for the Banning Wastewater Treatment Plant (WWTP or Facility). The WWTP is located at 2242 East Charles Street, Banning, California 92220, as shown in Attachment A (Vicinity Map), made part of this Board Order by this reference. Suez Water Environmental Services, Inc. maintains an office at the Facility.

2. The City of Banning owns a wastewater collection, treatment and disposal system which provides sewerage service to the city. The WWTP has a design treatment capacity of 3.6 million gallons-per-day (MGD) and currently discharges approximately 2.07 MGD into 10 unlined evaporation/percolation ponds (ponds). The Facility is located in Section 14, Township 3 South, Range 1 East, San Bernardino Baseline and Meridian. The Facility's Assessor's Parcel Numbers are 532 180 038/532 180 036; and its latitude and longitude coordinates are 33.915194/33.912134 and 116.852411/116.84164, respectively. The Facility is assigned California Integrated Water Quality System (CIWQS) number CW-208668; Waste Discharger Identification (WDID) number 7A330100015, and GeoTracker Global ID number WDR100027202.

3. The wastewater treatment plant currently receives industrial wastewater from several businesses within the City of Banning. The Discharger's Industrial Waste Program issues Industrial User Discharge Permits to verify that these businesses meet the City of Banning's local ordinance discharge limits, which were determined to ensure that the wastewater treatment plant is protected and can meet effluent standards.

4. The discharge is currently regulated by Board Order (WDRs) 01-022, adopted on May 9, 2001.

5. Board Order 01-022, required the Discharger to construct a groundwater monitoring system in the vicinity of the unlined ponds. The Board Order also required effluent monitoring for Sulfate, Chloride, Fluoride, Aluminum, and Iron until the groundwater monitoring system was installed and groundwater monitoring was initiated. Board Order 01-022, Monitoring and Reporting Program, states that "As soon as Ground Water monitoring commences, these constituents will not be required in Effluent monitoring." The groundwater monitoring system was completed in August 2007, and effluent monitoring for Sulfate, Chloride, Fluoride, Aluminum, and Iron were discontinued at that time. These constituents have been removed from the monitoring and reporting program for this Board Order as well as the effluent limitations for Chloride, Aluminum, and Iron.

6. The WDRs are being updated to implement the most current laws and regulations applicable to the discharge.

Wastewater Treatment Facility and Discharge

7. The WWTP consists of preliminary treatment, primary treatment, secondary treatment, solids handling, and disinfection (currently not in use), and the disposal ponds. Untreated wastewater flows to the preliminary treatment system, which consists of a mechanical bar screen, compactor, grit removal system, classifier and cyclone separator. Wastewater from the preliminary treatment system flows to two primary clarifiers and is then pumped to two trickling filters. The effluent from the trickling filters flows to the two secondary clarifiers and then to the chlorine contact chamber, which is currently used as a holding tank for the final effluent water sampling and discharge to the percolation ponds. The disinfection units have not been in use since April 2000.

8. Primary sludge from the two primary clarifiers is pumped to the anaerobic digester for further treatment. Secondary sludge from the secondary clarifiers is pumped to the gravity thickener for thickening and then pumped to three anaerobic digesters for further treatment. Sludge wasting from the digester is pumped to the sludge drying beds. The Discharger produces Class B biosolids, and a private contractor hauls the biosolids offsite to a permitted facility for disposal.

9. The Discharger's Self-Monitoring Reports (SMRs) from January 2011 through December 2015 characterize the WWTP effluent as follows:

Constituent	Units	Average	Maximum	Minimum
Flow	MGD	2.071	2.238	1.897
20° C BOD_5[1]	mg/L[2]	23	27	19

[1] 5-day biochemical oxygen demand at 20 degrees Celsius.

Constituent	Units	Average	Maximum	Minimum
TSS[3]	mg/L	21	28	16
pH	s.u.[4]	7.3	7.6	7.1
TDS[5]	mg/L	426	464	380
Nitrate as N	mg/L	22	32	12
Total Nitrogen	mg/L	29	49	14

Hydrogeologic Conditions

10. Precipitation in the Banning area averages about 12 inches per year. Annual evapotranspiration rate is approximately 56 inches.

11. A drainage course identified as Smith Creek Flood Control Channel is located along the south side of WWTP.

12. There are no domestic wells within 500 feet of the on-site evaporation/percolation ponds.

13. The evaporation/percolation ponds overlay an aquifer of high quality groundwater. The Discharger's SMRs show that the depth to groundwater in the vicinity of the WWTF ranges from about 330 feet (MW1) to 630 feet below ground surface (bgs) (MW3).

14. Water supply to the community is from groundwater production wells located in the San Gorgonio Hydrologic Unit, Banning Hydrologic Subunit. TDS in the water supply averages about 204 mg/L, based on data reported in the City of Banning's SMRs from January 2011 through December 2015.

15. Regional groundwater flow in the area is generally from the west to the east.

16. The Discharger uses a network of three groundwater monitoring wells, one upgradient and two downgradient, to monitor the impact of wastewater discharge to groundwater in the area of the ponds. The locations of the groundwater monitoring

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[2] Miligrams per Liter

[3] Total Suspended Solids

[4] Standard pH units

[5] Total Dissolved Solids

wells identified as R-1 (MW1), MP-1 (MW2) and C-6 (MW3) are shown in Attachment C (Monitoring Well Locations), made part of this Board Order by reference. The Discharger's monitoring reports from January 2011 through December 2015 show the following average water quality data for the groundwater monitoring wells:

Column header omitted in original	Units	MW1 (downgradient)	MW2 (downgradient)	MW3 (upgradient)
Depth to Groundwater	feet below ground surface	361	410	629
Total Dissolved Solids	mg/L	332	252	219
Total Nitrogen	mg/L	4	2	1.1
Nitrate as N	mg/L	2	2	1.5
Iron	mg/L	34	ND	ND
Sulfate	mg/L	32	18	15
Chloride	mg/L	42	35	13
Aluminum	mg/L	20	ND	ND
Fluoride	mg/L	0.4	0.4	0.6

17. The Discharger reports that the soil in the vicinity of the WWTP, from ground surface to 300 bgs, is sand and gravelly sand containing small rocks and boulders. From a depth of 300 to 600 feet bgs, the soil is mostly sand and gravel with spots of brown clay and layers of fine sand and clay.

Basin Plan, Beneficial Uses, and Regulatory Considerations

18. The Water Quality Control Plan for the Colorado River Basin Region of California (Basin Plan), which was adopted on November 17, 1993 and amended on November 13, 2012, designates the beneficial uses of ground and surface waters in this Region, and contains implementation programs and policies to achieve water quality objectives, including narrative objectives for ground water quality, in Chapter 3, section IV, Ground Water Objectives.

19. The discharge is within the San Gorgonio Hydrologic Unit, Banning Subunit. The beneficial uses of groundwater in the San Gorgonio Hydrologic Unit include:

    a. Municipal Supply (MUN),
    b. Industrial Supply (IND), and
    c. Agricultural Supply (AGR).

20. This Order implements numeric and narrative water quality objectives for ground and surface waters established by the Basin Plan. The numeric objectives for groundwater designated for municipal and domestic supply are the maximum contaminant levels (MCLs) specified in sections 64431, 64444, and 64678 of Title 22 of the California Code of Regulations (CCR), and the bacteriological limits specified in section 64426.1 of Title 22, CCR.

21. It is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This order promotes that policy by requiring discharges to meet maximum contaminant levels designed to protect human health and ensure that water is safe for domestic use.

22. Section 13267 of the California Water Code (CWC) authorizes the Colorado River Basin Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and state requirements.

23. This Order establishes WDRs pursuant to Division 7, Chapter 4, Article 4, of the CWC for discharges that are not subject to regulation under Clean Water Act (CWA) section 402 (33 U.S.C. section 1342).

24. Pursuant to CWC section 13263(g), the discharge of waste is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

25. The discharge authorized by this Board Order, and treatment and storage facilities associated with discharges of treated municipal wastewater, except for discharges of residual sludge and solid waste, are exempt from the requirements of the Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste, as set forth in Title 27, CCR, Division 2, Subdivision 1. This exemption is based on section 20090(a) of Title 27, which states in relevant part that discharges of domestic sewage or treated effluent are exempt provided that such discharges are regulated by WDRs, or for which WDRs have been waived, and which are consistent with applicable water quality objectives, and treatment or storage facilities associated with municipal WWTP's, provided that residual sludges or solid waste from WWTP’s shall be discharged only in accordance with the applicable Title 27 provisions. All of these Title 27 exemption conditions have been met with these WDRs.

Groundwater Degradation

26. State Water Board Resolution 68-16, "Policy with Respect to Maintaining High Quality Waters of the State"(Resolution 68-16) states:

    "Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies."

    Resolution 68-16 further states:

    "Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control [BPTC] of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained."

27. Some degradation of groundwater from the discharge to the ponds is consistent with Resolution 68-16, provided that the degradation:

    a. Is confined to a reasonable area;

    b. Is minimized by means of full implementation, regular maintenance, and optimal operation of BPTC measures;

    c. Is limited to waste constituents typically encountered in domestic wastewater; and

    d. Does not result in the loss of any beneficial use as prescribed in the applicable basin plan, or violation of any water quality objective.

28. The discharge of wastewater from the WWTP, as permitted herein, reflects BPTC. The controls assure the discharge does not create a condition of pollution or nuisance, and that the highest water quality consistent with maximum benefit to the people of the State will be maintained, which is consistent with the anti-degradation provisions of Resolution 68-16. The WWTP incorporates:

    a. Technology for secondary treated domestic wastewater;

    b. Solids handling facilities;

    c. An operation and maintenance manual;

d. A City ordinance that is comprised of a comprehensive set of rules and regulations governing the design, construction, maintenance and use of public and private sewer facilities within City jurisdictional limits;

e. Staffing to assure proper operation and maintenance;

f. A network of groundwater monitoring wells; and

g. A standby emergency power generator of sufficient size to operate the treatment plant and ancillary equipment during periods of loss of commercial power.

Accordingly, the discharge as authorized is consistent with the anti-degradation provisions of Resolution 68-16 and the applicable water quality objectives.

Constituents of Concern

29. Constituents of concern in domestic wastewater effluent that present the greatest risk to groundwater quality are nitrogen, coliforms (pathogen-indicator organisms), and TDS. The WWTP provides substantial removal of soluble organic matter, solids, and some nitrogen treatment.

30. Title 22, CCR section 64431, Maximum Contaminant Level (MCL) for Nitrate plus Nitrite as Nitrogen is 10 mg/L. To account for the fate of transport for the various components of Total Nitrogen, as a conservative value it is assumed that all nitrogen present converts to nitrate/nitrite. The City of Banning's SMRs report an average of 29 mg/L for Total Nitrogen between January 2011 and December 2015. Because the concentration of total nitrogen in the effluent is elevated, it is probable that nitrates may reach groundwater in concentrations that exceed the MCL prescribed in Title 22, CCR, section 64431. This Board Order will require that the Discharger conduct a nitrogen removal analysis and provide its findings in a technical report that provides a workplan and time schedule for the installation and implementation of nitrogen removal alternatives.

31. While secondary treatment reduces fecal coliform densities by 90 to 99%, the remaining organisms in effluent are still 10^5 to 10^6 MPN/100 ml (United States Environmental Protection Agency, Design Manual, Municipal Wastewater Disinfection; October 1986). Given the depth to groundwater, it is not likely that pathogen-indicator bacteria will reach groundwater at densities exceeding those prescribed in Title 22, CCR. Thus, it is not anticipated that groundwater will be degraded by pathogen-indicator bacteria. Furthermore, any degradation by pathogens that might occur will be limited to the area in the vicinity of the ponds and degradation by pathogens should not be significant.

32. The typical incremental addition of dissolved salts from domestic water usage is 150 to 380 mg/L. Domestic water supply to the City of Banning showed an

average of about 200 mg/L during the period of January 2011 to December 2015. From January 2011 to December 2015 treated wastewater discharged by the City of Banning had an average TDS concentration of approximately 420 mg/L. Thus, the average TDS increase over the domestic water supply for this facility during the same time period was about 220 mg/L. Treated wastewater discharged by the WWTP has a TDS limit of a maximum of 400 mg/L above the domestic source water as regulated by Board Order 01-022. The Colorado River Water Board is responsible for implementing the State Water Resources Control Board's Salt and Nutrient Management Plan (SNMP). To that end, the TDS effluent limit in this Board Order will be reduced to 300 mg/L above the domestic water supply. A regulatory limit of 300 mg/L above the domestic source water reasonably protects present and anticipated beneficial uses of groundwater in the area; therefore, it is not likely that groundwater will exhibit significant degradation by TDS.

Stormwater

33. Federal regulations for storm water discharges were promulgated by the U.S. Environmental Protection Agency on November 16, 1990, (40 CFR Parts 122, 123, and 124) to implement the Clean Water Act's storm water program set forth in Clean Water Act section 402(p) (33 U.S.C. section 1342(p).). In relevant part, the regulations require specific categories of facilities that discharge storm water associated with industrial activity to "waters of the United States" to obtain NPDES permits and to require control of such pollutant discharges using Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to prevent and reduce pollutants and any more stringent controls necessary to meet water quality standards. Facilities used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are within the confines of the facility with a design flow of one million gallons a day or more, or required to have an approved pretreatment program under 40 CFR Part 403, are considered to be engaging in "industrial activity" for purposes of the Clean Water Act's storm water program. The facility has a design treatment capacity of 3.6 MGD, and is thus subject to the federal regulations for discharges of stormwater associated with industrial activity.

CEQA and Public Participation

34. In accordance with section 15301, Chapter 3, Title 14, CCR, the issuance of these WDRs, which govern the operation of an existing facility involving negligible or no expansion of use beyond that previously existing, is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code, section 21000 et seq.).

35. The Colorado River Basin Water Board has notified the Discharger and all known interested agencies and persons of its intent to draft WDRs for this discharge, and

has provided them with an opportunity for a public meeting and an opportunity to submit comments.

36. The Colorado River Basin Water Board, in a public meeting, heard and considered all comments pertaining to this discharge.

IT IS HEREBY ORDERED, that Board Order 01-022 is rescinded upon the effective date of this Order, except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code, and regulations adopted thereunder, the Discharger shall comply with the following:

A. Effluent Limitations

1. Effluent discharged into the ponds for disposal shall not exceed the following effluent limits:

Constituent	Units	30-Day Arithmetic Mean	7-Day Arithmetic Mean	Maximum
20° C BOD_5	mg/L	30	45	-----
Total Suspended Solids	mg/L	30	45	-----

2. The 30-day average daily dry weather discharge from the WWTP shall not exceed 3.6 MGD.

3. Effluent from the WWTP into the ponds shall not have a pH below 6.0 or above 9.0.

4. The increase in concentration of TDS in the wastewater discharged to the ponds over that contained in the water supply to the community shall not exceed 300 mg/L.

5. The ponds shall be maintained so they will continuously operate in aerobic conditions. The dissolved oxygen content in the upper zone (one foot) of the ponds shall not be less than 1.0 mg/L at all times.

B. Discharge Prohibitions

1. Discharge of waste classified as “hazardous”, as defined in Title 23, CCR, section 2521(a), or “designated”, as defined in California Water Code section 13173, is prohibited.

2. Discharge of treated wastewater at a location other than the designated disposal areas is prohibited.

3. The discharge of any wastewater from the Facility to any surface waters or surface drainage courses is prohibited.

4. Discharge of waste to land not owned or authorized for such use by the Discharger is prohibited.

5. Surfacing or ponding of wastewater outside of the designated disposal locations is prohibited.

6. Bypass, overflow, discharge, or spill of untreated or partially treated waste is prohibited.

C. Discharge Specifications

1. The treatment or disposal of wastes from the WWTP shall not cause pollution or nuisance as defined in sections 13050(l) and 13050(m) of Division 7 of the California Water Code, respectively.

2. A minimum freeboard depth of two feet shall be maintained at all times in each pond.

3. All treatment, storage, and disposal areas shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

4. Ponds shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, ancillary inflow, and infiltration during the non-irrigation season. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.

5. The ponds shall be managed to prevent breeding of mosquitoes. In particular:

    a. An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.

    b. Weeds shall be minimized through control of water depth, harvesting, or herbicides.

    c. Dead algae, vegetation, and debris shall not accumulate on the water surface.

6. Public contact with wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.

7. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the wastewater treatment and disposal area.

8. The ponds shall be maintained and operated so as to maximize infiltration and minimize the increase of salinity in the groundwater.

9. The Discharger shall not accept wastewater in excess of the treatment capacity of the Facility.

D. Specifications

1. Discharge from the WWTP shall not cause groundwater to:

   a. Contain constituents in excess of California MCLs, as set forth in the California Code of Regulations, Title 22, section 64426.1 for bacteriological constituents; section 64431 for inorganic chemicals; section 64444 for organic chemicals; and section 64678 for determination of exceedances of lead and copper action levels.

   b. Contain taste or odor-producing substances in concentrations that adversely affect beneficial uses as a result of human activity.

E. Pretreatment

1. In the event that the facility has an average dry weather flow or treatment capacity of 5 MGD or more and Industrial Users [40 CFR 403.3(h)] are discharging pollutants which could Pass Through [40 CFR 403.3(n)] or Interfere [40 CFR 403.3(i)] with the operation of the wastewater treatment facility or are otherwise subject to National Pretreatment Standards [40 CFR 403.3(j)], (ii) California Code of Regulations, Title 23, section 2233 requires the facility to have and enforce an adequate pretreatment program, or (iii) the Colorado River Basin Water Board or its Executive Officer determines that other circumstances warrant, then:

   a. The Discharger shall notify the Colorado River Basin Water Board within 30 days after there are discharges that trigger the pretreatment requirements.

   b. The Discharger shall submit a revised Report of Waste Discharge and the pretreatment program for the Board review and approval as soon as possible but not later than one year of the notice of pretreatment requirements.

c. The Discharger shall enforce the federal categorical pretreatment standards on all Categorical Industrial Users (CIUs).

d. The Discharger shall notify the CIU of its discharge effluent limits. The limits must be as stringent as the pretreatment standards contained in the applicable federal category (40 CFR Part 400-699). The Discharger may develop more stringent, technically based local limit if it can show cause.

e. The Discharger shall notify the RWQCB if the CIU violates its discharge effluent limits.

2. The Colorado River Basin Water Board retains the right to take legal action against an industrial user and/or the Discharger where a user fails to meet the approved applicable pretreatment standards.

F. Special Provisions

1. Within **12 months** of the adoption of this Order, the Discharger shall submit to the Colorado River Basin Water Board office a technical report that includes a copy of the Maintenance and Operations Manual for the WWTP.

2. Within **18 months** of the adoption date of this Board Order, the Discharger shall submit for approval by the Colorado River Basin Water Board's Executive Officer, a technical report that is a work plan and time schedule to conduct a study that addresses the practicability of a 10 mg/L total nitrogen effluent limitation and the impact the discharge has on the beneficial uses of the receiving groundwater. The time schedule for the study shall not be longer than four (4) years. A California Professional Engineer (PE), Registered Geologist (RG), Certified Engineering Geologist (CEG), or a Certified Hydro Geologist (CHG) must sign and stamp the technical report. The report shall, at a minimum, include the following:

   a. Evaluation by the Discharger must include information on the following factors relating to the discharge:

      i. Description of the municipal entity and facilities.

      ii. Description of the quantity and nitrogen concentration of domestic water sources contributing to discharge.

      iii. Description of significant nitrogen sources of the municipal wastewater collection system, and identification of entities responsible for each source, if available.

      iv. Description of the wastewater discharge, receiving waters, quantity, and nitrogen load.

v. Alternative plans for minimizing nitrogen contribution from the municipal sources. Alternative plans should include:

(A) Description of nitrogen sources and alternative means of control; and

(B) Cost of alternative plans in dollars per ton, of nitrogen removed from discharge.

vi. Description and analyses of potential conventional nitrogen removal treatment technologies for implementation at the WWTP. Analyses shall include cost of implementation in dollars per ton, of nitrogen removed from discharge.

vii. Such other information pertinent to the study as the permitting authority may deem necessary.

b. In determining what permit conditions shall be required, the permit issuing authority shall consider the following criteria including, but not limited to:

i. The practicability of achieving a 10 mg/L total nitrogen effluent limit.

ii. Where a 10 mg/L effluent limit is not determined to be practicable, the Discharger shall provide the following:

(A) The impact of the proposed nitrogen input of each alternative on the beneficial uses of the groundwater in terms of tons per year and concentration;

(B) Costs per ton of nitrogen removed from discharge of each alternative plan;

(C) Capability of minimizing nitrogen discharge;

(D) A proposed value for the practical incremental increase; and

(E) A justification for the proposed practical incremental increased value.

c. By **June 30, 2020**, the Discharger shall submit a final technical report that includes the Discharger's recommendations and conclusions, including a tentative work plan and time schedule for facility plant improvements required to accomplish nitrogen removal and comply with the effluent water quality limit. The report shall be

certified with the signature and stamp of a California licensed professional PE, PG, CEG, or a CHG.

3. Within **24 months** of the adoption of this Order, the Discharger shall submit to the Colorado River Basin Water Board a technical report that includes a copy of the City of Banning ordinance that provides a comprehensive set of rules and regulations governing the design, construction, maintenance and use of public and private sewer facilities within the city's jurisdictional limits.

4. Within **24 months** of the adoption of this Order, the Discharger shall submit a technical report that contains:

   a. Documents demonstrating the City of Banning's authority to issue permits for individual and community onsite septic systems;

   b. The City of Banning's affirmative statement with regard to submitting a Local Agency Management Program plan in accordance with the State Water Board's *Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems*; and,

   c. Identification of all areas within the jurisdiction of the City of Banning's sewer authority that are currently on existing onsite septic systems, and those undeveloped areas planned for septic systems.

G. Standard Provisions

1. The Discharger shall comply with all of the conditions of this Board Order. Noncompliance is a violation of the Porter-Cologne Water Quality Control Act (CWC, section 13000 et seq.), and is grounds for enforcement action.

2. The Discharger shall comply with the Electronic Submittal of Information (ESI) requirements by submitting all correspondence and reports required under Monitoring and Reporting Program (MRP) R7-2016-0015, and future revisions thereto, including groundwater monitoring data and discharge location data (latitude and longitude), correspondence, and pdf monitoring reports to the State Water Resources Control Board GeoTracker https://geotracker.waterboards.ca.gov/ database. Documents that are 2.0 MB or larger should be broken down into smaller electronic files, labelled properly and uploaded into GeoTracker.

3. All technical reports required in conjunction with this Order are required pursuant to Section 13267 of the CWC, and shall include a statement by the Discharger, or an authorized representative of the Discharger, certifying

under penalty of perjury under the laws of the State of California, that the report is true, complete, and accurate.

4. In accordance with California Business and Professions Code Sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of California registered professionals (i.e., civil engineer, engineering geologist, geologist, etc.) competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain work plans, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professionals, even if not explicitly stated. Each technical report submitted by the Discharger shall contain a statement of qualifications of the responsible licensed professionals as well as the professional's signature and/or stamp of the seal. Additionally, to the extent that preparation of a required technical report involves field activities, field activities shall be conducted under the direct supervision of one or more of these professionals.

5. The Discharger shall not cause degradation of any water supply in accordance with State Water Board Resolution 68-16.

6. Standby power generating facilities shall be available to operate the plant during a commercial power failure.

7. Adequate measures shall be taken to assure that flood or surface drainage waters do not erode or otherwise render portions of the discharge facilities inoperable.

8. The WWTP shall be supervised and operated by persons possessing certification of appropriate grade pursuant to section 3680, Chapter 26, Division 3, Title 23 of the California Code of Regulations.

9. The Discharger shall at all times properly operate and maintain all systems and components of collection, treatment and control, installed or used by the Discharger to achieve compliance with this Board Order. Proper operation and maintenance includes effective performance, adequate process controls, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities/systems when necessary to achieve compliance with this Board Order. All systems in service or reserved shall be inspected and maintained on a regular basis. Records of inspections and maintenance shall be retained, and made available to the Colorado River Basin Water Board's Executive Officer on request.

10. The Discharger shall ensure that all site-operating personnel are familiar with the content of this Board Order, and shall maintain a copy of this Board Order at the site.

11. The Discharger shall allow the Colorado River Basin Water Board, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:

    a. Enter the premises regulated by this Order, or the place where records are kept under the conditions of this Board Order;

    b. Have access to and copy, at reasonable times, records kept under the conditions of this Board Order;

    c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

    d. Sample or monitor at reasonable times, for the purpose of assuring compliance with this Order or as otherwise authorized by the Water Code, any substances or parameters at this location.

12. Disposal of oil and grease, biosolids, screenings, and other solids collected from liquid wastes shall be pursuant to Title 27, and the review and approval of the Colorado River Basin Water Board Executive Officer.

13. Any proposed change in use or disposal of biosolids requires the approval of the Colorado River Basin Water Board Executive Officer, and U.S. Environmental Protection Agency Regional Administrator, who must be notified at least 90 days in advance of the change.

14. Sludge use and disposal shall comply with Federal and State laws and regulations, including permitting requirements, and technical standards in 40 CFR Part 503. If the State and Colorado River Basin Water Boards are delegated the authority to implement 40 CFR Part 503 regulations, this Order may be revised to incorporate appropriate time schedules and technical standards. The Discharger shall comply with the standards and time schedules in 40 CFR part 503, whether or not part of this Order.

15. The Discharger shall provide a plan as to the method, treatment, handling and disposal of sludge that is consistent with all State and Federal laws and regulations and obtain prior written approval from the Colorado River Basin Water Board specifying location and method of disposal, before disposing of treated or untreated sludge, or similar solid waste.

16. The Discharger shall maintain a permanent log of all solids hauled away from the treatment facility for use/disposal elsewhere and shall provide a

summary of the volume, type (screenings, grit, raw sludge, digested sludge), use (agricultural, composting, etc.), and the destination in accordance with the MRP of this Board Order. Sludge that is stockpiled at the treatment facility shall be sampled and analyzed for those constituents listed in the sludge monitoring section of the MRP of this Board Order and as required by Title 40, Code of Federal Regulations, Part 503. The results of the analyses shall be submitted to the Colorado River Basin Water Board as part of the MRP.

17. The Discharger shall provide a report to the Colorado River Basin Water Board when it determines that the plant's average dry-weather flow rate for any month exceeds 80 percent of the design capacity. The report should indicate what steps, if any, the Discharger intends to take to provide for the expected wastewater treatment capacity necessary when the plant reaches design capacity.

18. Prior to implementing a modification that results in a material change in the quality or quantity of wastewater treated or discharged, or a material change in the location of discharge, the Discharger shall report all pertinent information in writing to the Colorado River Basin Water Board, and obtain revised requirements.

19. Prior to a change in ownership or management of WWTP, the Discharger shall transmit a copy of this Board Order to the succeeding owner/operator, and forward a copy of the transmittal letter to the Colorado River Basin Water Board.

20. The Discharger shall provide adequate notice to the Colorado River Basin Water Board Executive Officer of the following:

    a. The introduction of pollutants into any treatment facility described in the Findings of this Board Order from an indirect Discharger which would be subject to section 301 or 306 of the Clean Water Act, if the pollutants were discharged directly;

    b. Any substantial change in the volume or character of pollutants introduced into any treatment facility described in the Findings of this Board Order, by an existing or new source; and

    c. Any planned physical alteration or addition to the facilities described in this Board Order, or change planned in the Discharger's sludge use or disposal practice, where such alterations, additions, or changes may justify the application of Board Order conditions that are different from or absent in the existing Board Order, including notification of additional disposal

sites not reported during the Board Order application process, or not reported pursuant to an approved land application plan.

21. The Discharger shall report orally, any noncompliance that may endanger human health or the environment. The noncompliance shall be reported immediately to the Colorado River Basin Water Board's Executive Officer at (760) 346-7491, and the California Office of Emergency Services at (800) 852-7550 as soon as:

    a. The Discharger has knowledge of the discharge;

    b. Notification is possible, and

    c. Notification will not substantially impede cleanup or other emergency measures.

    During non-business hours, the Discharger shall leave a message on the Colorado River Basin Water Board's office voice recorder at the above listed number. Incident information shall be provided orally as soon as possible and within 24 hours from the time the Discharger becomes aware of the incident. A written report shall also be provided within five (5) business days of the time the Discharger becomes aware of the incident. The written report shall contain a description of the noncompliance and its cause, the period of noncompliance, the anticipated time to achieve full compliance, and the steps taken or planned, to reduce, eliminate, and prevent recurrence of the noncompliance. The Discharger shall report all intentional or unintentional spills in excess of one thousand (1,000) gallons occurring within the WWTP or collection system to the Colorado River Basin Water Board office in accordance with the above time limits.

22. The Discharger shall report all instances of noncompliance. Reports of noncompliance shall be submitted with the Discharger's next scheduled SMRs or earlier if requested by the Colorado River Basin Water Board's Executive Officer, or if required by an applicable standard for sludge use and disposal.

23. By-pass (i.e., the intentional diversion of waste streams from any portion of the treatment facilities, except diversions designed to meet variable effluent limits) is prohibited. The Colorado River Basin Water Board may take enforcement action against the Discharger for by-pass unless:

    a. By-pass was unavoidable to prevent loss of life, personal injury, or severe property damage. Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to be inoperable, or substantial and permanent loss of natural resources reasonably expected to occur in

the absence of a by-pass. Severe property damage does not mean economic loss caused by delays in production; and

There were no feasible alternatives to by-pass, such as the use of auxiliary treatment facilities or retention of untreated waste. This condition is not satisfied if adequate back-up equipment was not installed to prevent by-pass occurring during equipment downtime, or preventive maintenance.

b. By-pass is:

i. Required for essential maintenance to assure efficient operation; and

ii. Neither effluent nor receiving water limitations are exceeded; and

iii. The Discharger notifies the Colorado River Basin Water Board ten (10) days in advance.

24. In the event of an unanticipated by-pass, the Discharger shall immediately report the incident to the Colorado River Basin Water Board. During non-business hours, the Discharger shall leave a message on the Colorado River Basin Water Board office voice recorder. A written report shall be provided within five business days the Discharger is aware of the incident. The written report shall include a description of the by-pass, any noncompliance, the cause, period of noncompliance, anticipated time to achieve full compliance, and steps taken or planned, to reduce, eliminate, and prevent recurrence of the noncompliance.

25. Federal regulations for storm water discharges require specific categories of facilities which discharge storm water associated with industrial activity (storm water) to obtain National Pollutant Discharge Elimination System (NPDES) permits and to implement Best Conventional Pollutant Technology (BCPT) and Best Available Technology Economically Achievable (BAT) to reduce or eliminate industrial storm water pollution.

26. All storm water discharges from this facility must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies, regarding discharges of storm water to storm water drain systems or other courses under their jurisdiction.

27. Storm water discharges from the facility shall not cause or threaten to cause pollution or contamination.

28. Storm water discharges from the facility shall not contain hazardous substances equal to or in excess of a reportable quantity listed in 40 CFR Part 117 and/or 40 CFR Part 302.

29. The Discharger is the responsible party for the waste discharge requirements and the monitoring and reporting program for the facility. The Discharger shall comply with all conditions of these waste discharge requirements. Violations may result in enforcement actions, including Colorado River Basin Water Board Orders or court orders, requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Colorado River Basin Water Board.

30. This Board Order does not authorize violation of any federal, state, or local laws or regulations.

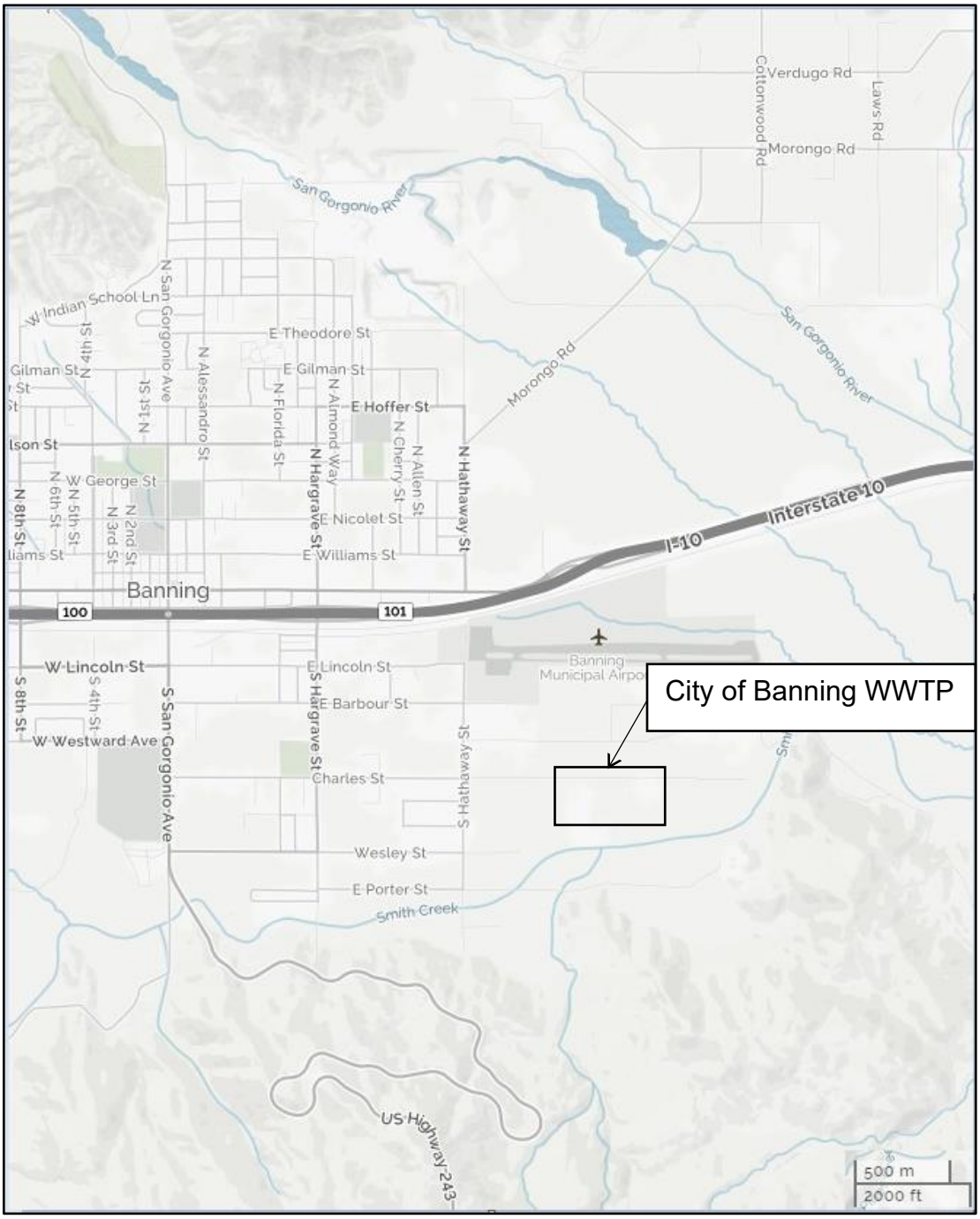
31. This Board Order does not convey property rights of any sort, or exclusive privileges, nor does it authorize injury to private property or invasion of personal rights, or infringement of federal, state, or local laws or regulations.

32. This Board Order may be modified, rescinded, or reissued, for cause. The filing of a request by the Discharger for a Board Order modification, rescission or reissuance, or notification of planned changes or anticipated noncompliance, does not stay any Board Order condition. Causes for modification include a change in land application plans, or sludge use or disposal practices, and adoption of new regulations by the State or Colorado River Basin Water Board (including revisions to the Basin Plan), or Federal government.

I, Jose L. Angel, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Colorado River Basin Region, on June 30, 2016.

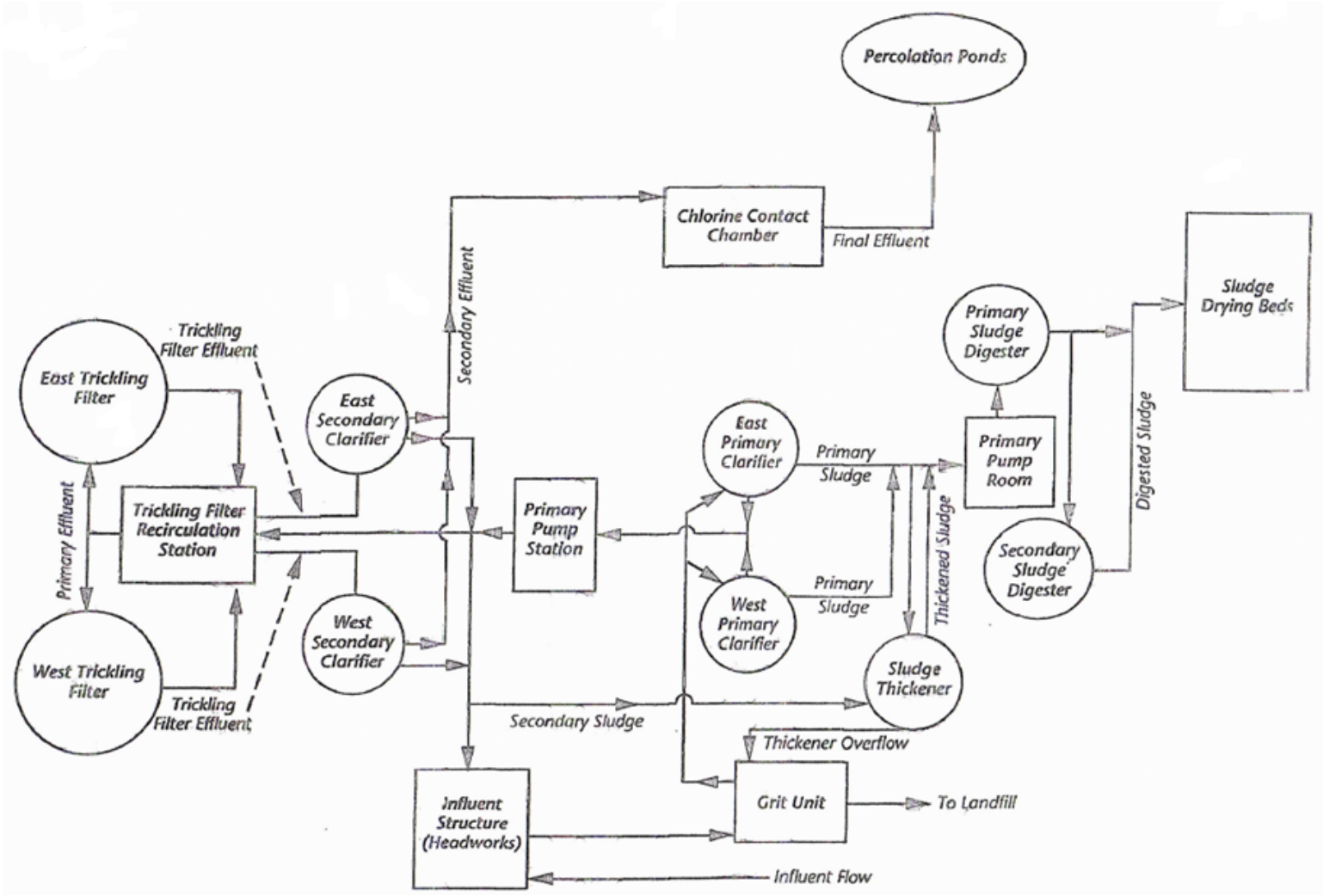
Original Signed by

JOSE L. ANGEL, P.E.
Executive Officer



CITY OF BANNING, OWNER

SUEZ WATER ENVIRONMENTAL SERVICES, INC., OPERATOR
WASTEWATER TREATMENT PLANT
Banning – Riverside County
Section 14, T3S, R1E, SBB&M



CITY OF BANNING, OWNER
SUEZ WATER ENVIRONMENTAL SERVICES, INC., OPERATOR
WASTEWATER TREATMENT PLANT
Banning – Riverside County



CITY OF BANNING, OWNER
SUEZ WATER ENVIRONMENTAL SERVICES, INC., OPERATOR
WASTEWATER TREATMENT PLANT
Banning – Riverside County

ATTACHMENT C- MONITORING WELL LOCATIONS Board Order R7-2016-0015

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM R7-2016-0015
FOR
CITY OF BANNING, OWNER
SUEZ WATER ENVIRONMENTAL SERVICES, OPERATOR
BANNING WASTEWATER TREATMENT PLANT
BANNING-RIVERSIDE County:
LOCATION OF DISCHARGE:
Section 14, T3S, R1E, SBB&M

A. Monitoring

1. This Monitoring and Reporting Program (MRP) describes requirements for monitoring a wastewater system and groundwater quality (when needed). This MRP is issued pursuant to California Water Code (CWC) section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

2. Water Code section 13267 states, in part:

   "In conducting an investigation specified in subdivision (a), the Colorado River Basin Water Board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the Colorado River Basin Water Board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the Colorado River Basin Water Board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."

3. Water Code section 13268 states, in part:

   "(a) (1) Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of section 13267, or failing or refusing to furnish a statement of compliance as required by subdivision (b) of section 13399.2, or falsifying any information provided therein, is guilty of a misdemeanor, and may be liable civilly in accordance with subdivision (b). (b) (1) Civil liability may be administratively imposed by a Colorado River Basin Water Board in accordance with Article 2.5 (commencing with section

13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violation occurs."

4. The Discharger owns and operates the wastewater system that is subject to Board Order R7-2016-0015. The reports are necessary to ensure that the Discharger complies with the Order. Pursuant to Water Code section 13267, the Discharger shall implement the MRP and shall submit the monitoring reports described herein.

5. All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form. If composite samples are collected, the basis for sampling (time or flow weighted) shall be approved by Colorado River Basin Water Board staff.

6. Field test instruments (such as those used to test pH, dissolved oxygen, and conductivity) may be used provided that:

    a. The user is trained in proper use and maintenance of the instruments;

    b. The instruments are field calibrated prior to monitoring events at the frequency recommended by the manufacturer;

    c. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and

    d. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

7. The collection, preservation and holding times of all samples shall be in accordance with U. S. Environmental Protection Agency (USEPA) approved procedures. Unless otherwise approved by the Colorado River Basin Water Board's Executive Officer, all analyses shall be conducted by a laboratory certified by the State Water Resources Control Board Division of Drinking Water. All analyses shall be conducted in accordance with the latest edition of the "Guidelines Establishing Test Procedures for Analysis of Pollutants" (40 CFR Part 136), promulgated by the USEPA.

8. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. In the event that continuous monitoring equipment is out of service for period greater than 24-hours, the Discharger shall obtain representative grab samples each day the equipment is out of service. The Discharger shall correct the cause(s) of failure of the continuous monitoring equipment as soon as practicable.

The Discharger shall report the period(s) during which the equipment was out of service and if the problem has not been corrected, shall identify the steps which the Discharger is taking or proposes to take to bring the equipment back into service and the schedule for these actions.

9. The Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Board Order, and records of all data used to complete the application for this Board Order, for a period of at least five (5) years from the date of the sample, measurement, report or application. This period may be extended by request of the Colorado River Basin Water Board's Executive Officer at any time. Records of monitoring information shall include:

    a. The date, exact place, and time of sampling or measurement(s);

    b. The individual(s) who performed the sampling or measurement(s);

    c. The date(s) analyses were performed;

    d. The individual(s) who performed the analyses;

    e. The analytical techniques or method used; and

    f. The results of such analyses.

10. Samples shall be collected at the location specified in the WDRs. If no location is specified, sampling shall be conducted at the most representative sampling point available.

11. Given the monitoring frequency prescribed by MRP R7-2016-0015, if only one sample is available for a given reporting period, compliance with monthly average, or weekly average Discharge Specifications, will be determined from that sample.

12. If the facility is not in operation, or there is no discharge during a required reporting period, the Discharger shall forward a letter to the Colorado River Basin Water Board indicating that there has been no activity during the required reporting period.

Influent Monitoring

13. Influent to the WWTP shall be monitored according to the following schedule:

Constituent	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
20°C BOD_5[1]	mg/L[2]	24-Hr. Composite	2x/Month	Monthly
Total Suspended Solids	mg/L	24-Hr. Composite	2x/Month	Monthly
Nitrate as N	mg/L	24-Hr. Composite	Quarterly	Quarterly
Nitrite as N	mg/L	24-Hr. Composite	Quarterly	Quarterly
Total Nitrogen	mg/L	24-Hr. Composite	Quarterly	Quarterly

WWTP Effluent Monitoring

14. Effluent from the WWTP into the Evaporation/Percolation Ponds shall be monitored according to the following schedule:

Constituent	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
Flow; Total Plant Effluent into Ponds	MGD[3]	Flow Meter Reading	Daily	Monthly
20°C BOD_5	mg/L	24 Hr. Composite	Weekly	Monthly
Total Suspended Solids	mg/L	24 Hr. Composite	Weekly	Monthly
Nitrate as N	mg/L	24 Hr. Composite	2x/Month	Monthly
Nitrite as N	mg/L	24 Hr. Composite	2x/Month	Monthly

[1] 5-day Biochemical Oxygen Demand at 20 degrees Celsius.

[2] milligrams per Liter

[3] Million Gallons per Day

Constituent	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
Total Nitrogen	mg/L	24 Hr. Composite	2x/Month	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly	Monthly
VOCs[4]	µg/L[5]	24 Hr. Composite	Annually	Annually

Pond Monitoring

15. The ponds shall be monitored according to the following schedule:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Dissolved Oxygen[6]	mg/L	Composite	Weekly	Monthly
pH	s.u.[7]	Grab	Weekly	Monthly
Freeboard	Ft	Measurement	Weekly	Monthly

The ponds shall be observed for vegetation growth, erosion and irregularities to prevent the breeding of mosquitoes. Observations shall be reported with the monthly SMR.

Domestic Water Supply

16. The domestic water supply shall be monitored according to the following schedule:

[4] Analysis of Volatile Organic Compounds is to be accomplished using the USEPA test methods 601 and 602 or 624

[5] micrograms per liter

[6] Dissolved Oxygen shall be monitored at the upper one foot layer of the evaporation/percolation ponds.

[7] standard pH units

Constituent	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
Total Dissolved Solids	mg/L	Composite	Monthly	Monthly

Groundwater Monitoring

17. Groundwater shall be sampled in the uppermost 20 feet of the shallow aquifer from the monitoring wells according to the following schedule:

Constituent	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
Depth to Groundwater	ft (bgs)[8]	measurement	Quarterly	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly	Quarterly
Total Nitrogen	mg/L	Grab	Quarterly	Quarterly
Nitrate as N	mg/L	Grab	Quarterly	Quarterly
Nitrite as N	mg/L	Grab	Quarterly	Quarterly
Sulfate	mg/L	Grab	Quarterly	Quarterly
Chloride	mg/L	Grab	Quarterly	Quarterly
Fecal Coliform	MPN/100mL	Grab	Quarterly	Quarterly
VOCs	μg/L	Grab	Annually	Annually

Sludge Monitoring

18. Prior to disposal, sludge that is generated at the WWTP shall be sampled and analyzed for the following:

[8] feet below ground surface.

Constituent	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
Arsenic	mg/kg[9]	Composite	Annually	Annually
Cadmium	mg/kg	Composite	Annually	Annually
Chromium	mg/kg	Composite	Annually	Annually
Copper	mg/kg	Composite	Annually	Annually
Lead	mg/kg	Composite	Annually	Annually
Mercury	mg/kg	Composite	Annually	Annually
Molybdenum	mg/kg	Composite	Annually	Annually
Nickel	mg/kg	Composite	Annually	Annually
Selenium	mg/kg	Composite	Annually	Annually
Zinc	mg/kg	Composite	Annually	Annually
Fecal Coliform	MPN/gram[10]	Composite	Prior to Disposal	Annually

B. Reporting

1. The Discharger shall inspect and document any operation/maintenance problems by inspecting each unit process. In addition, calibration of flow meters and equipment shall be performed in a timely manner and documented. Operation and Maintenance reports shall be submitted to the Colorado River Basin Water Board Office annually.

2. The annual Operation and Maintenance report shall include the following:

    a. Documentation showing the calibration of flow meters and equipment as performed in a timely manner annually;

    b. Modifications and updates to the Operation and Maintenance Manual;

[9] milligrams per kilogram

[10] Most Probable Number per gram.

c. Operator certification status update including number of staff and grade certification.

d. Modifications and updates to the City's waste water ordinance or rules and regulations.

3. The Discharger shall report annually on the quantity, location and method of disposal of all sludge and similar solid materials being produced at the WWTP. If no sludge is disposed of during the year being reported, the Discharger shall state "No Sludge Removed" in the annual monitoring report.

4. The Discharger shall provide the Colorado River Basin Water Board with an annual report describing the pretreatment program activities over the previous twelve-month period. The report shall be transmitted to the Colorado River Basin Water Board office no later than January 31 of each year and include:

   a. A summary of actions taken by the Discharger which ensures industrial-user compliance;

   b. An updated list of industrial users (by SIC categories) which were issued permits, and/or enforcement orders, and a status of compliance for each user; and

   c. The name and address of each user that received a revised discharge limit.

5. SMRs shall be certified under penalty of perjury to be true and correct, and shall contain the required information at the frequency designated in this MRP.

6. Each Report must contain an affirmation in writing that states:

   "All analyses were conducted at a laboratory certified for such analyses by and in accordance with current USEPA procedures or as specified in this Monitoring and Reporting Program."

7. Each report shall contain the following completed declaration:

   "I certify under the penalty of law that this document, including all attachments and supplemental information, was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for

submitting false information, including the possibility of a fine and imprisonment.

Executed on the _____day of _____ at _____

_____(Signature)

_____(Title)"

8. The SMRs, and other information requested by the Colorado River Basin Water Board, shall be signed by a principal executive officer or ranking elected official.

9. A duly authorized representative of the Discharger may sign the documents if:

   a. The authorization is made in writing by the person described above;

   b. The authorization specified an individual or person having responsibility for the overall operation of the regulated disposal system; and

   c. The written authorization is submitted to the Colorado River Basin Water Board's Executive Officer.

10. The Discharger shall attach a cover letter to the SMRs. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned and the proposed time schedule of corrective actions. Identified violations should include a description of the requirement that was violated and a description of the violation.

11. Daily, weekly, and monthly monitoring shall be included in the monthly monitoring report. Monthly monitoring reports shall be submitted to the Colorado River Basin Water Board by the 15th day of the following month. Quarterly monitoring reports shall be submitted by January 15th, April 15th, July 15th and October 15th. Annual monitoring reports shall be submitted by January 31st of the following year.

12. The Discharger shall comply with the Electronic Submittal of Information (ESI) requirements by submitting all correspondence and reports required under Monitoring and Reporting Program (MRP) R7-2016-0015, and future revisions thereto, including groundwater monitoring data and discharge location data (latitude and longitude), correspondence, and pdf monitoring reports to the State Water Resources Control Board GeoTracker database. Documents that are 2.0 MB or larger should be broken down into smaller electronic files, labelled properly and uploaded into GeoTracker.

Ordered by: *Original signed by*
JOSE L. ANGEL, P.E.
Executive Officer

June 30, 2016
Date



CITY OF BANNING NITROGEN REMOVAL FEASIBILITY STUDY

REPORT ON THE PRACTICABILITY OF 10 mg/L TOTAL NITROGEN EFFLUENT LIMITATION

JUNE 2020

MONTROSE ENVIRONMENTAL

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ABBREVIATIONS AND ACRONYMS

Anammox	Anaerobic Ammonium Oxidation Bacteria
AOB	Ammonia Oxidizing Bacteria
BAF	Biologically Active Filtration
BOD_5	5-day Biochemical Oxygen Demand at 20° C
CAAFT	Conditionally Accepted Alternative Filtration Technologies
CAS	Conventional Activated Sludge
CIP	Chemical Clean in Place
City	City of Banning
Cl_2	Chlorine Gas
CSI	Construction Specifications Institute
CT	Contact Time
DB	Design-Build
DBB	Design-Bid-Build
DF	Denitrification Filter
DMWTP	Design of Municipal Wastewater Treatment Plants
DO	Dissolved Oxygen
EQ	Equalization
F/M	Food and Microorganism Ratio
gpd	Gallons per Day
HDPE	High-density Polyethylene
HRT	Hydraulic Retention Time
IFAS	Integrated Fixed-Film Activated Sludge
KPI	Key Performance Indicators
MBBR	Moving Bed Biofilm Reactor
MBR	Membrane Bioreactor
MCL	Maximum Contaminant Level

mg-min/L	Milligram Minutes per Liter
MGD	Million Gallons per Day
mL	Milliliters
MLE	Modified Ludzack-Ettinger
MLSS	Mixed Liquor Suspended Solids
MLVSS	Mixed Liquor Volatile Suspended Solids
MPN	Most Probable Number
N/DN	Nitrification/denitrification
NaOCl	Sodium Hypochlorite
NH_3-N	Ammonia Nitrogen
NO_x	Nitrite and Nitrate
NT	Natural Treatment Systems
NTU	Nephelometric Turbidity Unit
O&M	Operation and Maintenance
OD	Oxidation Ditch
OSHA	Occupational Safety and Health Administration
PARF	Passive Aeration Rock Filters
RAS	Return Activated Sludge
SCADA	Supervisory Control and Data Acquisition
SGMH	San Gorgonio Memorial Hospital
SRT	Solid Retention Time
ST	Sidestream Treatment
SWD	Side Wall Depth
TDS	Total Dissolved Solids
TF	Trickling Filter
TKN	Total Kjeldahl Nitrogen
TN	Total Nitrogen

TSS	Total Suspended Solids
US EPA	United States Environmental Protection Agency
UV	Ultraviolet
WAS	Waste Activated Sludge
WDR	Waste Discharge Requirements
WRF	Water Reclamation Facility
WSEL	Water Surface Elevation
WWTP	Wastewater Treatment Plant

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1. INTRODUCTION

The purpose of this study is to evaluate wastewater treatment alternatives for nitrogen removal and the production of recycled water for the City of Banning (City) wastewater treatment plant (WWTP). Wastewater treatment stages considered for this evaluation included biological, tertiary, and disinfection. Several process options were assessed within each treatment stage to develop a list of wastewater treatment alternatives for further evaluation. The treatment alternatives are evaluated based on estimated construction and operating costs, operational issues, site constraints, and the ability to comply with current and future regulatory requirements. Additionally, this evaluation considered existing treatment process operations, and the ability to upgrade or reuse facilities for future use. The viable wastewater treatment alternatives developed from the evaluation are listed below:

Alternative 1 - Increase Trickling Filter Recirculation Rate
Alternative 2 - Conventional Activated Sludge
Alternative 3 - Integrated Fixed-Film Activated Sludge
Alternative 4 - Moving Bed Biofilm Reactor
Alternative 5 - Membrane Bioreactor

2. BACKGROUND

Groundwater is one of the main drinking water sources for the City. One of the serious problems that affect the quality of the region's groundwater is nutrients leaching through from the soil. Nitrogen easily percolates into the groundwater via rainwater recharge, irrigation water carrying excess fertilizers, and untreated sewage or septic leaching. Nitrate and nitrite nitrogen at levels above the drinking water standards have the potential to cause serious human health effects, particularly for infants below the age of six months. Additionally, ammonia nitrogen in the wastewater can form harmful disinfection byproducts when chlorine is used for disinfection. To protect the quality of the City's water supply, it is critical that the nitrogen in the City's wastewater be properly managed.

2.1. Plant Overview

The City owns and operates a WWTP located at 2242 East Charles Street, Banning, California 92220. The WWTP has a design treatment capacity of 3.6 million gallons per day (MGD) and currently discharges approximately 2.07 MGD into 10 unlined evaporation/percolation ponds. The treated effluent then percolates into the groundwater of the San Gorgonio Hydraulic Unit. Groundwater from this basin is used for municipal, industrial, and agricultural applications.

The WWTP consists of preliminary treatment, primary treatment, secondary treatment, solids handling, disinfection (currently not in use), and evaporation/percolation ponds. The preliminary treatment system consists of a mechanical bar screen, compactor, grit removal system, and cyclone separator. Effluent from the preliminary treatment system is gravity fed to two primary clarifiers. Primary effluent is pumped to two trickling filters, each rated for 1.8 MGD. The trickling filter effluent is sent to two secondary clarifiers. Secondary effluent flows through a chlorine contact chamber and is then discharged to the evaporation/percolation ponds. Primary and secondary sludge is processed via two primary anaerobic digesters. A second-stage digester is currently used as a sludge holding tank before dewatered sludge is sent to the sludge drying beds. Sludge is allowed to dewater and then is hauled offsite for final disposal. A gravity thickener was used to thicken secondary sludge but is currently not in service. An overall process schematic of the existing WWTP is shown in Figure 1.

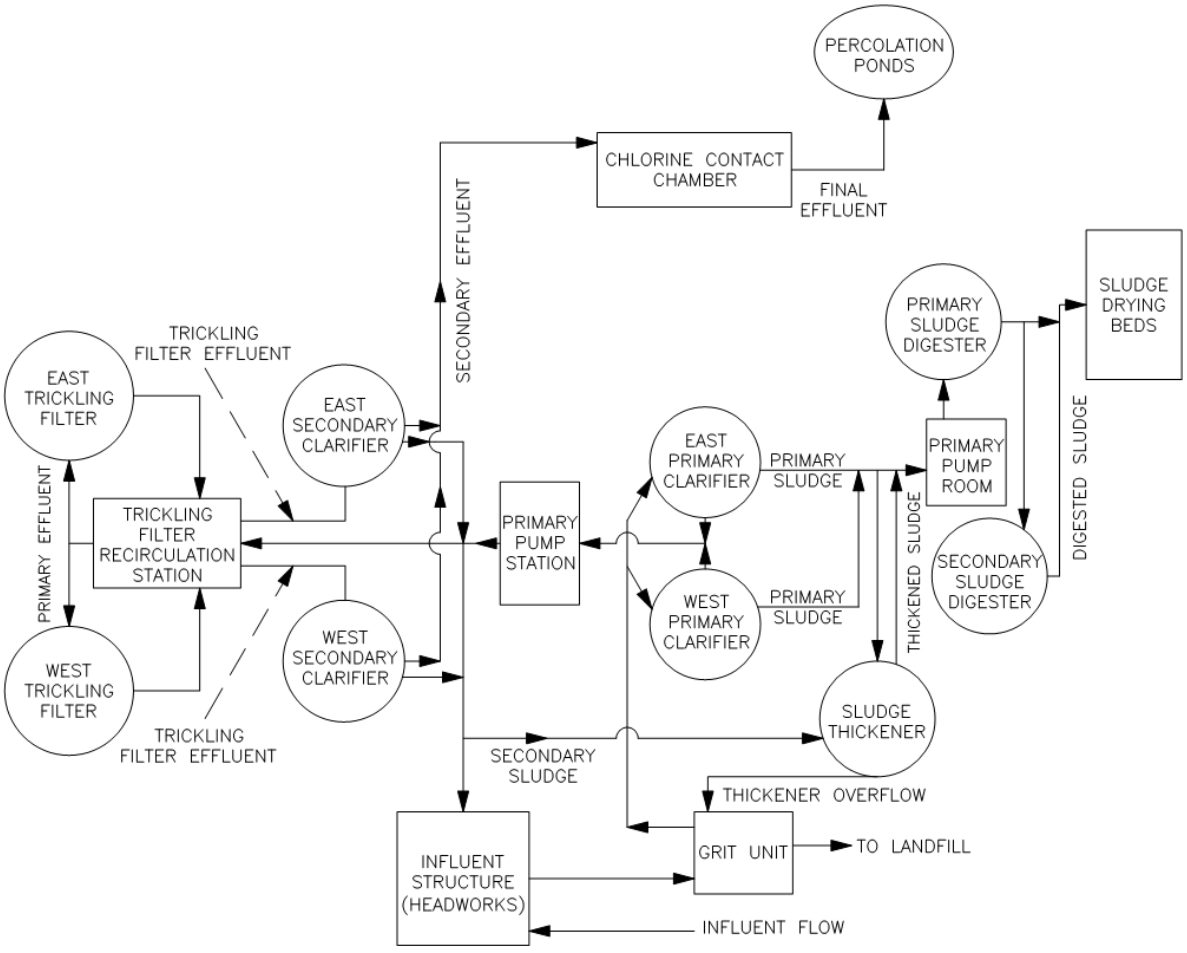


Figure 1. Process schematic for existing WWTP

2.2. Previous Efforts

In 2007, the City contracted Parsons to evaluate treatment technologies for a 1.5 MGD water reclamation facility (WRF) for the production of recycled water. Treatment alternatives investigated included oxidation ditch (OD), conventional activated sludge (CAS), and membrane bioreactor (MBR). The purpose of the evaluation was to determine the best option to comply with future Title 22 requirements for the beneficial reuse of recycled water. Parsons determined an MBR system was the best treatment option and completed a 90% design package of the WRF. However, the final design and construction of the WRF were terminated due to other pressing City needs and the desire to prepare for future population growth in the area.

In 2013, ZW3, Inc. performed a condition assessment evaluation of the unit operations, equipment, structural, and electrical components of the WWTP. The assessment estimated the

remaining lifetime of the existing unit treatment processes before preforming any major upgrades. It was determined that while several components of the WWTP are nearly 50 years old, process and structural components are performing adequately and are expected to remain operational for several more decades. Additionally, the facility and treatment system produce effluent that complied with permit limits.

In 2015, Carollo Engineers assessed the viability of producing recycled water by expanding the existing WWTP or constructing a satellite plant at or near the Rancho San Gorgonio Development. Carollo considered treatment alternatives, including upgrading the facility to a 3.6 MGD tertiary filter treatment system and constructing a 1.5 MGD MBR facility and a 1 MGD satellite treatment facility. The estimated capital and operation and maintenance (O&M) costs only considered the planning stage, and did not include nitrogen removal by the treatment processes.

Since both the 2007 Parson and 2015 Carollo studies evaluated the use of an MBR treatment system, the City would like to update the cost estimates based on new design considerations and improvements to the MBR technology. A comparison of the capital, annual O&M, and life cycle costs from the Parson and Carollo reports is shown in Table 1.

Table 1. Cost comparison of previous MBR studies to treat 1.5 MGD

2007 Parson Study			**2015 Carollo Study**
Cost Type	**Hollow Fiber MBR**	**Flat Sheet MBR**	**MBR**
Construction Cost	**$14,628,000**	**$14,395,000**	**$9,200,000**
Annual O&M Costs			
Power	$250,000	$230,000	-
Chemical	$59,000	$59,000	-
Maintenance and Replacement	$165,000	$145,000	-
Total O&M Cost	**$474,000**	**$434,000**	**$760,000**
Life Cycle Cost	**$21,678,000**[1]	**$20,837,000**[1]	**$28,614,000**[1]

[1] Life Cycle cost was calculated based on a 3% interest rate and 20 years of the return period.

2.3. Regional Water Quality Control Board Order

On June 30, 2016, the California Regional Water Quality Control Board adopted Board Order R7-2016-0015, which describes the Waste Discharge Requirements (WDRs) and other terms and conditions of operation for the WWTP. The Board Order requires the WWTP to remove constituents that present the greatest risk to groundwater quality such as nitrogen, coliforms, and total dissolved solid (TDS). According to the United States Environmental Protection Agency (US EPA), the maximum contaminant level (MCL) for Nitrate as Nitrogen is 10 mg/L. Per the Board

Order, it is assumed all nitrogen available converts to nitrate/nitrite so Total Nitrogen (TN) is used as the measurement of concern. The wastewater effluent limitations per the Board Order are outlined in Table 2.

Table 2. WWTP effluent limitations per Board Order R7-2016-0015

Parameter	30-Day Average	7-Day Average
20°C BOD_5	30 mg/L	45 mg/L
TSS	30 mg/L	45 mg/L
pH	6.0 - 9.0	
30-Day Daily Dry Weather Discharge	< 3.6 MGD	
DO	Upper Zone of the Ponds > 1.0 mg/L	
TDS	Not to Exceed 300 mg/L of the Water Supply	
TN*	10 mg-N/L	

*City does not need to comply with this limit at this time

Currently, the average TN concentration in the WWTP's effluent is 29 mg-N/L, well above the future TN limit of 10 mg-N/L specified in Board Order R7-2016-0015. As a result, the Board Order requires the City to conduct a nitrogen removal analysis and summarize the findings in a technical report that includes a tentative work plan and time schedule for the installation and implementation of nitrogen removal treatment alternatives. The final technical report is required to be submitted to the Regional Control Board by June 30, 2020.

2.4. Title 22 Requirements

Water recycling has been proven to be effective and successful in creating a new and reliable water supply without compromising public health. Non-potable reuse is a widely accepted practice and is used to accommodate the needs of the growing water supply demand. Although the initial investment for the construction of water recycling systems can be significant, water recycling and reuse is a sustainable, cost-effective approach for long term applications.

The City is interested in utilizing WWTP effluent for beneficial non-potable reuse applications such as agriculture, landscape, public parks, and golf course irrigation. However, the WWTP effluent, based on the Self-Monitoring Report data from 2011 – 2015, does not comply with California's water recycling criteria outlined in Title 22, Code of Regulations. To comply with Title 22 requirements, the effluent must meet the following requirements:

- Average daily turbidity less than 2 nephelometric turbidity unit (NTU); approximately 3 – 5 mg/L TSS.

- Effluent cannot exceed 5 NTU more than 5% of the time.
- Effluent cannot exceed 10 NTU at any time.
- Coagulant must be added if the influent to the filter exceeds 5 NTU for more than 15 minutes, or 10 NTU at any time.
- The disinfection process must provide a chlorine residual that provides 450 milligram-minutes per liter (mg-min/L) under minimal modal contact time (CT) of 90 minutes.
    - This corresponds to a residual of 5 mg/L or less, or any process that achieves 5-log virus removal.
- Total coliform cannot exceed the average most probable number (MPN) of 2.2 per 100 milliliters (mL).
- No more than one sample per month can exceed an MPN of 23 per 100 mL.

The WWTP currently discharges 29 mg/L TN and 21 mg/L TSS. In order to use recycled water, the City will be required to improve the removal efficiency of the existing WWTP to comply with the TN, turbidity, and disinfection requirements. The project will ensure the proposed treatment system comply with Title 22 requirements for disinfected tertiary recycled water, while optimizing the treatment process to minimize capital and operating expenses, environmental impacts, and community impacts.

3. WASTEWATER CHARACTERIZATION

The wastewater characteristics, including biochemical oxygen demand (BOD_5), total suspended solids (TSS), TDS, pH, and temperature, are based on the Annual Operations Monitoring Reports from January 2015 – September 2018 and are summarized in Table 3. Raw wastewater quality data for TN, total kjeldahl nitrogen (TKN), and ammonia nitrogen (NH_3-N) were measured separately in March 2019. These wastewater characteristics were used in sizing the treatment units during the evaluation of nitrogen removal alternatives and the estimation of sludge productions.

Table 3. Wastewater characteristics

Parameter	Unit	Raw Wastewater	Primary Effluent		Plant Effluent
			% Removal	Concentration	
BOD_5[1]	mg/L	320	30	224	24
TSS[1]	mg/L	288	50	144	20
TDS[1]	mg/L	420	-	420	437
pH[1]	-	7.5	-	7.5	7.5
Temperature[1]	°F	76	-	76	70
TN[2]	mg/L	45	6	42.3	29
TKN[2]	mg/L	45	6	42.3	19
NH_3-N[2]	mg/L	38	0	38	8.4

[1] Data per 2015 – 2018 Annual Operations Reports.
[2] Data per March 2019. It is currently not regularly measured.

3.1. Sources of Nitrogen

The sources of wastewater discharged to collection systems are typically from residential areas, commercial, institutional, recreational, and industrial facilities. Nitrogen in the wastewater entering the WWTP is primarily domestic in nature, and from a few industrial facilities within the City. Although WWTPs cannot completely remove all nutrients or other constituents from the influent wastewater, their final concentration can be decreased by reducing pollution that comes from these sources. To estimate the nitrogen load contributed from domestic and industrial sources, the total flow must be estimated for each source.

For residential areas, the wastewater flow rate is primarily a function of the population. According to the California Department of Finance report released in May 2019, the City of Banning has a population of 31,044 people. Using the Metcalf and Eddy Wastewater Treatment

and Reuse Guidance Book, standard demand factors are used to estimate the average wastewater flow rate contributed from residential sources. The estimated average wastewater flow rate, expressed in gallons per day (gpd), from the City assuming most of the homes in the City are older homes is presented in Table 4.

Table 4. Estimated wastewater flow from City population

Residential Wastewater Flow				
Description	**Quantity**	**Units**	**Flow/Unit**	**Base Flow (gpd)**
Population	31,044	people	50	1,552,200
Miscellaneous	15%	-	-	232,900
			Subtotal	**1,785,100**

Industrial discharge is monitored at various locations and submitted to the City in accordance with local and federal requirements. Currently, industrial discharge requirements do not have wastewater nitrogen limitations. Presently, the City regulates industrial discharge from two businesses within City limits.

- **San Gorgonio Memorial Hospital (SGMH)** – Located on the westside of Banning. The hospital complies with the Non-Significant Industrial User Discharge Permit. SGMH has two clinics: behavioral health services, as well as an outpatient cardiac rehabilitation clinic located within the hospital, and is licensed for a total of 79 inpatient beds.
- **Larry D. Smith Correctional Facility** – Located in South Banning is classified as a Class I Non-Categorical Significant Industrial User. The Facility's Riverside County staff report issued on June 2011, states that the Correctional Facility has more than 1,500 beds and also contains a laundry facility.

Wastewater flow rates from each facility are determined based on the industrial discharge type and the design daily flow rates. Table 5 and Table 6 are the estimated wastewater baseflow for SGMH and the correctional facility, respectively. The quantity of each facilities' flow-generating components is estimated according to facility size, type, and typical wastewater flowrates for various industrial activities. Allen Industrial Facility was excluded from the calculations due to the non-significant discharge volume.

Table 5. Estimated wastewater flows for San Gorgonio Memorial Hospital

San Gorgonio Memorial Hospital				
Description	**Quantity**	**Units**	**Flow/Unit**	**Base Flow (gpd)**
Hospital, medical	61	Bed	300	18,300
	31	Employee	10	400
Hospital, mental	18	Bed	150	2,700
	9	Employee	10	100
Miscellaneous	15%	-	-	3,300
			Subtotal	**24,800**

Table 6. Estimated wastewater flow for Larry D. Smith Correctional Facility

Correctional Facility				
Description	**Quantity**	**Units**	**Flow/Unit**	**Base Flow (gpd)**
Correctional facility	1,500	Inmate	120	180,000
	100	Employee	10	1,000
Miscellaneous	15%	-	-	27,200
			Subtotal	**208,200**

The estimated nitrogen mass contribution from domestic wastewater is typically found by multiplying the average wastewater flow rate by a factor of 13 – 14.3 grams of nitrogen per capita per day. The estimated nitrogen load contributed from domestic and industrial sources, and the nitrogen load calculated from the current average flow rate and nitrogen water quality data is shown in Table 7. The difference between the estimated versus actual data can be contributed to flow/load variance, natural losses, and dilution in the collection system.

Table 7. Estimated nitrogen contribution from wastewater sources

Parameter	Residential	SGMH	Correctional Facility	Total Estimated	*Current Data*
Wastewater Flow (gpd)	1,785,100	24,800	208,200	2,018,100	*2,070,000*
TN Load (lb/day)	934	3.31	48	986	*777*
TN Concentration (mg/L)	63	16	28	59	*45*

4. PRELIMINARY SCREENING OF OPTIONS

In this technical memorandum, a systematic naming convention is used to label the process/unit operation categories that make up the different liquid treatment systems. The use of "Alternatives" represents the complete wastewater treatment system and is comprised of a combination of "Stages" that maintain individual "Options". The wastewater treatment system was divided into the following three stages for evaluation:

- Biological
- Tertiary Filters
- Disinfection

A preliminary list of viable treatment options that comply with Title 22 requirements was developed for this evaluation. General information and illustrations for each option are given below. Internal brainstorm sessions were conducted to analyze the feasibility of various options, and to develop treatment alternatives for preliminary design.

4.1. Biological Treatment

Biological systems refer to the secondary treatment stage of wastewater unit processes. The focus of this evaluation was to determine the performance of each treatment option on the removal of BOD_5, TN, and TSS. The eleven biological treatment options are presented in Table 8.

Table 8. Biological treatment process options

Biological Treatment Option	Abbreviation
Trickling Filter	TF
Denitrification Filter	DF
Oxidation Ditch	OD
Conventional Activated Sludge	CAS
Integrated Fixed-Film Activated Sludge	IFAS
Moving Bed Biofilm Reactor	MBBR
Membrane Bioreactor	MBR
Sidestream Treatment	ST
Biologically Active Filtration	BAF
Natural Treatment Systems	NT
Passive Aeration Rock Filters	PARF

4.1.1. Trickling Filter

Trickling Filters are currently utilized by the City at the WWTP. TF, shown in Figure 2, is an aerobic attached growth process used for secondary treatment. It consists of a tank filled with different types of media such as crushed stone, rocks, or plastic materials ranging in size from 2 – 4 inches. Wastewater is distributed by a rotary distributor arm over the top area of a vessel containing non-submerged packing material. As the wastewater trickles through the bed, microbial growth on the media forms a biofilm. The organic material in the wastewater is degraded by microorganisms attached to the biofilm. Some of the ammonia nitrogen in the wastewater is oxidized by nitrifying bacteria to nitrate or nitrite nitrogen. An essential element of the trickling filter design and operation is the recirculation of effluent to the filter media for process optimization and increased treatment performance.

There are four basic trickling filter types: low-rate, intermediate-rate, high-rate, and roughing filters. Low-rate filters are loaded at less than 40 kg BOD_5 per day. The residual solids are usually well digested, producing a higher quality secondary effluent. Intermediate-rate filters are loaded up to 64 kg BOD_5 per day. This system requires wastewater recirculation to ensure sufficient effluent quality. High-rate filters have a maximum organic load, ranging from 64 – 160 kg BOD_5 per day. In this system, a secondary filtration stage is required to achieve effluent standards. Roughing filters are typically loaded from 160 – 480 kg BOD_5 per day. Overall, low-rate and high-rate trickling filters achieve the highest organic removal rates.



Figure 2. Trickling filters at the City WWTP

Advantages	Disadvantages
• Simplicity in biological operation • Low energy requirements • Low maintenance requirements • Low sludge production • Appropriate for small and medium sized communities • No problems of sludge bulking in secondary clarifiers • Improved sludge thickening abilities • Durable process elements	• Low loading rate requirements depending on media • Diffusion limitations and possibility of mass transfer • Higher BOD_5 and solid concentrations in the effluent • Issues with biofilm maintenance due to excess sloughing • Odor problems • Low efficiency at cold temperatures

4.1.2. Denitrification Filter

Denitrification filtration, shown in Figure 3, is a commonly employed method to reduce the TN and suspended solids via attached growth processes. The attached biofilm converts nitrite and nitrate (NO_x) to nitrogen gas with the addition of a carbon source, such as glycerol or methanol, to stimulate the denitrification process. There are two main configurations of denitrification filters: downflow and upflow packed-bed reactors. Downflow denitrification filters operate in a conventional filtration mode. Wastewater flows through a downflow filter over weirs along the length of the filter bed on both sides. During this process, nitrate is converted to nitrogen gas under anoxic and anaerobic conditions by autotrophic bacteria that are attached to the filter media. Backwashing is required at regular intervals. In upflow denitrification filters, influent flows upward through the filter media and is slowly drawn into an airlift pipe in the center of the filter. Compressed air is added to the filter to draw media up and scour the biofilm off. Continuous backwash or reject is required. Typical medias used for denitrification filters include mono-media granular sand, gravel, or silica. An external carbon sourced is typically dosed in the denitrification filter influent.

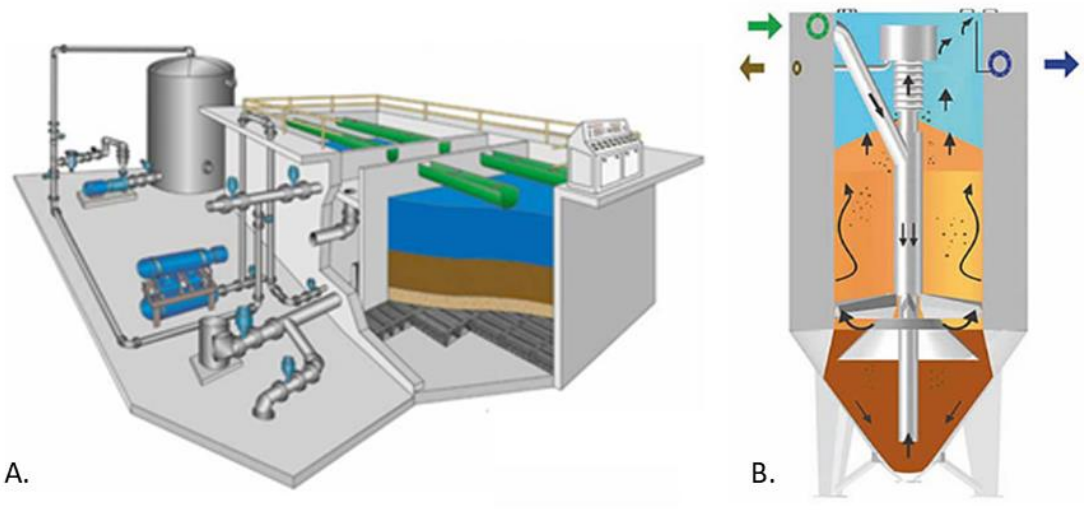


Figure 3. (a)Downflow and (b)Upflow Denitrification Filter (courtesy of ITT Leopard and Dynasand

Advantages	Disadvantages
• Effective total nitrogen, solids, phosphorus, and BOD_5 removal • Operational flexibility • Small footprint	• High chemical addition costs • Additional pump station • Upflow denitrification filters have high energy costs due to continuous backwashing

4.1.3. Oxidation Ditch

Oxidation Ditches, shown in Figure 4, is a type of modified activated sludge process that utilizes long solid retention times (SRT) to accomplish organic and nitrogen removal. Oxidation ditches are configured in a single or multi-ring, oval, or horseshoe-shaped basin. Aerators are equipped to provide circulation, oxygen transfer, and aeration in the basin. Wastewater flows continuously in one direction to create a mixed system.

Screened influent enters the oxidation ditch, is aerated and mixed with the return activated sludge, and effluent is settled in a secondary clarifier. The system can operate in an extended or conventional aeration mode. Tertiary filters may be required when discharge requirements are more stringent. This process is suitable for use in small and medium communities with large land areas. The oxidation ditch is typically designed to achieve both BOD_5 and nitrogen removal via nitrification/denitrification (N/DN). Primary settling is not required.

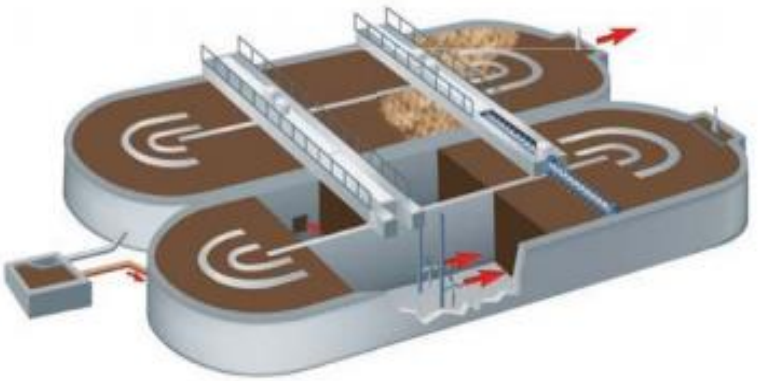


Figure 4. Oxidation Ditch (courtesy of Veolia)

Advantages

- Highly reliable and operational simplicity
- Low maintenance costs
- Well-stabilized sludge
- Capable of treating shock/toxic loads without affecting effluent quality due to long SRT time and complete mixing
- Adaptable for N/DN

Disadvantages

- Larger footprint requirements compared to other activated sludge treatment options
- Higher effluent suspended solids
- Unable to treat sustained highly toxic waste streams
- Requires more energy consumption than conventional treatment

4.1.4. Conventional Activated Sludge

The conventional activated sludge process, shown in Figure 5, is a biological wastewater treatment system where various microorganisms growing as suspended flocs, called mixed liquor, degrade organic matter in the wastewater. The mixed liquor settles in the secondary clarifiers, effluent is discharged for further treatment, and the microorganisms are recirculated back to the bioreactor as return activated sludge (RAS). Oxygen is provided by blowers and diffusers to facilitate the growth of microorganisms. Excess sludge is wasted so that the system can be operated at a target solids retention time.

The conventional activated sludge process can be modified for biological nitrogen removal. This is accomplished by dividing the bioreactor into the aerobic zone and anoxic zone (where no oxygen is provided). Ammonia in the wastewater is oxidized to nitrite and nitrate in the aerobic zone, whereas nitrate and nitrite are denitrified to nitrogen gas in the anoxic zone. In the modified Ludzack-Ettinger (MLE) configuration, the anoxic zone is placed upstream of the aerobic zone. Nitrate and nitrite are recirculated back to from the end of the aerobic zone to the anoxic zone for denitrification. Other configurations, such as the step-feed activated sludge process, have also been used successfully for nitrogen removal.

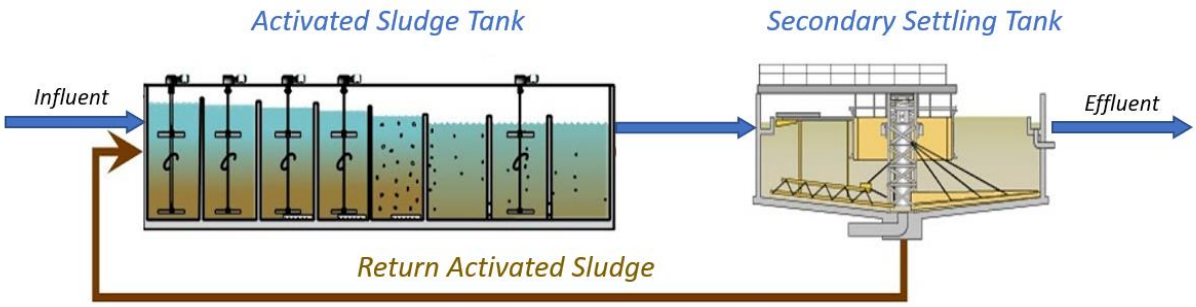


Figure 5. Conventional activated sludge flow diagram

Advantages

- Plenty of operating experience
- Uniform mixing in aeration tanks
- High oxygen transfer efficiency
- Solid and liquid stream separation
- High quality effluent

Disadvantages

- High operational cost
- Sludge disposal requirement
- Diffusers require regular cleaning

4.1.5. Integrated Fixed-Film Activated Sludge (IFAS)

An Integrated Fixed-Film Activated Sludge (IFAS) system, shown in Figure 6, contains fixed media that promote biofilm growth within conventional activated sludge systems. It operates in the same manner as the conventional activated sludge system. The primary difference between IFAS and conventional activated sludge is that IFAS systems allow for a greater density of bacteria populations to grow on the surface area of the media. The greater amount of biomass increases the treatment capacity of a basin. The fixed media's surface areas usually range from 50 – 300 m^2/m^3. IFAS achieves an increase in process reliability under conditions of variable mixed liquor, solids retention, and organic loading rates. IFAS systems require secondary clarifiers and sludge recycle, as in the conventional activated sludge process. However, because the mixed liquor suspended solids (MLSS) levels are lower in the bioreactor than those in the conventional activated sludge process, the size of the secondary clarifiers can be reduced.

While a conventional activated sludge process is typically designed and operated at SRTs ranging from 12 to 18 days to achieve nitrification with water temperatures between 10 and 15 °C, an IFAS system achieves nitrification typically with SRTs of 4 – 5 days, even with the temperature at approximately 10 °C.

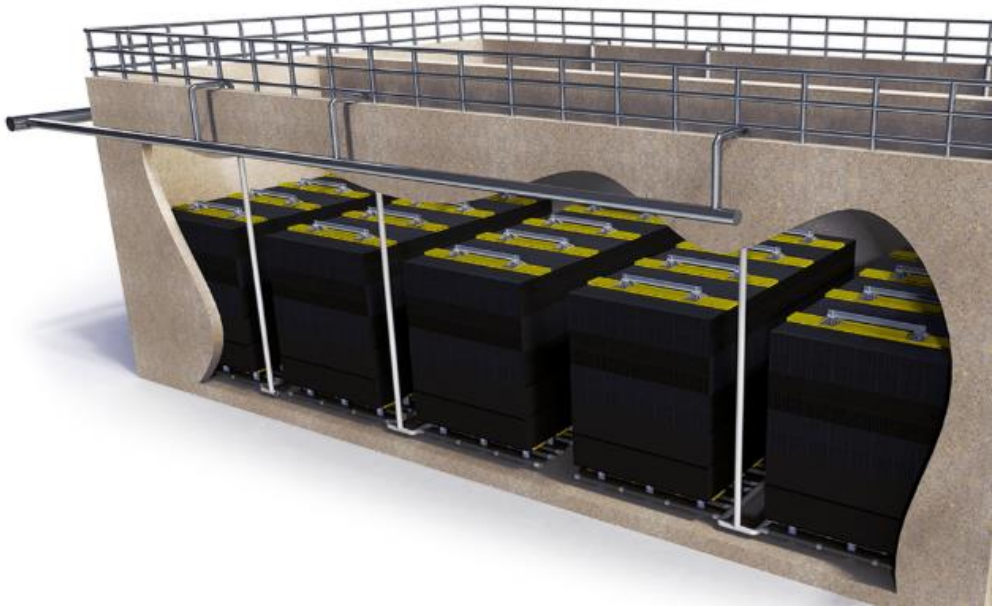


Figure 6. IFAS (courtesy of Brentwood)

Advantages	Disadvantages
• Increased capacity of the activated sludge without increasing tank volume • Increased process stability • Reduced clarifier loading • Low construction costs	• High oxygen demand requirements • Accumulation of debris in IFAS cells • Foaming issues • Cost of the media

4.1.6. Moving Bed Biofilm Reactor (MBBR)

The moving bed biofilm reactor (MBBR) process, shown in Figure 7, is a biological treatment process that was developed by combining the conventional activated sludge system and suspended biofilm carrier media. This process incorporates polyethylene or other material media that provides surface area for the growth of heterotrophic and autotrophic bacteria biofilm in uniformly mixed tanks. The MBBR contains media with the surface area of ranging from 400 – 600 m^2/m^3. A final clarifier is used to remove suspended solids and to produce a clarified effluent. Settled sludge can be returned to the bioreactor if necessary.

MBBRs may be used for aerobic, anoxic, or anaerobic processes. The system can handle high organic loads and high substrate concentrations. Nitrification rates are influenced by the organic load, dissolved oxygen (DO) concentration, ammonium nitrogen concentration, temperature, pH, and alkalinity in the reactor.

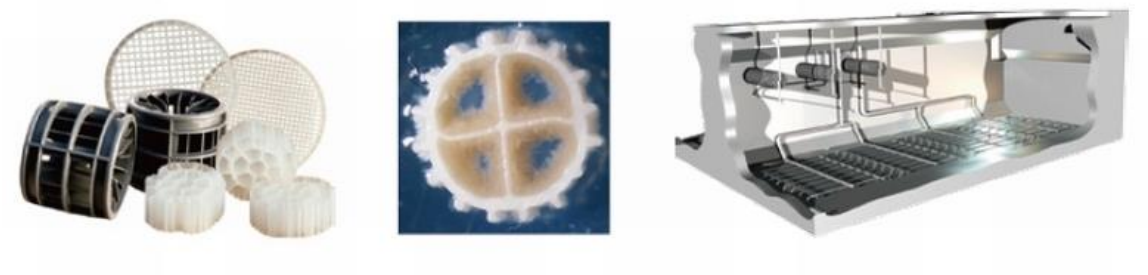


Figure 7. MBBR system components (courtesy of Veolia)

Advantages	Disadvantages
• Backwash is not necessary • A high specific biofilm surface area • Continuous operation of the reactor without clogging • Ability to increase the plant capacity without expansion of existing reactor volume • Easy to operate • Stable operation at low temperature • Long life expectancy of biofilm media carriers	• Media can wash out over time; regular cleaning of effluent screens • Longer start up time requirement • Bacterial activity has to be monitored periodically • Cost of the media

4.1.7. Membrane Bioreactor (MBR)

Membrane Bioreactors (MBRs), shown in Figure 8, consist of a biological reactor with suspended biomass and solids separation by microfiltration or ultrafiltration membranes with the nominal pore size ranging from 0.07 – 2.0 µm and 0.008 – 0.2 µm, respectively. MBRs can be operated at higher MLSS concentrations (8,000 – 12,000 mg/L), as a result, the reactor size is reduced. Solids liquid separation is accomplished with membranes instead of clarifiers. There are two fundamental arrangements of MBRs: (1) integrated systems that have membranes immersed in an activated sludge reactor and (2) separate systems that have a membrane module placed outside the reactor. Immersed MBRs typically use hollow fiber membranes that operate at lower pressures, accommodate various types of biosolids, concentrate biosolids without settling concerns, and have lower life-cycle costs. Separate systems are typically pressure driven and the membranes are in a stand-alone tank. Properly configured, the MBR process removes nitrogen similar to the activated sludge process.

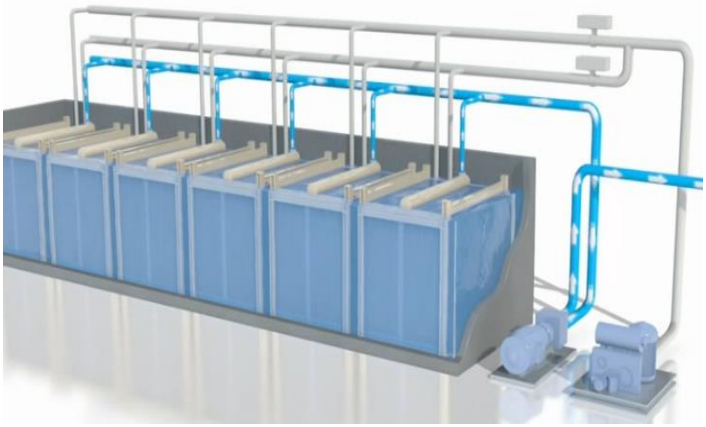


Figure 8. MBR Facility (courtesy of KY OCP)

Advantages	Disadvantages
• Higher MLSS concentrations therefore a small footprint • Less sludge production due to longer SRT design • High effluent quality • No secondary sedimentation is needed	• High capital costs (membranes) • High energy costs compared to the conventional process due to membrane scouring • Limited time on membrane life • High cost membrane replacement

4.1.8. Sidestream Treatment

Most WWTPs return sludge dewatered liquid (filtrate of centrate) generated from the sludge treatment processes to the headwork of the plant. This sidestream can contain elevated levels of ammonia nitrogen if sludge is anaerobically digested. The ammonia mass loading of the sidestream can account for 15 to 25 percent of the total nitrogen load that has to be treated by the biological process. In recent years, advances have been made to effectively remove nitrogen from the sludge dewatering sidestream using the ammonia oxidizing bacteria (AOB) and the anaerobic ammonia oxidizing (Anammox) bacteria. In this process, some of the ammonia nitrogen is partially oxidized to nitrite nitrogen by the AOB, the Anammox bacteria then use the nitrite nitrogen as electron acceptor and the remaining ammonia nitrogen as electron donor to form nitrogen gas. No carbon source is necessary for the process. Because Anammox bacteria grow slowly, there is no significant sludge produced from the process that needs to be managed. Additionally, oxygen required is significantly lower than the conventional nitrification process.

There are three major technology providers for the process: Kruger/Veolia (ANITA™Mox), Ovivo (AnammoPAQ™), and World Water Works (DEMON®). These systems operate in either batch or continuous flow configurations, with anammox bacteria attaching to a surface or floating freely

as granules. The process operates similarly to the MBBR and IFAS processes. An example of the anammox treatment system is shown in Figure 9.

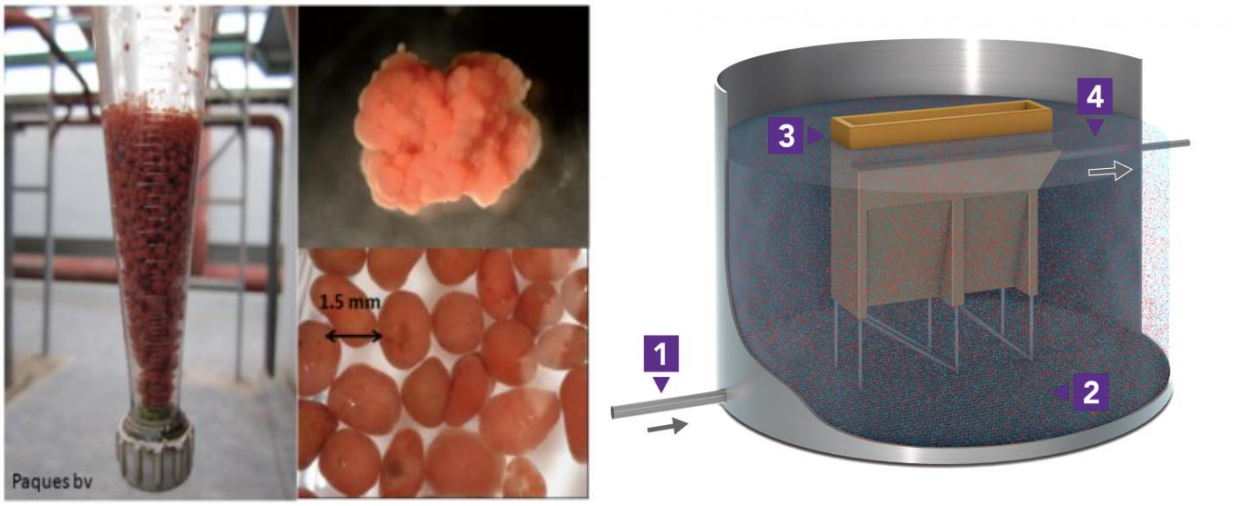


Figure 9. Sidestream anammox treatment systems (courtesy of Veolia and Ovivo)

Advantages

- No external carbon addition
- Reduced energy for aeration
- Less sludge production
- Lower alkalinity demands
- Cost effective compared to conventional biological nutrient removal systems

Disadvantages

- Slow growth of Anammox bacteria
- Sensitive to nitrite, oxygen, and ammonia concentration and other environmental conditions (temperature, pH)
- Tight process controls
- High cost of anammox bacteria

4.1.9. Biologically Active Filter

Biologically Active Filter (BAF) systems, shown in Figure 10, remove contaminants by three main mechanisms: biodegradation, adsorption, and filtration. They can combine ammonia, carbonaceous matter, and solids removals in a single unit. Microorganisms attach to the filter media creating a biofilm that consumes organic matter and nitrifies ammonia nitrogen. BAFs utilized for denitrification are fed a form of carbon (i.e. acetic acid, methanol) and use nitrate as an electron acceptor in place of oxygen.

In a BAF, influent flows either upwards or downwards through tanks that are filled with media. Granular activated carbon is often used as the media to promote biofilm growth. The size of the granular media affects the efficiency of wastewater treatment in terms of solids and nutrient removal. For example, medias with large diameters (6 mm) reduce available space for biofilm growth, while small diameter medias facilitate higher filtration efficiency, but require more

frequent backwashing. BAF units are typically used as a polishing step after conventional treatment and are utilized to remove micropollutants and suspended solids. Clarifiers are not required in the BAF system.

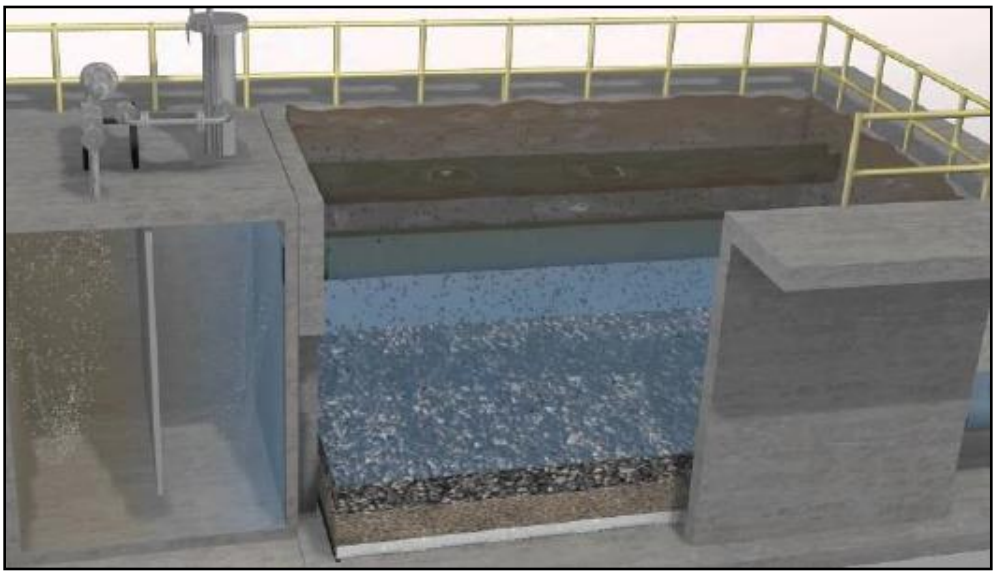


Figure 10. BAF layout (courtesy of Leopard)

Advantages	Disadvantages
• Fully automated operation • Capable of handling varied flow and temperature fluctuations • Cost effective due to the elimination of secondary clarifiers • Ability to control odor • Better contaminant removal than conventional filtration • Reduction of residual solid production	• Optimization for media type is required • Higher costs due to automated valves and on-line instrumentation • Higher operational costs due to external carbon source for denitrification

4.1.10. Natural Treatment Systems

Natural treatment systems such as constructed wetlands, shown in Figure 11, promote the breakdown of contaminants via natural processes such as photodegradation, biological and chemical transformation, and physical removal mechanisms. Plant species, media types, and optimal operating parameters (water depth, hydraulic load, and retention time) are all crucial influencing factors to the removal performance of constructed wetlands. The removal mechanisms for nitrogenous compounds in constructed wetlands are sedimentation, adsorption,

volatilization, microbial uptake and transformation, and plant uptake. Nitrate will either be absorbed by plants and microbes and converted to biomass through assimilation, or it will undergo denitrification in the anaerobic zone at the bottom of the wetland. The highest rate of nitrogen removal is observed during the growing season where up to 3.3 g-N/m^2-yr have been estimated for uptake by emergent wetland plants. Other case studies have shown up to 70% TN removal.

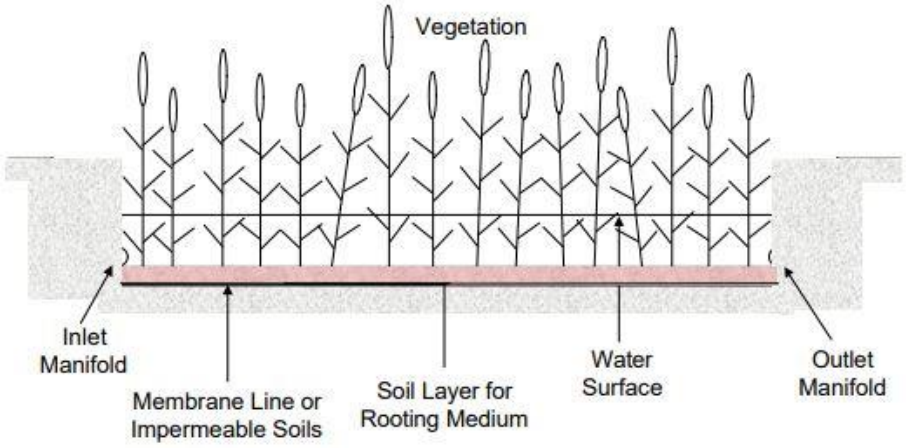


Figure 11. Schematic of a natural treatment system

The City can retrofit unused percolation/evaporation ponds for constructed wetlands. The bulk of the capital costs needed would be to perform earthwork and grading in order to create wetland cells, purchase of wetland vegetation, and install flow control structures. Effluent can be discharged via the remaining percolation ponds or connected to distribution lines for water reuse. Additionally, wetlands are less expensive to operate and maintain since mechanical equipment, energy, and skilled operator requirements are reduced compared to conventional treatment systems.

Advantages

- Ease of construction
- Low O&M costs
- Habitat for wildlife
- Reliable treatment under fluctuating loading rates

Disadvantages

- Requires preliminary treatment
- Large footprint area
- Long retention time
- Pests and vector control

4.1.11. Passive Aeration Rock Filters

Passive aeration rock filters, shown in Figure 12, is a relatively new method using passive aeration attached growth for biological degradation. Wastewater is filled and drained through subsurface flow basins to achieve passive aeration. The system is comprised of two flow basins with gravel

media that alternate between fill and drain cycles. This process allows for uniform mixing and has the ability to treat high nitrogen loads to tertiary effluent quality levels. The unique pumping configuration in the basin can allow for simultaneous N/DN. Prescreening and primary settling are recommended to prevent clogging and odor issues in the basins.

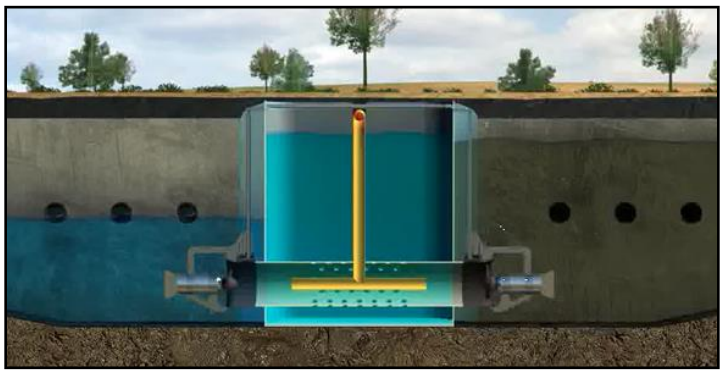


Figure 12. The flow control structure of passive aeration rock filter (courtesy of Triple-T)

Advantages	Disadvantages
• High degree of nitrogen removal	• Relatively new technology
• Low energy consumption	• Large footprint area
• Low O&M costs	• Smaller flow installations
• Low sludge production	

4.1.12. Treatment Process Selection Criteria

Capital and O&M costs, regulatory compliance, and treatment performance are the main design parameters to evaluate potential treatment options. However, there are several other factors that may affect the City's decision in selecting a treatment process, such as permitting, construction schedule, process robustness, footprint, ease of operation, monitoring requirements, and consumables. All of these factors are considered in evaluating which treatment process will yield most benefit for the City.

Process evaluation and selection have been performed by using a paired comparison analysis to weigh the relative importance of each selection criterion. During this analysis, one criterion is judged to be more important than, of equal importance to, or less important than one other criterion. Comparing only two criteria at a time simplifies the evaluation and minimizes ambiguity in the weighting process. For example, if criterion A (applications) is compared with criterion B (startup time), and B is more important than A, B is then listed in the weighting table.

A mathematical formula was used to convert the paired comparison selections to a relative weight factor for each criterion, rather than randomly assigning values. Table 9 illustrates the

comparison analysis and the relative weights of twelve criteria that our team developed for the biological treatment options.

Table 9. Process selection criteria and weighting factors for biological treatment options

	Criteria	Priority												Weight
		A	B	C	D	E	F	G	H	I	J	K	L	
A	Demonstrated in Previous Applications		A	C	D	A	F	A	H	I	A	K	L	6%
B	Start Up Time			C	D	B	F	G	H	I	J	K	L	2%
C	Constructability				D	C	F	C	H	I	C	K	C	9%
D	Operational Complexity					D	F	D	H	D	D	K	D	12%
E	Treatment Complexity						F	G	H	I	E	K	L	2%
F	Regulatory Compliance							F	F	F	F	F	F	17%
G	Process Robustness								H	I	G	K	L	5%
H	Capital Cost									H	H	H	H	15%
I	O&M Cost										I	K	I	11%
J	Environmental Impacts											K	L	2%
K	Effluent Water Quality												K	14%
L	Footprint													8%

Each option was assigned an absolute score of 1 to 5 per criterion. These scores were multiplied by the relative weight of a given criterion and then summed for each process. Scores and weighting factors were determined by the project team and City staff. Table 10 presents the relative weights of the criteria along with the individual and total scores for the options based on a 1 – 5 scale.

Table 10. Biological treatment options weighted scores

Weighted Scores											
Selection Criteria	**TF**	**DF**	**OD**	**CAS**	**IFAS**	**MBBR**	**MBR**	**ST**	**BAF**	**NT**	**PARF**
Demonstrated in Previous Applications	0.18	0.18	0.18	0.24	0.3	0.3	0.3	0.12	0.12	0.18	0.12
Start Up Time	0.08	0.06	0.06	0.08	0.08	0.08	0.08	0.02	0.05	0.03	0.05
Constructability	0.45	0.36	0.18	0.45	0.45	0.45	0.45	0.45	0.27	0.18	0.18
Operational Complexity	0.61	0.36	0.61	0.48	0.48	0.48	0.48	0.12	0.48	0.48	0.48
Treatment Complexity	0.08	0.05	0.06	0.08	0.06	0.06	0.08	0.05	0.05	0.06	0.05
Regulatory Compliance	0.5	0.67	0.5	0.67	0.83	0.83	0.83	0.83	0.5	0.5	0.33
Process Robustness	0.18	0.14	0.14	0.23	0.18	0.18	0.23	0.14	0.14	0.18	0.09
Capital Cost	0.76	0.45	0.45	0.76	0.45	0.45	0.3	0.3	0.61	0.45	0.3
O&M Cost	0.32	0.32	0.42	0.42	0.32	0.32	0.32	0.53	0.32	0.53	0.42
Environmental Impacts	0.06	0.06	0.05	0.06	0.08	0.08	0.08	0.08	0.06	0.08	0.05
Effluent Water Quality	0.41	0.41	0.27	0.41	0.55	0.55	0.68	0.55	0.41	0.41	0.27
Footprint	0.38	0.38	0.15	0.3	0.23	0.3	0.38	0.38	0.3	0.08	0.08
Total Weighted Score	**4.00**	**3.44**	**3.08**	**4.18**	**4.02**	**4.09**	**4.21**	**3.56**	**3.30**	**3.17**	**2.42**

4.1.13. Options Eliminated

Based on the results of the paired comparison analysis, the following six options were eliminated from further analysis: Denitrification Filter (DF), Oxidation Ditch (OD), Sidestream Treatment (ST), Biologically Active Filtration (BAF), Natural Treatment Systems (NT), and Passive Aeration Rock Filters (PARF). Brief reasons for the elimination of these options are provided in Table 11.

Table 11. Biological treatment option elimination reasoning

Eliminated Option	Reason for Elimination
Denitrification Filter	▶ Capital cost is higher than MBBR or IFAS systems while not providing much better effluent water quality. Requires additional carbon source for nitrogen removal which increases O&M costs.
Oxidation Ditch	▶ Operates similar to conventional activated sludge systems, but does not provide significant treatment improvements or cost savings.
Sidestream Treatment	▶ Sidestream treatment may not achieve nitrogen discharge limits; therefore, improving the mainstream system is needed. Sidestream treatment is optimal for larger municipal facilities where space is limited and O&M costs are prohibitive.
Biologically Active Filter	▶ It requires upstream treatment units to prevent clogging. Typically used as a polishing step or for smaller wastewater systems.
Natural Treatment Systems	▶ To comply with the effluent TN goal of 10 mg/L, the system must be at least 90 acres. The City does not have enough land space to accommodate this large footprint.
Passive Aeration Rock Filters	▶ The typical largest installation is around 1.5 MGD. Very few installations in the United States. It does not provide significant improvement in effluent water quality compared to conventional treatment systems.

4.2. Tertiary Filters

Tertiary treatment options are used as a polishing step for wastewater to remove suspended, colloidal, and dissolved constituents. Advanced filtration is required when wastewater is discharged into receiving water bodies with stringent suspended solids effluent requirements or

reuse applications. The most common processes for tertiary filters are cloth media disk filters, pressurized sand filters, and gravity sand filters.

4.2.1. Cloth Media Disk Filters

Cloth media disk filters, as shown in Figure 13, utilize nylon, acrylic, and polyester pile fabric as the media to reduce TSS concentrations to below 5 mg/L. Additionally, disk filters have been used for membrane pretreatment and phosphorus removal. They are typically made of a series of disks mounted horizontally or vertically. Disk filters are completely submerged in tanks, and flow direction is dependent upon the method of solids removal. Disk filter footprints are very small compared to gravity sand filters; typically, 2 – 12 filters can be placed in one basin.

When disk filters are in operation, water enters the feed tank and flows through the filter cloth and a central collection tube. The filtered effluent is collected in a central tube and is discharged to the effluent channel. The solids accumulate on the medium, resulting in an increase of head-loss. After reaching a predetermined head loss level, disks are backwashed and the filter is put back into operation.

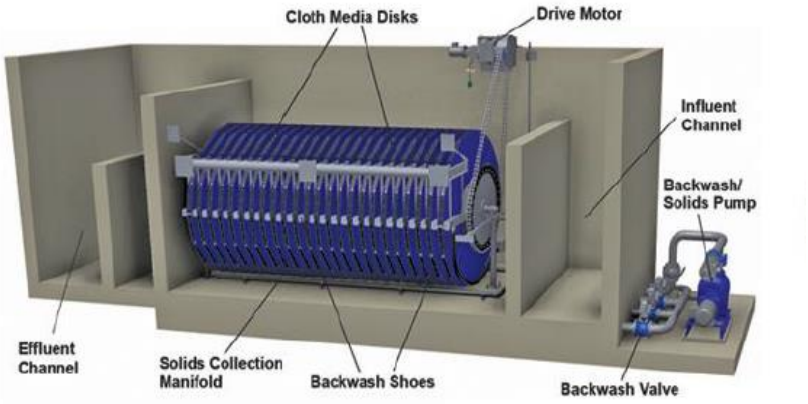


Figure 13. Disk Filter (courtesy of Aqua-Aerobics)

Advantages

- Simple operation
- High quality effluent
- Minimal head loss
- Fully automated operation
- Low backwash waste generation
- Low energy costs

Disadvantages

- Filters have a limited life span
- Filters can be designed to operate at slightly higher loading rates than sand/dual media filters.
- Fouling problem may occur due to chemical pretreatment processes used upstream such as polymer addition

4.2.2. Pressurized Sand Filters

Pressurized Sand Filters, shown in Figure 14, are an effective system to remove TSS and reduce turbidity in wastewater. Pressurized sand filters are deployed in vertical or horizontal pressurized steel tanks, and consist of multiple layers of sand, gravel, or anthracite in a variety of sizes and specific gravities. These systems have been proven to produce effluent water quality below 0.5 NTU. The amount of pressurized sand filters in series is dependent upon the flow of the system.

When pressurized sand filters are placed in operation, water flows through the filter bed where polymer is added to enhance removal mechanisms. Constituents in the wastewater are retained in and around the sand grains. Due to the accumulation of solids on the sand, head-loss increases and flow is reduced once an excess in pressure drop occurs across the filter. Pressurized sand filters are required to be backwashed or air scoured to prevent clogging and to maintain treatment performance.



Figure 14. Pressurized sand filters (courtesy of EPD USA Inc.)

Advantages	Disadvantages
• High efficiency in turbidity and TSS removal • Easy in O&M • Higher energy requirement than gravity filters	• Clogging issues due to fine sand • High backwash volumes

4.2.3. Gravity Sand Filters

Gravity Sand Filters, as shown in Figure 15, are an effective filtration method to remove pathogens and meet stringent effluent discharge permit requirements. Gravity sand filters are driven entirely under gravity force without any outside energy supply. The water level above the media forces the water through the sand filter media. The rate at which water passes through the gravity filters depends on the hydraulic loading rate and the medium used. Based on the loading rate, the gravity filters can be classified as slow sand filters, rapid sand filters, or high rate sand filters. Frequent backwashing is required at regular intervals.

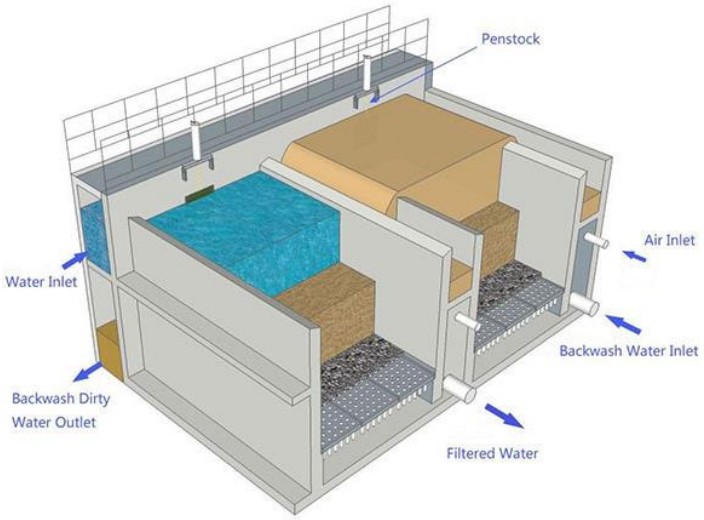


Figure 15. Gravity sand filters (courtesy of Khan Water Treatment Co., Ltd.)

Advantages

- High efficiency in turbidity and TSS removal
- Short cleaning time

Disadvantages

- High capital and operational costs
- Frequent cleaning (every 24 – 72 hours)
- Clogging and odor problems

4.2.4. Treatment Process Selection Criteria

The same methodology as discussed in Section 4.1.12 was utilized to compare the three tertiary filtration options. Table 12 illustrates the comparison analysis and the relative weights of five criteria that the project team and City staff developed for the tertiary filters. Table 13 presents the relative weights of the criteria along with the individual and total scores for the options based on a 1 – 3 scale.

Table 12. Process selection criteria and weighting factors for tertiary filter

	Criteria	Priority					Weight
		A	B	C	D	E	
A	Backwash Quantity		B	A	A	E	20%
B	Capital Cost			C	B	E	20%
C	O&M Cost				C	C	30%
D	Operational Complexity					D	10%
E	Space Requirements						20%

Table 13. Tertiary filter options weighted scores

Weighted Scores			
Selection Criteria	**Cloth Media Disk Filter**	**Pressurized Sand Filter**	**Gravity Sand Filter**
Safety	0.6	0.6	0.2
Capital Cost	0.4	0.4	0.4
O&M Cost	0.9	0.6	0.6
Operational Complexity	0.2	0.2	0.2
Effluent Water Quality	0.6	0.4	0.2
Total Weighted Score	**2.7**	**2.2**	**1.6**

4.2.5. Options Eliminated

Based on the results of the paired comparison analysis, the pressurized sand filter and gravity sand filter were eliminated from further analysis. Brief reasons for the elimination of these options are provided in Table 14.

Table 14. Tertiary filter options elimination reasoning

Eliminated Method	Reason for Elimination
Pressurized Sand Filters	▶ The system requires high backwash volumes.
Gravity Sand Filters	▶ The system requires a lower recovery than cloth media filter due to higher backwashing. a large footprint and additional pretreatment due to clogging affected by water impurities. Additionally, it has high capital and operational costs due to frequent backwashing.

4.3. Disinfection

Disinfection is the process of inactivating pathogens in water and wastewater. Title 22 specifies the required level of disinfection prior to reuse applications. Based on the existing configuration of the WWTP and proven disinfection technology for wastewater applications, the use of Sodium Hypochlorite, Chlorine Gas, and Ultraviolet were considered.

4.3.1. Sodium Hypochlorite

Sodium hypochlorite (NaOCl) is the most commonly used source of chlorine for the disinfection of municipal wastewater treatment plant effluent. NaOCl is available in liquid form with concentrations of 12.5% to 15% of available chlorine. The solution can be degraded when

exposed to sunlight and heat. Therefore, the sodium hypochlorite solution has to be stored in a corrosive resistant tank in a cool, dark place, as shown in Figure 16.

The required chlorine dose depends on water characteristics, contact time, and discharge requirements. Water temperature, alkalinity, and nitrogen content also affect chlorine disinfection efficacy. Ammonia reacts with chlorine to form chloramines which are less effective disinfectant than free chlorine. Any nitrite nitrogen as well as other reduced chemicals in the water will be oxidized by chlorine. Chlorine may also react with organic matter in the water to produce harmful disinfection by-products. The unit cost of sodium hypochlorite solution is about 30% higher than the unit cost of gaseous chlorine.



Figure 16. Sodium Hypochlorite System (courtesy of Bergen County)

Advantages

- Provides residual protection in the effluent
- Effective disinfectant
- Low capital costs than UV and gaseous chlorine
- Safer to handle than gaseous chlorine

Disadvantages

- Not effective against *Cryptosporidium*
- Highly corrosive
- Produces disinfection byproducts
- Limited shelf life

4.3.2. Chlorine Gas

Chlorine gas (Cl_2), as shown in Figure 17, utilizes a similar disinfection mechanism as NaOCl. It is injected into wastewater through chlorinators to reduce the pressure so that gas becomes liquid. Only qualified personnel, under the supervision of certified personnel and in accordance with the

Occupational Safety and Health Administration (OSHA) regulatory requirements, are allowed to handle chlorine gas at wastewater treatment plants due to safety concerns. Safety concerns include chlorine gas leaks that could have been caused during the shipment process, storage on site, and/or changing of the gas cylinders. Therefore, many wastewater plants have switched from chlorine gas to sodium/calcium hypochlorite sources for chlorine disinfection.



Figure 17. Chlorine gas (courtesy of JCS Industries)

Advantages

- Effective against most pathogens
- Provides residual protection in the effluent
- Low operating and capital costs

Disadvantages

- Disinfection byproduct formation
- Increased safety risk and special training required for operators
- Not effective against *Cryptosporidium*
- Additional regulatory requirements

4.3.3. UV

Ultraviolet (UV) disinfection, shown in Figure 18, utilizes UV electromagnetic energy to damage microbial DNA and RNA, thereby retarding microbial reproduction. The optimum UV wavelengths are from 250 to 270 nm. The main components of a UV system include UV lamps, quartz sleeves that house the lamps, the supporting structure, and the power supply. UV systems are classified according to the lamp types and whether the flow occurs in an open or closed channel.

UV capital costs depend on the capacity of the plant, wastewater characteristics, and the manufacturer. The total capital and operating costs for UV disinfection are much higher than chlorination. However, in cases where both chlorination and dichlorination are required and fire codes are met, UV becomes cost competitive. Additionally, no harmful disinfection byproducts are formed during operation.



Figure 18. UV System (courtesy of Flow-Technics, Inc.)

Advantages

- More effective disinfectant than chlorine for protozoa
- No byproducts formation
- No residual effect harmful to human or aquatic life
- Eliminates the need to generate, handle, transport, or store hazardous chemicals
- Shorter contact times

Disadvantages

- High energy requirements
- Low dosages may not effectively inactivate bacteria and viruses
- Turbidity and TSS can render UV ineffective
- Fouling of tubes
- No measurable residual in the effluent to indicate the efficacy of disinfection
- UV lamps have limited life and need to be replaced regularly
- No residual; reactivation of microorganisms has been reported

4.3.4. Treatment Process Selection Criteria

The same methodology discussed in Section 4.1.12 was utilized to compare the three disinfection options. Table 15 illustrates the comparison analysis and the relative weights of five criteria that the project team and City staff developed for the disinfection systems. Table 16 presents the relative weights of the criteria along with the individual and total scores for the options based on a 1 – 3 scale.

Table 15. Process selection criteria and weighting factors for the disinfection system

	Criteria	Priority					Weight
		A	B	C	D	E	
A	Safety		A	A	A	A	40%
B	Capital Cost			C	B	E	10%
C	O&M Cost				C	C	30%
D	Operational Complexity					D	10%
E	Effluent Water Quality						10%

Table 16. Disinfection options weighted scores

Weighted Scores			
Selection Criteria	**NaOCl**	**Cl_2**	**UV**
Safety	1.2	0.4	1.2
Capital Cost	0.2	0.3	0.1
O&M Cost	0.9	0.9	0.3
Operational Complexity	0.3	0.3	0.2
Effluent Water Quality	0.2	0.2	0.3
Total Weighted Score	**2.8**	**2.1**	**2.1**

4.3.5. Options Eliminated

Based on the results of the paired comparison analysis, chlorine gas and UV disinfection were eliminated from further analysis. Brief reasons for the elimination of these options are provided in Table 17.

Table 17. Disinfection option elimination reasoning

Eliminated Method	Reason for Elimination
Chlorine Gas	▶ Chlorine gas is a serious safety concern. Operations of a gaseous chlorine disinfection system are complicated and require meeting stringent federal and state safety requirements.
Ultraviolet Disinfection	▶ UV has higher capital costs and significantly higher O&M costs due to high power consumption compared to sodium hypochlorite; UV lamps need to be replaced regularly

5. ALTERNATIVES ANALYSIS

After the initial screening of secondary, tertiary, and disinfection options, five wastewater treatment alternatives were developed for process design and sizing of tanks and equipment. Capital and O&M costs were estimated and compared. Analyses of each alternative included defining the design criteria, biological process modeling, plant hydraulics calculations, and cost estimation. The subsections below provide a more detailed description of the analytical procedures.

5.1. Design Criteria

The wastewater treatment alternatives were evaluated by developing preliminary design criteria. The components and site layouts associated with each alternative were defined by size and quantity while applying the design criteria listed in Section 6 and Section 7. The size and quantity of the components associated with the wastewater treatment alternative were then used to develop capital and O&M costs. When appropriate, assumptions for design criteria were made for sizing the treatment systems.

5.2. BioWin Modeling

The BioWin 5.3 software (EnviroSim Associates Ltd.) for wastewater treatment plant simulation was utilized to estimate key performance indicators (KPI) including effluent water quality, DO, MLSS, SRT, and hydraulic retention time (HRT) for selected biological process configurations. The processes were designed to achieve a 10 mg/L TN effluent, and further optimized to achieve 8 mg/L TN to offer a safety factor for operation.

The model was configured and calibrated with plant physical data, operation data, influent loading data, influent wastewater characteristics, and kinetic and stoichiometric model parameters. Once the model was calibrated for each process, constraint parameters related to operation and water quality are addressed through trial and error method based on the general approach. KPIs based on secondary effluent water quality and operation conditions in the bioreactors have been established to analyze and provide comparisons between each alternative. An example of the BioWin process modeling is shown in Figure 19.

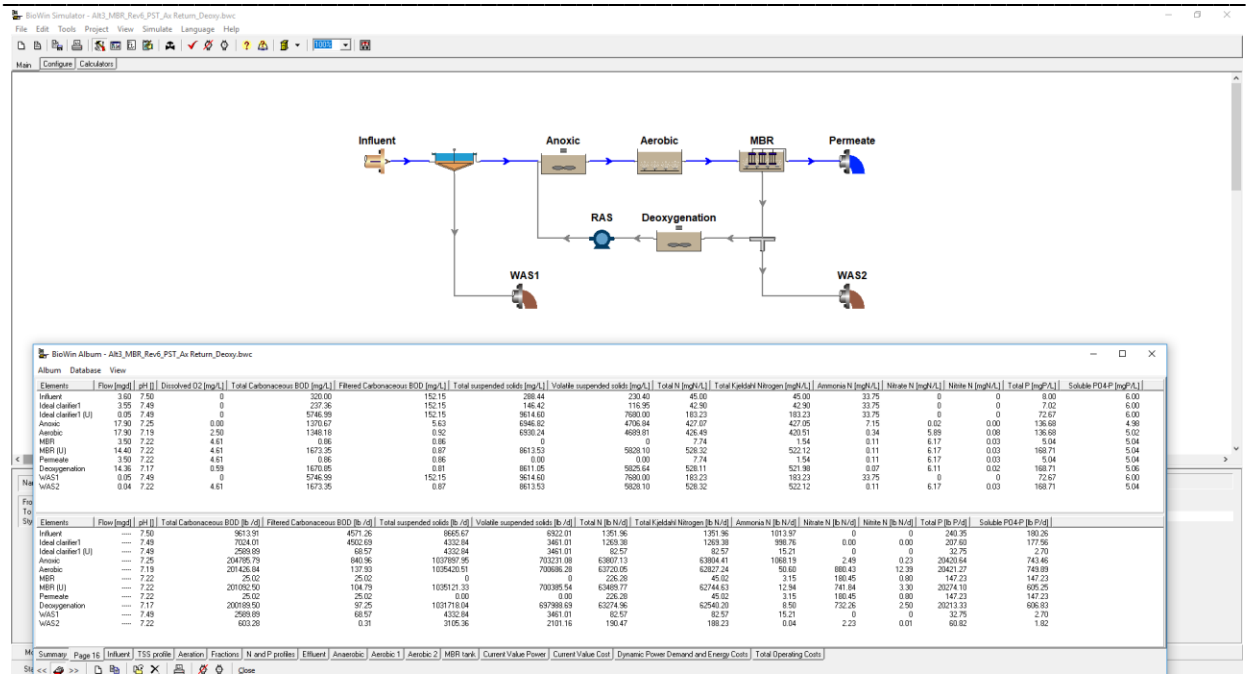


Figure 19. BioWin modeling

5.3. Visual Hydraulics 4.2

Visual Hydraulics is a software primarily used for modeling the hydraulic characteristics of water and wastewater treatment plants. The software is capable of analyzing hydraulic profiles for the entire treatment plant, and follows the traditional method for analyzing water surface profiles. A downstream control point (chlorine contact chamber discharge point) was selected for each alternative, and the hydraulics of each treatment alternative was checked. The use of Visual Hydraulics 4.2 determined if new and existing pumps and pipelines would be suitable for each proposed treatment alternative.

5.4. Cost Assumptions

A list of assumptions used for capital and O&M cost estimates for each wastewater treatment alternative is provided in Table 18. Capital costs were developed using the 17 division of constructions as defined by the Construction Specifications Institute (CSI)'s MasterFormat. Life cycle costs prepared for this report assumed an annual interest rate of 2.5 percent. Any cost assumptions that deviate from this table are identified in the wastewater treatment alternative subsections.

Table 18. Cost assumptions for the development of capital and O&M costs

Cost Item	Value
Capital Costs	
Equipment Installation	25% of equipment cost
Pipe Installation	300% of pipe material cost
Diffuser Installation	$125/diffuser
Electrical	20% of Div 1 -15
Instrumentation	10% of Div 1 - 16
Contingency	15% of Construction Subtotal
Mobilization and Insurance	5% of Construction Subtotal with Contingency
General Conditions	9% of Construction Subtotal with Contingency, and Mobilization and Insurance
Contractor Profit	15% of Construction Subtotal with Contingency, Mobilization and Insurance, and General Conditions
Concrete	$1,200/CY
Annual O&M Costs	
Electrical	$0.10/kWh
Labor, Maintenance, and Spare Parts	2% of equipment cost
12.5% Sodium Hypochlorite	$2.12/gallon
Polymer	$0.94/gallon
Citric Acid	$7.50/gallon
Sodium Bisulfite	$2.42/gallon
Sodium Hydroxide	$0.95/gallon

6. WASTEWATER PLANT UPGRADES

Upgrades to the WWTP to appropriately handle the future 3.6 MGD average flow and to comply with Board Order and Title 22 requirements are discussed in this section. The costs for these components to comply with Title 22 requirements are included in the capital, O&M, and life cycle costs discussed in Sections 7 and 8.

The existing plant unit processes were reused as much as possible based on the condition assessment evaluation. Reuse of the existing trickling filter tanks for the biological treatment options was evaluated to save on capital construction costs. However, based on WWTP site investigations from October 30, 2018 and April 16, 2019, and recommendations per the condition assessment evaluation, the structure of the trickling filters is not recommended for retrofit without major repairs.

6.1. Equalization Basin

Currently, the City has no method to regulate variations in flow. Additionally, many of the existing treatment processes downstream of the headworks are not designed to handle 3.6 MGD. The existing treatment components have the following treatment capacity: Primary West Clarifier (1.6 MGD), Primary East Clarifier (2.0 MGD), West Tricking Filter (1.8 MGD), East Trickling Filter (1.8 MGD), Secondary-clarifier West (1.8 MGD), Secondary-clarifier East (1.8 MGD), and Anaerobic Digester (2.3 MGD).

The construction of an equalization (EQ) basin is recommended to regulate flow and organic and nitrogen loading to ensure the biological treatment processes are not under- or over-sized. It is important to equalize the nitrogen loading to optimize the removal performance of the biological systems. Other benefits of the EQ basin include lower capital and O&M costs for systems requiring to be designed for peak flow conditions, and the ability to store wastewater in case of emergency or treatment process downtime.

The City records daily flow fluctuations using a flow meter located upstream of the unused chlorine contact tank. Daily flow is recorded continuously on flow record disks. Data from January 2017 – September 2018 were analyzed to determine hourly flow fluctuations. The average flow recorded over this time period was approximately 2.0 MGD. Presently, it is unknown if the daily flow variation will change with an increase in average flow. Therefore, it is assumed the daily flow variation will remain the same. The flow fluctuations at 3.6 MGD is scaled up from the 2.0 MGD flow rate. Figure 20 shows the existing (blue) and projected future (red) diurnal flow patterns.

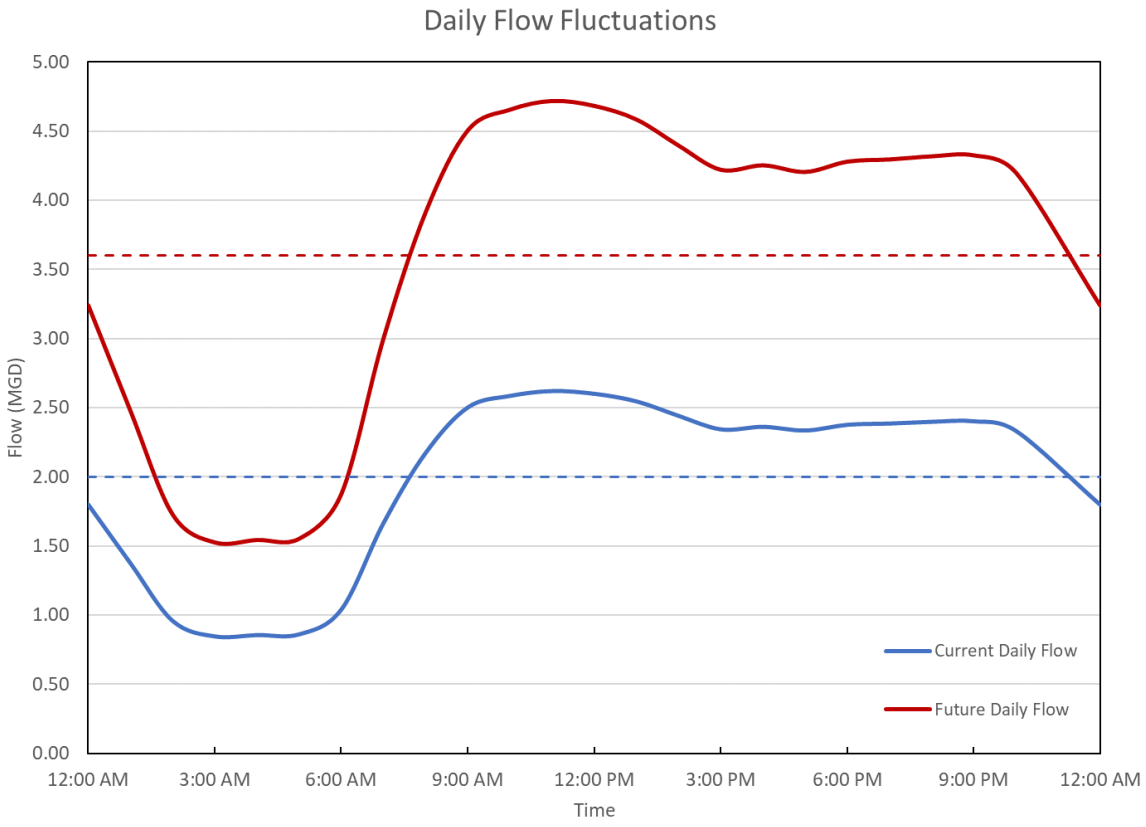


Figure 20. Daily flow fluctuation for existing (2.0 MGD) and future (3.6 MGD) flow conditions

The City operates nine evaporation/percolation ponds and one stormwater detention pond. The existing stormwater pond is recommended to be converted into a new EQ basin based on the size of the pond and the topography of the site. Based on the existing utility layout of the WWTP, the primary clarifier effluent will be directed to the new EQ basin. A liner such as concrete or high-density polyethylene (HDPE) is required to prevent percolation of untreated wastewater into the groundwater aquifer. The EQ basin will be able to hold approximately 3,500,000 gallons. A new pump station will need to be constructed to return flow to WWTP during low flow periods. The design criteria for the new EQ basin and pump station are shown in Table 19.

Table 19. Summary of design characteristics for EQ basin

Parameter	Unit	Value
EQ Basin		
Top Length	ft	360
Top Width	ft	151
Bottom Length	ft	282
Bottom Width	ft	73
Side Slopes	-	3:1
Height	ft	13
Volume	gal	3,500,000
Type of Liner	-	Concrete
Thickness	inches	8
EQ Basin Pump Station		
Number of Pumps	-	2+1
Flow/pump	MGD	1.8
Pump Power	HP	25

6.2. Primary Clarifier

The two existing primary clarifiers can accommodate an average flow of up to 3.6 MGD. Although this meets our requirement for the new wastewater treatment plant, the existing layout does not allow for peak daily flow or redundancy. Based on the layout of existing utilities and wastewater pipeline, it would be more cost effective and easier to build a third primary clarifier to handle the daily peak flowrate. The third primary clarifier will be 50 feet in diameter and sized for 2 MGD flow. The total capacity of the primary clarifiers including the proposed clarifier will be 5.6 MGD, sufficient to handle daily peak flow and wet weather flow. The primary clarifier effluent will be directed to the EQ basin using the existing piping. Design criteria and sizing of the existing and new primary clarifiers are summarized in Table 20.

Table 20. Summary of design characteristics for existing and new primary clarifiers

Parameter	Unit	Primary Clarifier 1 (West)	Primary Clarifier 2 (East)	Primary Clarifier 3 (New)
Design Flow Rate	MGD	1.6	2	2
Clarifier Diameter	ft	45	50	50
Clarifier Surface Area	ft^2	1,600	1,965	1.965
Sidewall Depth	ft	6.5	7	7
Volume Capacity	ft^3	10,330	13,750	13,750
Hydraulic Retention Time	hr	1.2(1)	1.2(1)	1.2(1)
Hydraulic Surface Loading Rate	gpm/ft^2	0.7(1)	0.7(1)	0.7(1)

Note: Referred to the report of "City of Banning Water Reclamation Plant Overview"
(1) WEF and ASCE, Design of Municipal Wastewater Treatment Plants (DMWTP), 1998

6.3. Tertiary Filter

A tertiary filter is required to meet the Title 22 turbidity requirements for recycled water. Based on the results of the preliminary screening of options, cloth media disk filters were used for sizing, layout, and costs. The disk filter tank is recommended to be installed at grade between the secondary clarifiers and chlorine contact tank. The system will tie into the existing secondary effluent pipeline and will be gravity fed to the disinfection system. A secondary effluent pump station is required upstream of the disk filters to accommodate the head loss associated with the filters and maintain gravity flow to the chlorine contact tank. Design criteria for the tertiary filters and secondary effluent pump station are shown in Table 21.

Table 21. Summary of design characteristics for tertiary filter components

Parameter	Unit	Value
Cloth Media Filters		
Number of Disks	-	6
Filter Area	ft^2	432
Flow	MGD	3.73
Tank Length	ft	15.5
Tank Width	ft	8
Tank Height	ft	10.5
Maximum Head loss	inch	12
Secondary Effluent Pump Station		
Number of Pumps	-	2+1
Flow/pump	MGD	1.8
Pump Power	HP	15

The State Water Resources Control Board has developed a list of Conditionally Accepted Alternative Filtration Technologies (CAAFT) that are suitable for Title 22 applications. These technologies have been recognized via thorough testing and continuous monitoring for Title 22 compliance. A current list of CAAFT as of the September 2014 "Alternative Treatment Technology Report for Recycled Water" is provided in Table 22. An alternative analysis of these equipment suppliers should be conducted to determine the cost-effective solution without sacrificing performance.

Table 22. List of CAAFT for filtration systems

Cloth Filters	Non-Granular Media Filters	Other Filters and Non-Polymeric Membrane Filters
1) Alfa Laval Ashbrook Simon-Hartley – Iso-Disc 2) Aqua-Aerobic System - MMK2-13 acrylic pile fabric 3) Aqua-Aerobic System – NF-102 needle felt fabric 4) Aqua-Aerobic System - PA-13 nylon pile fabric 5) Aqua-Aerobic System - PES-13 woven polyester fabric 6) Aqua-Aerobic System – PES-14 woven polyester fabric 7) Entex Technologies – FlowTex Disc Filter 8) Five Star Cloth – Cloth 1A-Yellow Jersey Knit Fabric 9) Five Star Cloth – Cloth 2A-Yellow Jersey Knit Fabric 10) I. Kruger - Hydrotech 11) Nordic Water - Nordic Water Disc Filter 12) Sanitaire a Xylem Brand – Drumfilter 13) Siemens Water Technologies – Forty X	1) Amiad - AMF Wastewater Filter 2) Nova Water Technologies - Nova Ultrascreen Filter® 3) Schreiber - Fuzzy Filter 4) Schreiber – Compressible Media Filter	1) Metawater – Ceramic Membrane

6.4. Chlorine Contact Tank

According to Title 22 regulations, systems that wish to use wastewater effluent for irrigation purposes must meet disinfection requirements. Title 22 requires 90 minutes of modal contact time at peak daily flowrate and CT of 450 mg-min/L at all times if chlorine is used for disinfection. An existing chlorine contact chamber is located onsite, but the use of a disinfectant was discontinued. The existing tank is sized for 2.4 MGD and 60 minutes of contact time. Due to the recommendation of the construction of an EQ basin, flows will stay constant at approximately 3.6 MGD throughout the day. Compliance with Title 22 disinfection requirements will require the

construction of a second, identical chlorine contact tank, which will achieve 90 minutes contact time at 3.6 MGD. Additionally, a cover or canopy over the contact tanks is recommended to prevent photo and thermal degradation of free chlorine.

Based on the results of the preliminary screening of options, free chlorine in the form of 12.5% sodium hypochlorite will be used for disinfection. There are two methods for sodium hypochlorite disinfection: bulk delivery and onsite generation. Bulk delivery is the cheapest capital cost option and is considered for the purposes of this evaluation. Onsite generation can be explored during detailed design and the system can be installed in the existing decommissioned chlorine gas storage room adjacent to the chlorine contact tank. The bulk delivery option will require two double walled sodium hypochlorite storage tanks installed to the east of the decommissioned chlorine storage building. Double walled storage tanks are the preferred tank option since secondary containment is already built into the tank. A concrete secondary containment area can also be installed to provide additional safety and containment of leaks from piping or fittings. The tanks are sized to handle approximately two weeks of sodium hypochlorite usage. Title 22 requires 5 mg/L of combined chlorine residual. The total chlorine dose will vary between wastewater treatment alternatives, but a maximum of two 1,500-gallon sodium hypochlorite storage tanks is required. Design criteria for the chlorine contact tanks and sodium hypochlorite storage tanks are shown in Table 23.

Table 23. Summary of design characteristics for chlorine contact tanks

Parameter	Unit	Value
Flow	MGD	3.6
Contact Time	minutes	90
Number of Tanks	-	2
Tank Length	ft	60
Tank Width	ft	20
Tank Height	ft	12
Tank Volume	gal	110,000
CT	mg-min/L	450
Disinfectant	-	Sodium Hypochlorite
Free Chlorine	%	12.5
Required Residual	mg/L	5
Number of Storage Tanks	-	2
Total Storage Tank Volume	gal	3,000

6.5. Sludge Treatment

Sludge generated at the WWTP is anaerobically digested. The existing digestion system includes two primary digesters and one secondary digester. All three digesters are 35' in diameter, the primary digesters have a side wall depth (SWD) of 26' and water surface elevation (WSEL) of 24' and the secondary digester SWD of 21' and WSEL of 19'. Currently, only the primary digesters are mixed, heated, and used for digestion, while the secondary digester is unmixed and unheated and is only used for sludge holding and some thickening. Assuming 20 days SRT and 4% solids concentration, the existing primary digesters can accommodate sludge generated from a wastewater flow of 2.3 MGD under the current trickling filter treatment system. A summary of the dimensions of the existing three digesters is shown in Table 24. A gravity sludge thickener is onsite, but is not operated based on past operating experience. Treated sludge is gravity fed to the facility's drying beds where it remains until approximately 85% of the moisture is removed. Dried sludge is then hauled off for beneficial reuse as a fertilizer and soil amendment.

Table 24. Existing anaerobic digesters dimensions and capacity

Parameter	Unit	East Primary	West Primary	Secondary
Diameter	ft	35	35	35
SWD	ft	26	26	21
WSEL	ft	24	24	19
Total Volume	ft^3	23,091	23,091	18,280
	gal	172,718	172,718	136,735
Design SRT	days	20	20	20
Design Sludge Flow Capacity	gal/day	8,636	8,636	6,837

To accommodate the increased average daily flow, the existing digesters will need to be reconfigured and potentially new digesters will need to be constructed. The existing secondary digester can be converted to a primary digester by adding recirculation pumps and heating elements to the system. This will provide a total capacity of 482,000-gallons and 24,000 gpd of wasted sludge if the three existing digesters are operated in parallel.

Additionally, it is recommended a new mechanical sludge thickener to be installed to improve the total solids content in the digester influent thus reducing the size requirements of the new digesters. A mechanical thickener such as a rotary screw thickener, shown in Figure 21, can receive sludge at approximately 0.4% solids and thicken it to 4 – 6% solids content. Mechanical thickeners are compact, can be totally enclosed, and require minimal operator attendance. For the purposes of this evaluation, a new mechanical thickener system will be installed adjacent to

the existing gravity thickener. Piping for the thickened sludge will tie into the existing and new digesters.



Figure 21. Mechanical sludge thickener (courtesy of Huber)

The size of the new digesters will differ for each wastewater treatment alternative based on the projected amounts of primary sludge and waste activated sludge (WAS). The design of the new digesters used an assumed SRT of 20 days and 26' tank SWD. By converting the existing secondary digester to a primary digester, only the trickling filter and MBBR treatment alternative will require a new digester to be constructed to accommodate the increased flow capacity. A summary of the sludge design parameters of all the treatment alternatives is provided in Table 25. Costs for sludge treatment for each treatment alternative is based on the new mechanical thickener, anaerobic digesters, and associated sludge piping and pumps from the secondary clarifiers.

Table 25. Summary of anaerobic digester design requirements

Parameter	Unit	TF	CAS	IFAS	MBBR	MBR
WAS	MGD	0.40	0.11	0.10	0.23	0.06
Solids Content	%	0.32%	0.85%	0.91%	0.45%	2.02%
Thickener Target	%	4%	4%	4%	4%	6%
Thickened Sludge Flow	MGD	0.0316	0.0233	0.0227	0.0256	0.0202
Existing Digesters Flow Capacity	MGD	0.0241	0.0241	0.0241	0.0241	0.0241
Additional Flow Capacity Required	MGD	0.0075	**None**	**None**	0.0015	**None**
Design SRT	days	20	-	-	20	-

Parameter	Unit	TF	CAS	IFAS	MBBR	MBR
New Digester Volume	gal	150,411	-	-	29,460	-
	ft^3	20,108	-	-	3,939	-
Selected WSEL Height	ft	24	-	-	18	-
Calculated Diameter	ft	32.66	-	-	16.69	-
Tank Diameter	**ft**	**33**	**-**	**-**	**17**	**-**
Tank Height (SWD)	**ft**	**26**	**-**	**-**	**20**	**-**

6.6. Lab and Control Building

After analyzing the condition and location of the current lab and control building, it was determined that the existing lab building needs to either be upgraded or demolished and built new. A new lab and control building would be constructed adjacent to the proposed aeration tanks. This update would provide a new state of the art equipment to help ensure successful and smooth system operations.

A new control room and lab will increase treatment plant reliability and safety. The building will supply adequate office, storage, and laboratory space. The control room workstation will be centralized to support plant supervision, functionality, and efficiency via supervisory control and data acquisition (SCADA). Further, operators' needs, such as easy access to the process, internal and external communication, and alarm response, will all be considered in designing the workstation layout. The workstation computers will be connected to servers, allowing for trending and archiving, memory backup, and signal processing.

7. WASTEWATER TREATMENT ALTERNATIVES

After the initial screening of secondary, tertiary filters, and disinfection treatment options, five biological treatment options were selected for further evaluation to treat an average daily flow of 3.6 MGD. To comply with the Board Order and Title 22 requirements, the biological processes were combined with all of the components discussed in Section 6 unless otherwise noted. BioWin modeling results for each alternative were completed to compare effluent water quality and to determine necessary unit processes. Detailed capital, O&M, and 20-year life cycle costs were developed for each alternative for comparison. Viable treatment alternatives included:

Alternative 1 - Increase Trickling Filter Recirculation Rate
Alternative 2 - Conventional Activated Sludge
Alternative 3 - Integrated Fixed-Film Activated Sludge
Alternative 4 - Moving Bed Biofilm Reactor
Alternative 5 - Membrane Bioreactor

7.1. Alternative 1 Increase Trickling Filter Recirculation Rate

The existing operation of the trickling filters does not allow for sufficient N/DN to occur. Each trickling filter is operated at a recirculation ratio of 100% under the current conditions (or 1.0 MGD recirculation rate per trickling filter). In order to reduce the TN concentration in the effluent, nitrate has to be denitrified after ammonia is nitrified to nitrate. In trickling filters, denitrification occurs during anoxic conditions which happen at the top of the filter. The BOD_5 and ammonia nitrogen in the influent consume oxygen and create anoxic conditions for denitrification. Aerobic conditions occur downward through the trickling filter, which allows for nitrification. By increasing the recirculation rate, higher denitrification rates can occur thus lowering the effluent TN.

In order to comply with the Board Order requirements, the trickling filter recirculation ratio must be increased to at least 350% (or 12.6 MGD) for the future design flow conditions. The existing diameter of the trickling filter influent pipe is 20”, which can just barely accommodate the proposed recirculation rate, but not flow beyond this level. A summary of the design characteristics for Alternative 1 is shown in Table 26.

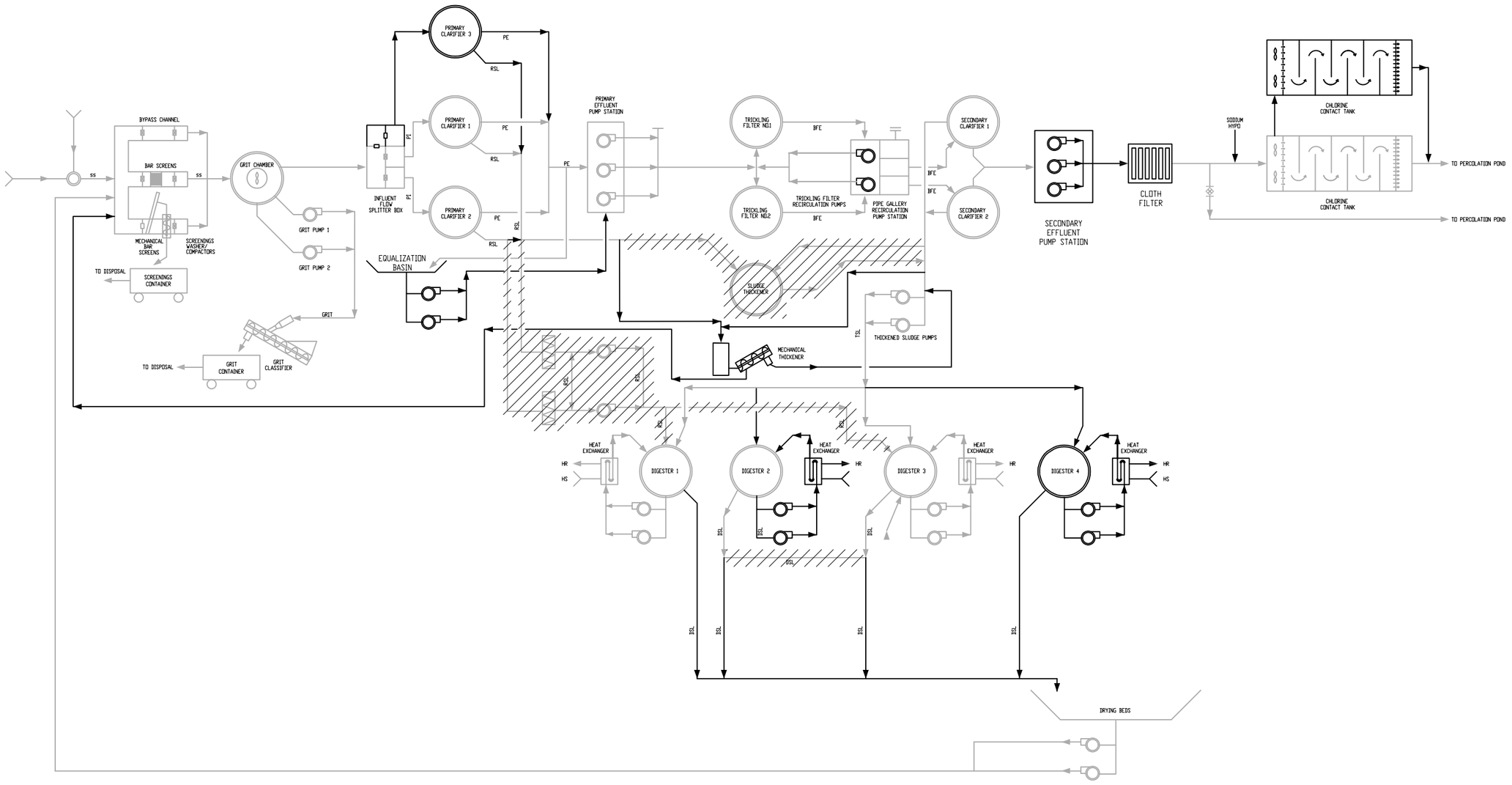
Table 26. Summary of design characteristics for Alternative 1

Parameter	Unit	Value
Design Flow Rate	MGD	3.6
Design Flow per TF	MGD	1.8
Design Temperature	°F	70
Filter Diameter	ft	110
Filter Surface Area	ft^2	9,500
Media Depth	ft	8
Media Volume	ft^3	76,000
Empty Bed Contact Time	hr	7.6
Maximum Flow Rate	MGD	West 6.48 / East 8.352
Nitrate Return Flow	%	350
Hydraulic Surface Loading Rate	gpm/ft^2	0.59
BOD_5 Surface Loading Rate	$lb/1000\ ft^2/day$	353
Volumetric BOD_5 Loading Rate	$lb/1000\ ft^3/day$	48.1
New Recirculation Pumps	-	2
Pump Power	HP	50

Based on BioWin modeling results, the expected secondary effluent for the constituents of concern is provided in Table 27. The operation of the trickling filter will comply with BOD_5 and TN effluent goals, but a tertiary filter will be required to comply with Title 22 turbidity requirements. Additionally, based on the capacity of the existing infrastructure, there is minimal process flexibility to maintain effluent TN treatment goals. A proposed process flow diagram and site layout to comply with the Board Order and Title 22 requirements are shown in Figure 22 and Figure 23, respectively.

Table 27. Secondary effluent water quality for Alternative 1

Parameter	Secondary Effluent Water Quality
BOD_5	24.74 mg/L
TSS	6.31 mg/L
TN	9.92 mg-N/L



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STATUS: DRAFT

CLIENT: CITY OF BANNING

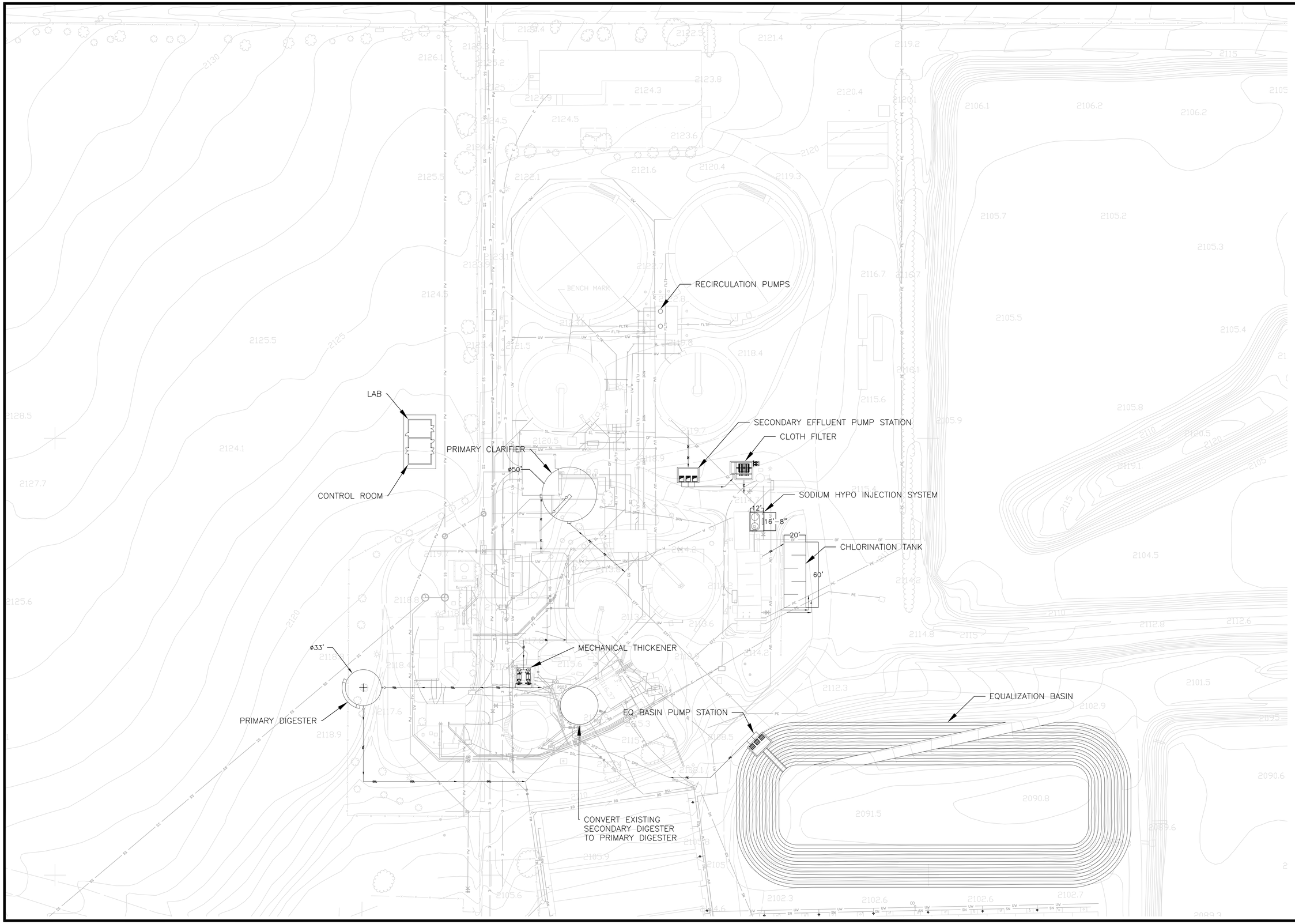
PROJECT LOCATION:
CITY OF BANNING WASTEWATER TREATMENT PLANT
2242 CHARLES STREET
BANNING, CA 92220

DESCRIPTION:
ALTERNATIVE 1 - INCREASE TRICKLING FILTER RECIRCULATION RATE

PROJECT NO.
029RC1-512809

SHEET:
G-101

FILE: W:\PROJECT\CITY OF BANNING\8. CONSTRUCTION DOCUMENT\GENERAL\TF-AERATION-MBR PFD\PFD - V4.DWG



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CLIENT: CITY OF BANNING

PROJECT LOCATION:
CITY OF BANNING WASTEWATER TREATMENT PLANT
2242 CHARLES STREET
BANNING, CA 92220

DESCRIPTION:
ALTERNATIVE 1 - INCREASE TRICKLING FILTER RECIRCULATION RATE

PROJECT NO.
029RC1-512809

SHEET:
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A summary of the capital, annual O&M, and 20-year life cycle costs for Alternative 1 is shown in Table 28. Annual O&M costs include pump power consumption, chemicals (NaOCl and polymers), and labor and maintenance of equipment.

Table 28. Capital, O&M, and life cycle cost summary for Alternative 1

Cost Component	Cost
Capital	
EQ Basin	$2,008,000
Primary Clarifier	$1,701,000
Tertiary Filter	$1,814,000
Chlorination Tank	$1,097,000
Sludge Treatment	$1,400,000
Lab and Control Building	$978,000
TF Modifications	$1,396,000
Total Capital Cost	**$10,394,000**
Annual O&M	
Power	$155,000
Chemical	$213,000
Maintenance and Spare Parts	$25,000
Total O&M Cost	**$393,000**
20-Year Life Cycle Cost	
$20,623,000	

7.2. Alternative 2 Conventional Activated Sludge

Conventional activated sludge is one of the most common biological nutrient removal systems in the United States. New bioreactors with anoxic and aerobic zones will need to be constructed for this system. The City owns the property immediately to the west of the WWTP where the proposed CAS system could be located. The existing trickling filters will be decommissioned, while the existing primary clarifiers and primary effluent pump station will remain in operation. The existing secondary clarifiers will not be suitable for the increased flow as the underflow drain is only 6” in diameter. The new RAS line needs to be at least 12” in diameter to handle the increased RAS flows. New rectangular clarifiers will need to be constructed north of the bioreactors to handle half (1.8 MGD) of the average daily flow. An external carbon source is not necessary for this option. A summary of the design characteristics for Alternative 2 is shown in Table 29. Modeled secondary effluent water quality is provided in Table 30. A tertiary filter is required to

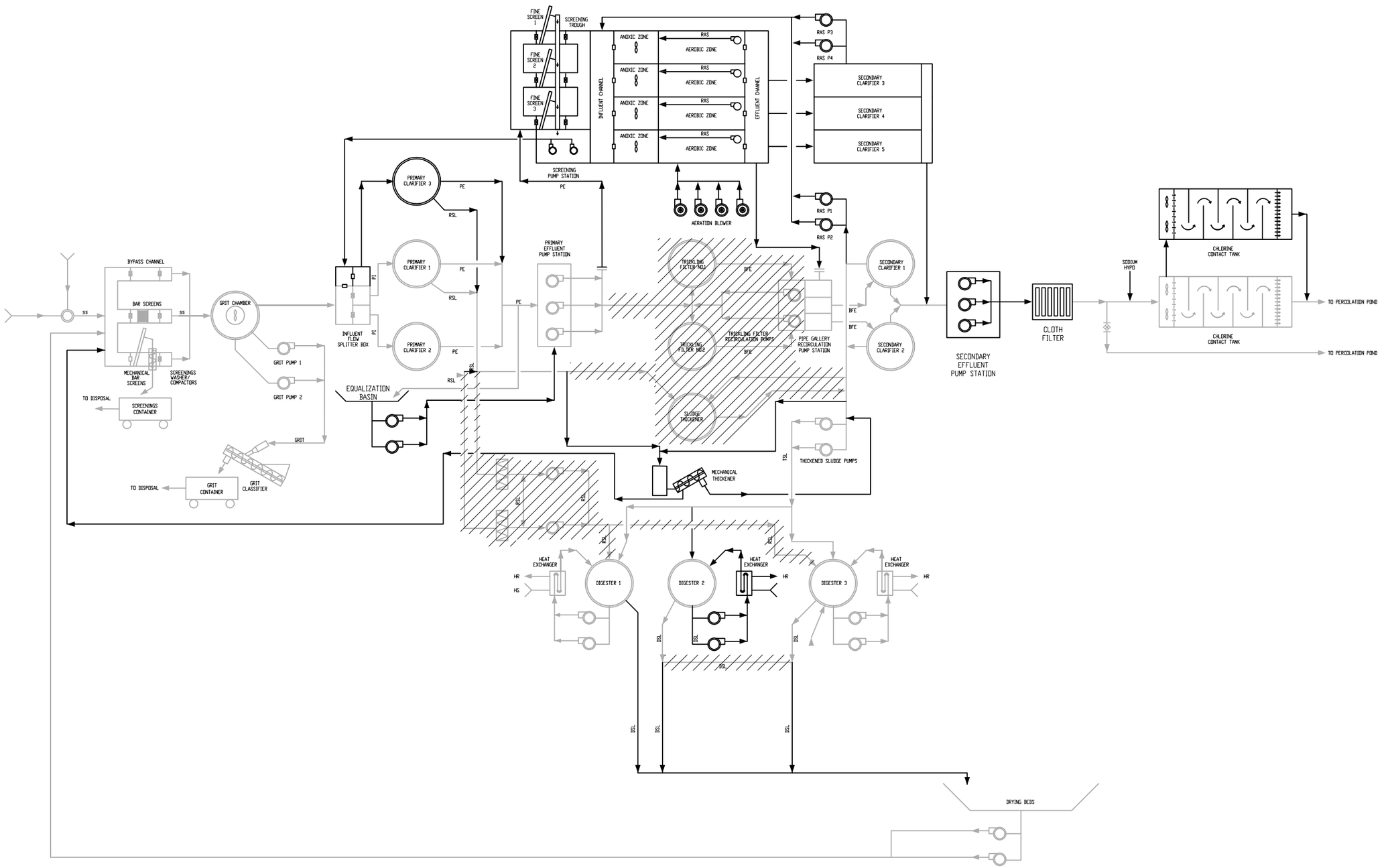
comply with Title 22 turbidity requirements. The proposed process flow diagram and site layout for Alternative 2 are shown in Figure 24 and Figure 25, respectively.

Table 29. Summary of design characteristics for Alternative 2

Parameter		Unit	Value
Design Flow Rate		MGD	3.6
Number of Tanks		-	4 (3 operating and 1 standby)
Flow per Tank		MGD	1.2
Design MLSS		mg/L	4,000
MLVSS:MLSS		%	70
Design System SRT		day	10
HRT	Anoxic	hr	3
	Aerobic	hr	6.5
	Total	hr	9.5
Tank Width	Anoxic	ft	27
	Aerobic	ft	27
Tank Length	Anoxic	ft	47
	Aerobic	ft	86
Tank Water Depth	Anoxic	ft	18
	Aerobic	ft	18
Tank Volume	Anoxic	gal	171,000
	Aerobic	gal	312,000
	Total	gal	483,000
Freeboard		ft	2
Volumetric BOD Loading Rate		lb/1000 ft^3/day	38.5
Volumetric TN Loading Rate		lb/1000 ft^3/day	6.6
F/M Ratio		day^{-1}	0.23
Return Activated Sludge Ratio		%	100
Internal Recycle Ratio		%	320

Table 30. Secondary effluent water quality for Alternative 2

Parameter	Secondary Effluent Water Quality
BOD_5	4.78 mg/L
TSS	10.96 mg/L
TN	7.49 mg-N/L



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2242 CHARLES STREET
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DESCRIPTION:
ALTERNATIVE 2 - CONVENTIONAL ACTIVATED SLUDGE

PROJECT NO.
029RC1-512809

SHEET:
G-102

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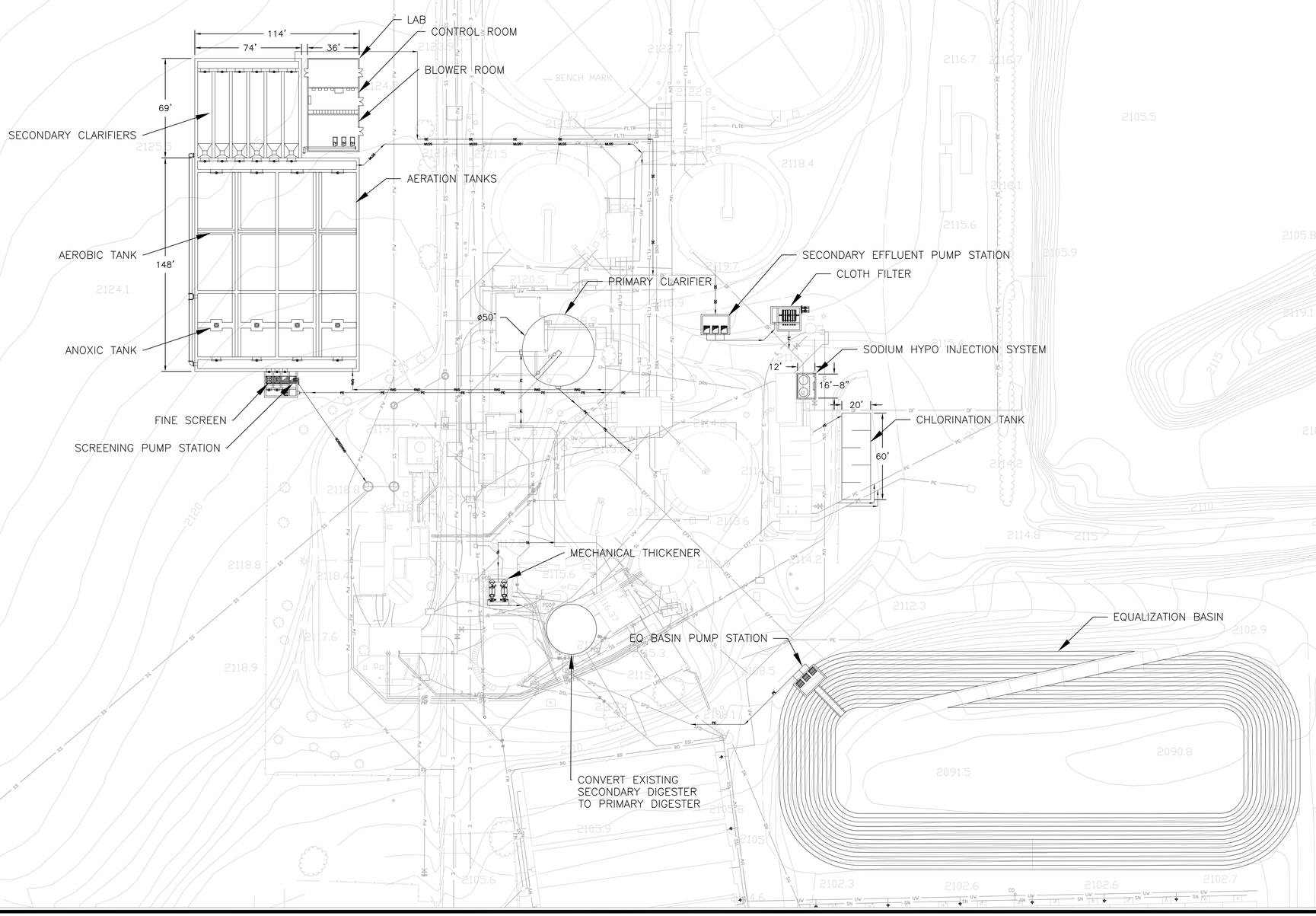

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2242 CHARLES STREET
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DESCRIPTION:
ALTERNATIVE 2 - CONVENTIONAL ACTIVATED SLUDGE

PROJECT NO.
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A summary of the capital, annual O&M, and 20-year life cycle costs for Alternative 2 is shown in Table 31. Annual O&M costs are based on power, chemical (NaOCl and polymer), and labor and maintenance.

Table 31. Capital, O&M, and life cycle cost summary for Alternative 2

Cost Component	Cost
Capital	
EQ Basin	$2,008,000
Primary Clarifier	$1,701,000
Tertiary Filter	$1,814,000
Chlorination Tank	$1,097,000
Sludge Treatment	-
Lab and Control Building	$978,000
Activated Sludge System	$22,501,000
Total Capital Cost	**$30,099,000**
Annual O&M	
Power	$302,000
Chemical	$182,000
Maintenance and Spare Parts	$48,000
Total O&M Cost	**$532,000**
20-Year Life Cycle Cost	
$43,941,000	

7.3. Alternative 3 Integrated Fixed-Film Activated Sludge

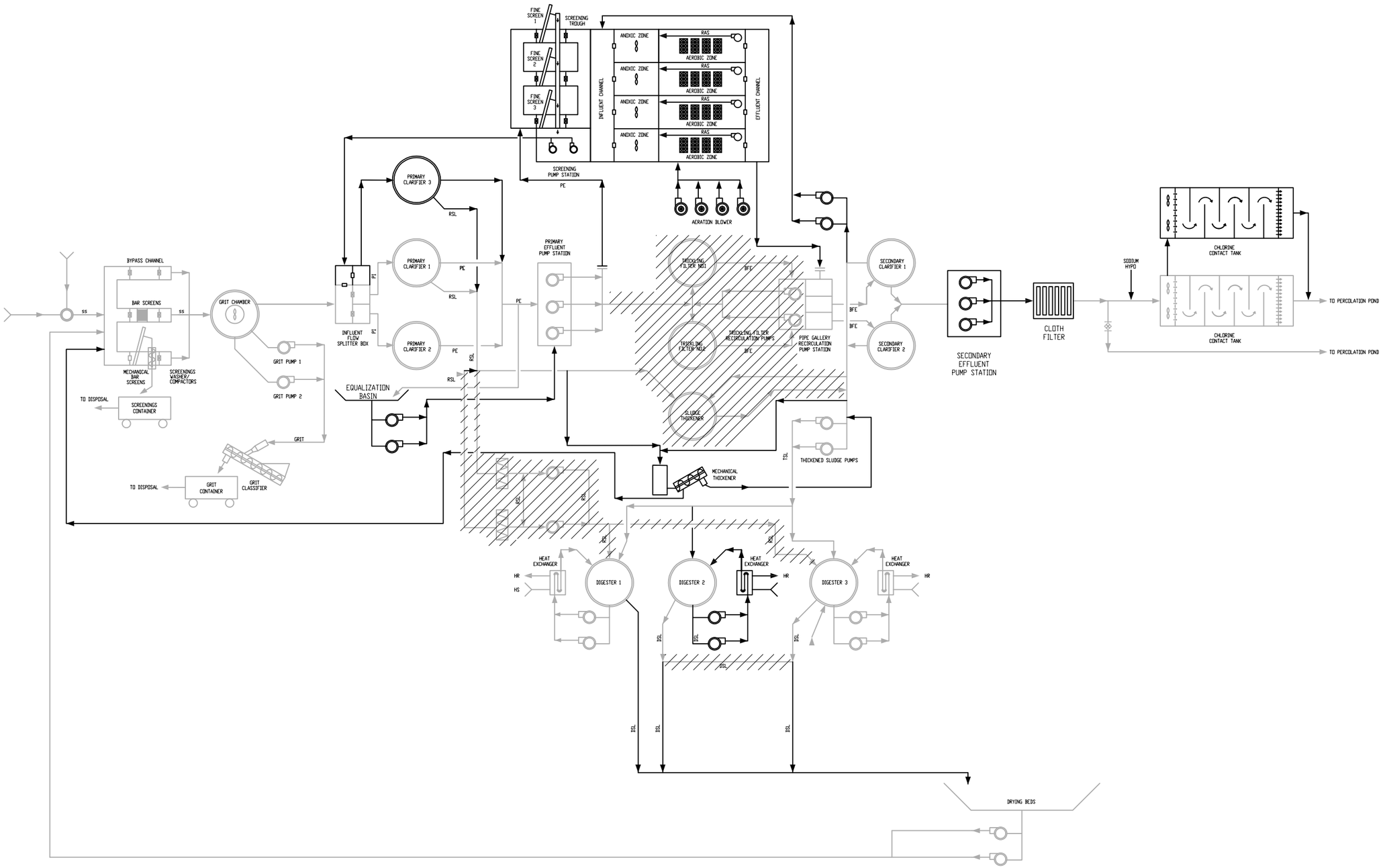
The IFAS system is nearly identical to Alternative 2, except the media is placed in the aerobic tank to allow for biofilm growth. The increased density of heterotrophs allows for increased treatment capacity in the same sized tank as the conventional activated sludge tank. Additionally, Alternative 3 has the same issue with the existing secondary clarifier RAS line, so new rectangular clarifiers will need to be constructed to the north of the secondary treatment tank. A summary of the design characteristics for Alternative 3 is shown in Table 32. Modeled secondary effluent water quality is provided in Table 33. A tertiary filter is required to comply with Title 22 turbidity requirements The proposed process flow diagram and site layout for Alternative 3 are shown in Figure 26 and Figure 27, respectively.

Table 32. Summary of design characteristics for Alternative 3

Parameter		Unit	Value
Design Flow Rate		MGD	3.6
Number of Tanks		-	4 (3 operating and 1 standby)
Flow per Tank		MGD	1.2
Design MLSS		mg/L	3,000
MLVSS:MLSS		%	70
Design System SRT		day	10
HRT	Anoxic	hr	3.5
	Aerobic	hr	5.5
	Total	hr	9
Tank Width	Anoxic	ft	26
	Aerobic	ft	26
Tank Length	Anoxic	ft	46
	Aerobic	ft	85
Tank Water Depth	Anoxic	ft	18
	Aerobic	ft	18
Tank Volume	Anoxic	gal	161,000
	Aerobic	gal	298,000
	Total	gal	459,000
Freeboard		ft	2
Volumetric BOD Loading Rate		lb/1000 ft^3/day	40.8
Volumetric TN Loading Rate		lb/1000 ft^3/day	7
BOD F/Mv Ratio		day^{-1}	0.18
Activated Sludge Return Ratio		%	60
Internal Recycle Ratio		%	320
Media Volume		%	30

Table 33. Secondary effluent water quality for Alternative 3

Parameter	Secondary Effluent Water Quality
BOD_5	4.58 mg/L
TSS	10.43 mg/L
TN	7.40 mg-N/L



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PROJECT LOCATION:
CITY OF BANNING WASTEWATER TREATMENT PLANT
2242 CHARLES STREET
BANNING, CA 92220

DESCRIPTION:
ALTERNATIVE 3 - INTEGRATED FIXED-FILM ACTIVATED SLUDGE

PROJECT NO.
029RC1-512809

SHEET:
G-103

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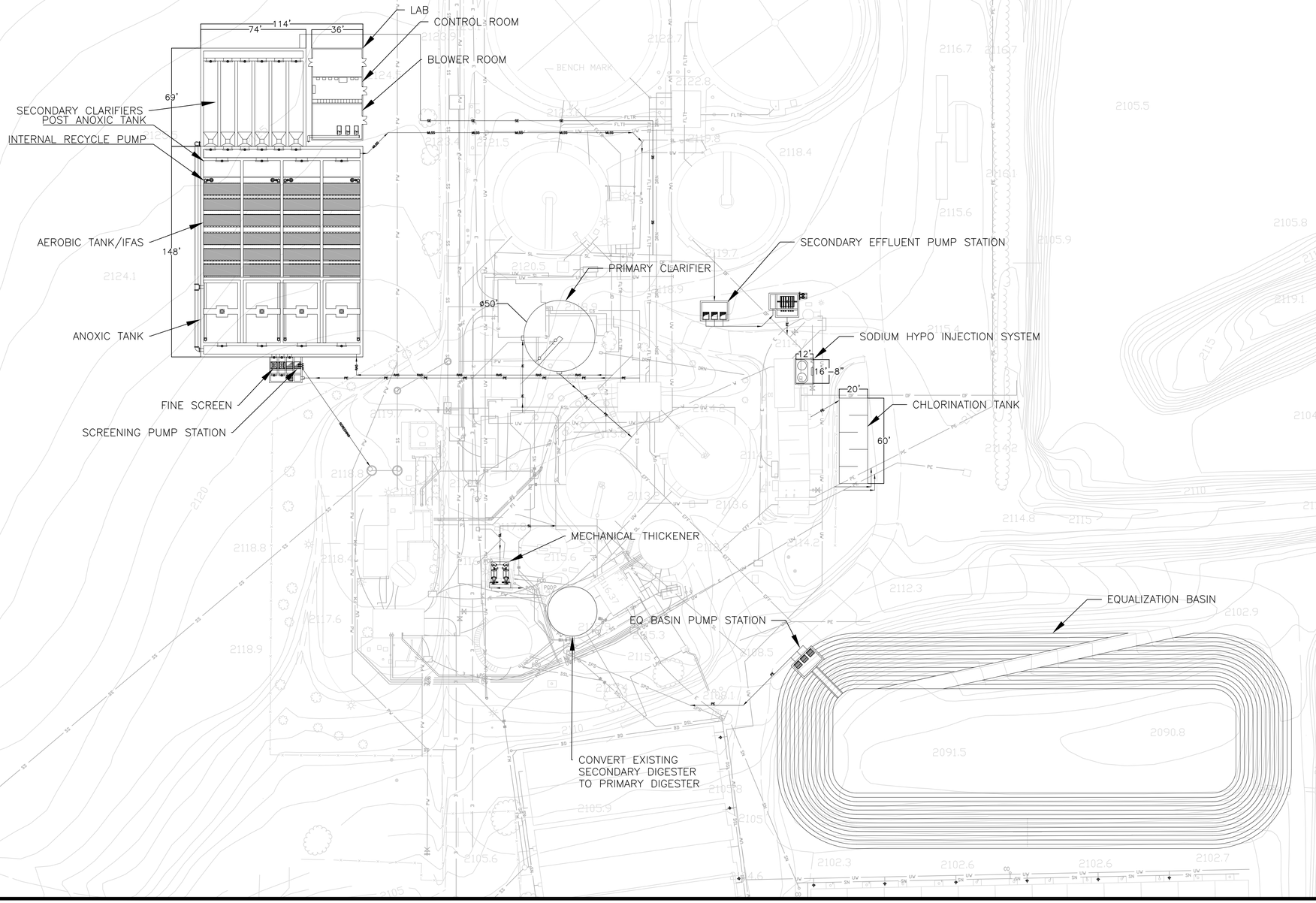

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PROJECT LOCATION:
CITY OF BANNING WASTEWATER TREATMENT PLANT
2242 CHARLES STREET
BANNING, CA 92220

DESCRIPTION:
ALTERNATIVE 3 - IFAS

PROJECT NO.
029RC1-512809

SHEET:
C-103

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A summary of the capital, annual O&M, and 20-year life cycle costs for Alternative 3 is shown in Table 34. Annual O&M costs are based on power, chemical (NaOCl and polymer), and labor and maintenance.

Table 34. Capital, O&M, and life cycle cost summary for Alternative 3

Cost Component	Cost
Capital	
EQ Basin	$2,008,000
Primary Clarifier	$1,701,000
Tertiary Filter	$1,814,000
Chlorination Tank	$1,097,000
Sludge Treatment	-
Lab and Control Building	$978,000
IFAS	$25,735,000
Total Capital Cost	**$33,333,000**
Annual O&M	
Power	$309,000
Chemical	$181,000
Maintenance and Spare Parts	$141,000
Total O&M Cost	**$631,000**
20-Year Life Cycle Cost	
$49,704,000	

7.4. Alternative 4 Moving Bed Biofilm Reactor

The MBBR system is similar to the IFAS option, but the process configuration is slightly different. Plastic biocarriers are suspended in the aerobic and anoxic tanks to allow for microorganism growth. The primary effluent enters a common influent channel where flow is evenly distributed into the four tanks. The first tank is aerobic where heterotrophs are predominant and organic removal primarily occurs. The next tank is also aerobic but the conditions are enhanced for the growth of nitrifiers for ammonia removal. From here, wastewater enters the anoxic tank where denitrification occurs. With this process configuration, an external carbon source such as methanol or glycerol is added to promote denitrification. Alternatively, the City can reverse this process by having an anoxic tank upstream of the aeration tanks and utilize an internal recycle to maintain the carbon requirements for denitrification. This would decrease chemical costs, but increase power cost due to additional pumping requirements. A final, small polishing reaeration step is included to re-add oxygen back into the wastewater for the purpose of downstream

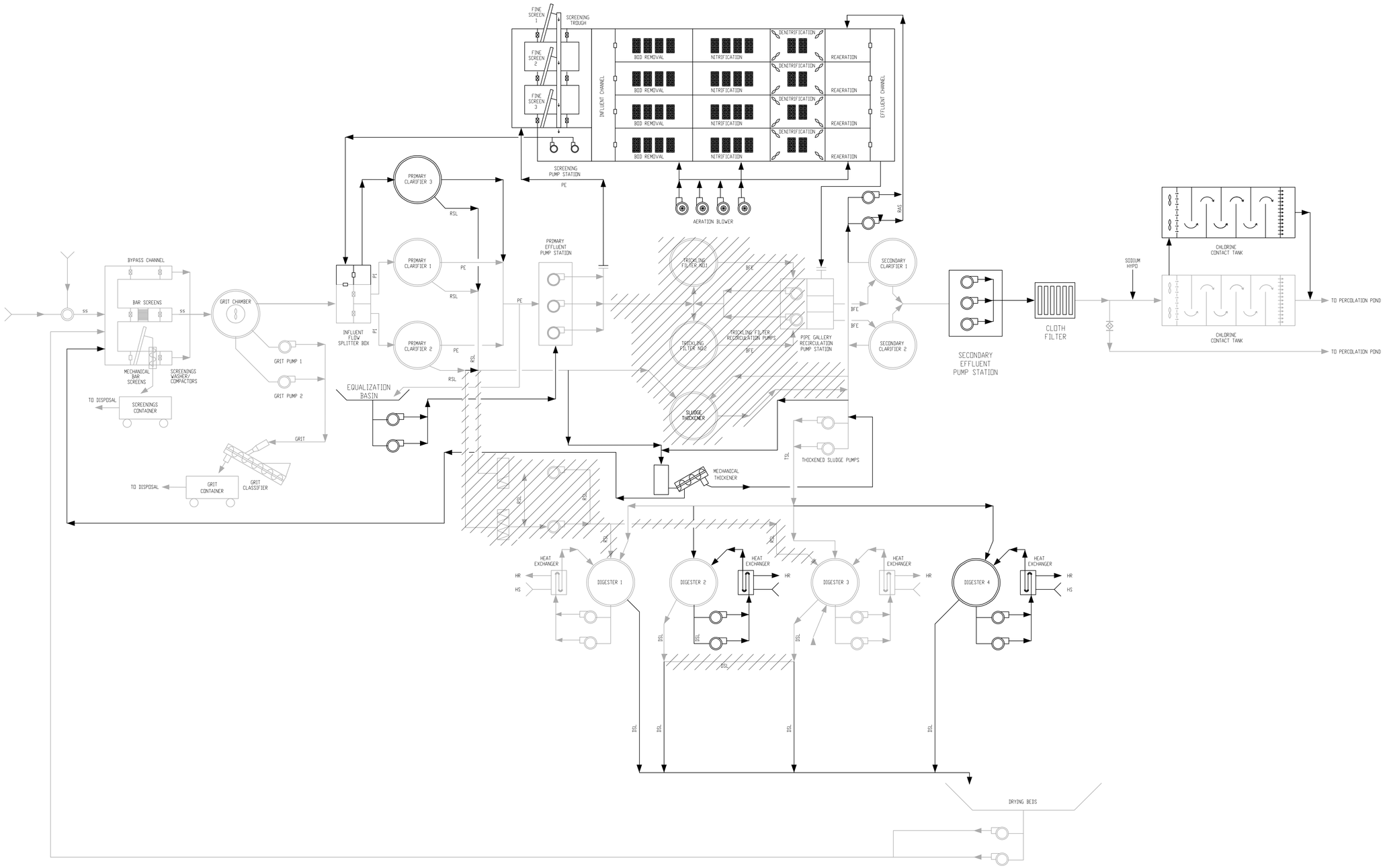
processes that require oxygen in the system. The secondary effluent is conveyed to the existing secondary clarifiers where a small portion of the sludge is returned to the reaeration tanks. The reactors will be equipped with media retention screens to keep the media elements from leaving the MBBR basins. A summary of the design characteristics for Alternative 4 is shown in Table 35. Modeled secondary effluent water quality is provided in Table 36. A tertiary filter is required to comply with Title 22 turbidity requirements. The proposed process flow diagram and site layout for Alternative 4 are shown in Figure 28 and Figure 29, respectively.

Table 35. Summary of design characteristics for Alternative 4

Parameter	Unit	BOD Removal	Nitrification	Denitrification	Reaeration
Media Volume	ft^3	11,886	12,713	2,966	-
Media Filling Fraction	%	42.4	45.4	20	-
Number of Trains	-	4	4	4	4
Tank Width	ft	25.75	25.75	25.75	25.75
Tank Length	ft	17	17	9	6
Tank Water Depth	ft	16	16	16	16
Total Volume	gal	209,560	209,560	110,943	73,962
Total HRT	hr	1.40	1.40	0.74	0.49
External Carbon Requirements	kg/d	-	-	1,450	-
RAS Recycle Rate	gpm	-	-	-	250

Table 36. Secondary effluent water quality for Alternative 4

Parameter	Secondary Effluent Water Quality
BOD_5	4.34 mg/L
TSS	6.64 mg/L
TN	8.00 mg-N/L



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PROJECT LOCATION: CITY OF BANNING WASTEWATER TREATMENT PLANT
2242 CHARLES STREET
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DESCRIPTION: ALTERNATIVE 4 - MOVING BED BIOFILM REACTOR

PROJECT NO. 029RC1-512809

SHEET: G-104

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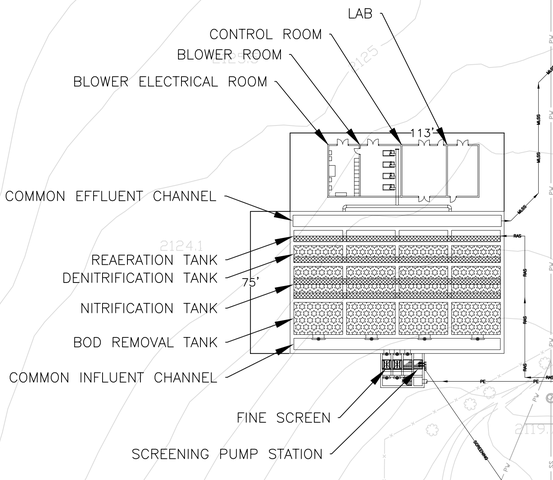

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PROJECT LOCATION:
CITY OF BANNING WASTEWATER TREATMENT PLANT
2242 CHARLES STREET
BANNING, CA 92220

DESCRIPTION:
ALTERNATIVE 4 - MBBR

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A summary of the capital, annual O&M, and 20-year life cycle costs for Alternative 4 is shown in Table 37. Annual O&M costs are based on power, chemical (NaOCl, methanol, and polymer), and labor and maintenance.

Table 37. Capital, O&M, and life cycle cost summary for Alternative 4

Cost Component	Cost
Capital	
EQ Basin	$2,008,000
Primary Clarifier	$1,701,000
Tertiary Filter	$1,814,000
Chlorination Tank	$1,097,000
Sludge Treatment	$1,203,000
Lab and Control Building	$978,000
MBBR	$14,516,000
Total Capital Cost	**$23,317,000**
Annual O&M	
Power	$310,000
Chemical	$353,000
Maintenance and Spare Parts	$74,000
Total O&M Cost	**$737,000**
20-Year Life Cycle Cost	
$42,395,000	

7.5. Alternative 5 Membrane Bioreactor

The MBR system combines conventional biological nutrient removal with the use of membranes for the separation of solids and treated effluent. The MBR process train is similar to Alternative 2 except that membranes replace the secondary clarifiers and tertiary filters. The design MLSS of the MBR system is much higher than Alternatives 2 – 4, which allows for greater treatment capacity per unit volume of the aeration basin. The EQ basin is an important upstream unit to create a steady flow, providing a relatively steady flux for membrane operation. One design note is that the high recycle from the membrane aeration zone impacts the denitrification ability and the carbon demand. Consequently, a tank will be provided to allow the DO to decrease by endogenous respiration before the recycle stream is returned to the anoxic zone.

Membrane fouling is controlled by several methods of cleaning which includes the chemical clean in place (CIP) system, relaxation, and air scouring. Chemical CIP cleaning is also referred to as

maintenance cleaning used to address irreversible fouling. This type of cleaning usually occurs at least 10 times a year and is completely automated; however, it can also be manually operated as needed. The membrane units are cleaned in place quickly by injecting a dilute solution of bleach into the permeate line which remains in the membranes for 1 to 3 hours and then the normal operation is resumed. During the cleaning of one basin, the other basins are left online and operated at a slightly higher flux rate as required to meet plant demand. Although this type of cleaning is efficient, the addition of chemicals will degrade any membrane material over time. Therefore, replacement of the membranes will be required.

There are two types of membranes available for wastewater applications: hollow fiber and flat sheet. Hollow fiber membranes are constructed of a microporous structure and are densely packed into tubes to create the membrane module. These tightly packed modules allow for high membrane surface areas and high outside pressure tolerance. Typically, flow is applied to the outside of the membranes and permeate is removed via the inner tube of the module. However, some manufacturers offer the opposite (in-out) flow pattern. The typical vacuum pressure applied to the hollow fiber membranes is around 10 pounds per square inch (psi). Flat sheet membranes are constructed of a paper like backing material with a membrane cast on the surface of the paper. These plates are submerged into the membrane tank, and permeate pass through the membrane from the outside in. The membranes allow the biofilm to attach and are continuously aerated to prevent solids buildup. A comparison of the predominant MBR equipment suppliers is provided in Table 38.

Table 38. MBR equipment supplier specification comparison

Parameter	Evoqua Memcor	Suez ZeeWeed	Ovivo Microdyn	Anaergia Fibracast	Schwing Econity
Type	Hollow Fiber	Hollow Fiber	Flat Sheet	Hollow Fiber	Hollow Fiber
Pore Size	0.04 µm	0.04 µm	0.04 µm	0.04 µm	0.1 µm
Membrane Surface Area of Smallest Replaceable Unit	405 ft^2	370 ft^2	43 ft^2	400 ft^2	226 ft^2

Parameter	Evoqua Memcor	Suez ZeeWeed	Ovivo Microdyn	Anaergia Fibracast	Schwing Econity
Membrane Area per Plan Area	400 ft^2/ft^2	320 ft^2/ft^2	200 ft^2/ft^2	685 ft^2/ft^2	166 ft^2/ft^2
Flow per Plan Area	6,000 gpd/ft^2	4,800 gpd/ft^2	3,000 gpd/ft^2	10,300 gpd/ft^2	3,000 gpd/ft^2
Membrane Material	PVDF	PVDF	Polyether Sulfone	PVDF	PVDF
Average Flux	15 gfd	15 gfd	15 gfd	15 gfd	20 gfd
Vacuum	< 7.3 psi	< 11.9 psi	< 3.0 psi	< 10 psi	< 11.7 psi

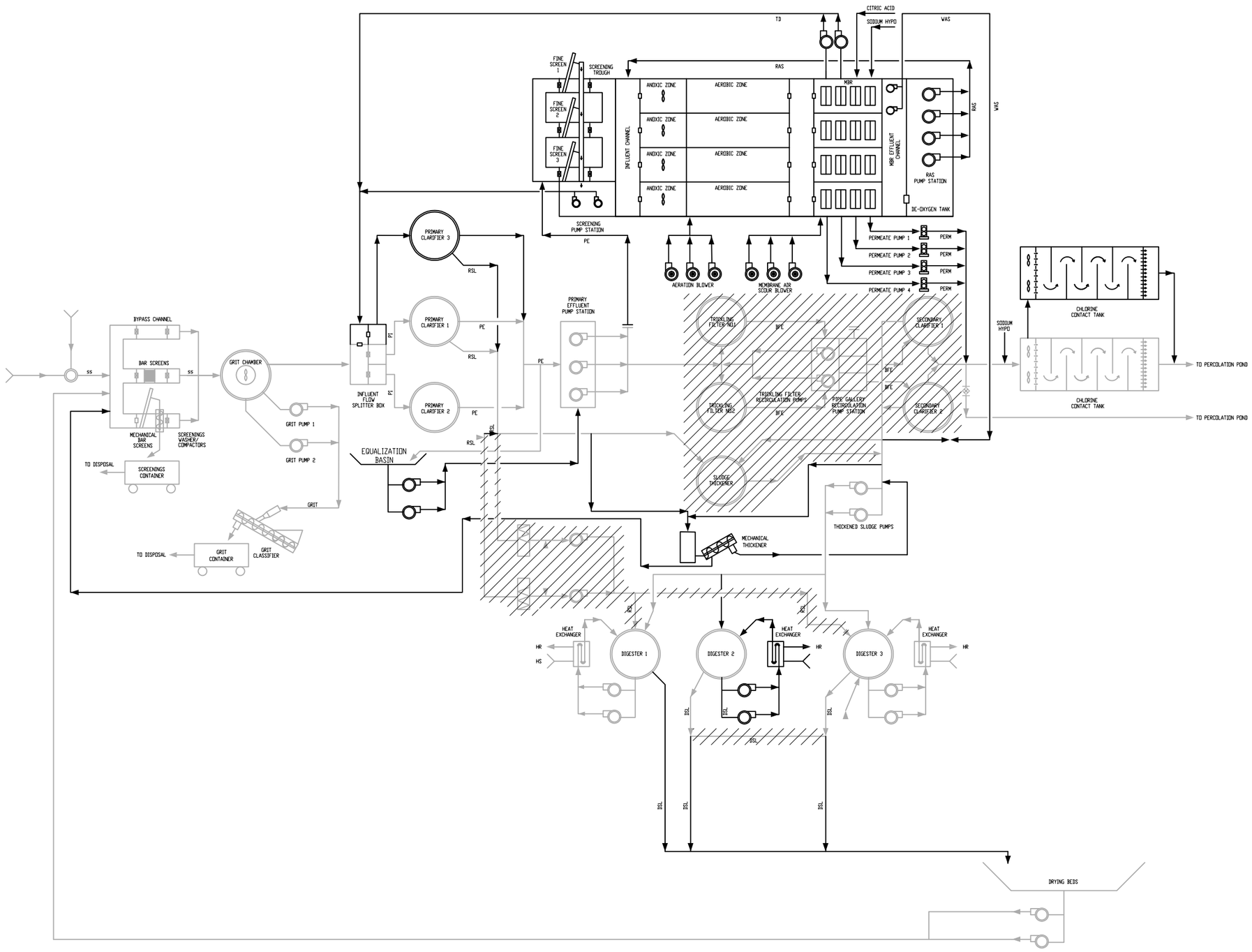
A summary of the design characteristics for Alternative 5 is shown in Table 39. Modeled secondary effluent water quality is provided in Table 40. The proposed process flow diagram and site layout for Alternative 5 are shown in Figure 30 and Figure 31, respectively.

Table 39. Summary of design characteristics for Alternative 5

Parameter		Unit	Value
Design Flow Rate		MGD	3.6
Number of Tanks		-	4 (3 operating and 1 standby)
Flow per Tank		MGD	1.2
Design MLSS		mg/L	7,000
MLVSS:MLSS		%	70
Design System SRT		day	20
HRT	Anoxic	hr	3.5
	Aerobic	hr	5
	Total	hr	8.5
Tank Width	Anoxic	ft	26
	Aerobic	ft	26
Tank Length	Anoxic	ft	44
	Aerobic	ft	82
Tank Water Depth	Anoxic	ft	18
	Aerobic	ft	18
Tank Volume	Anoxic	gal	154,000
	Aerobic	gal	287,000
	Total	gal	441,000
Freeboard		ft	2
Volumetric BOD Loading Rate		lb/1000 ft^3/day	42.6
Volumetric TN Loading Rate		lb/1000 ft^3/day	7.4
BOD F/M Ratio		day^{-1}	0.15
Internal Recycle		%	400
Specific Design Flux		gallons/ft^2-d	10.5
Recovery Rate		%	92

Table 40. Secondary effluent water quality for Alternative 5

Parameter	Secondary Effluent Water Quality
BOD_5	0.86 mg/L
TSS	0.00 mg/L
TN	7.74 mg-N/L



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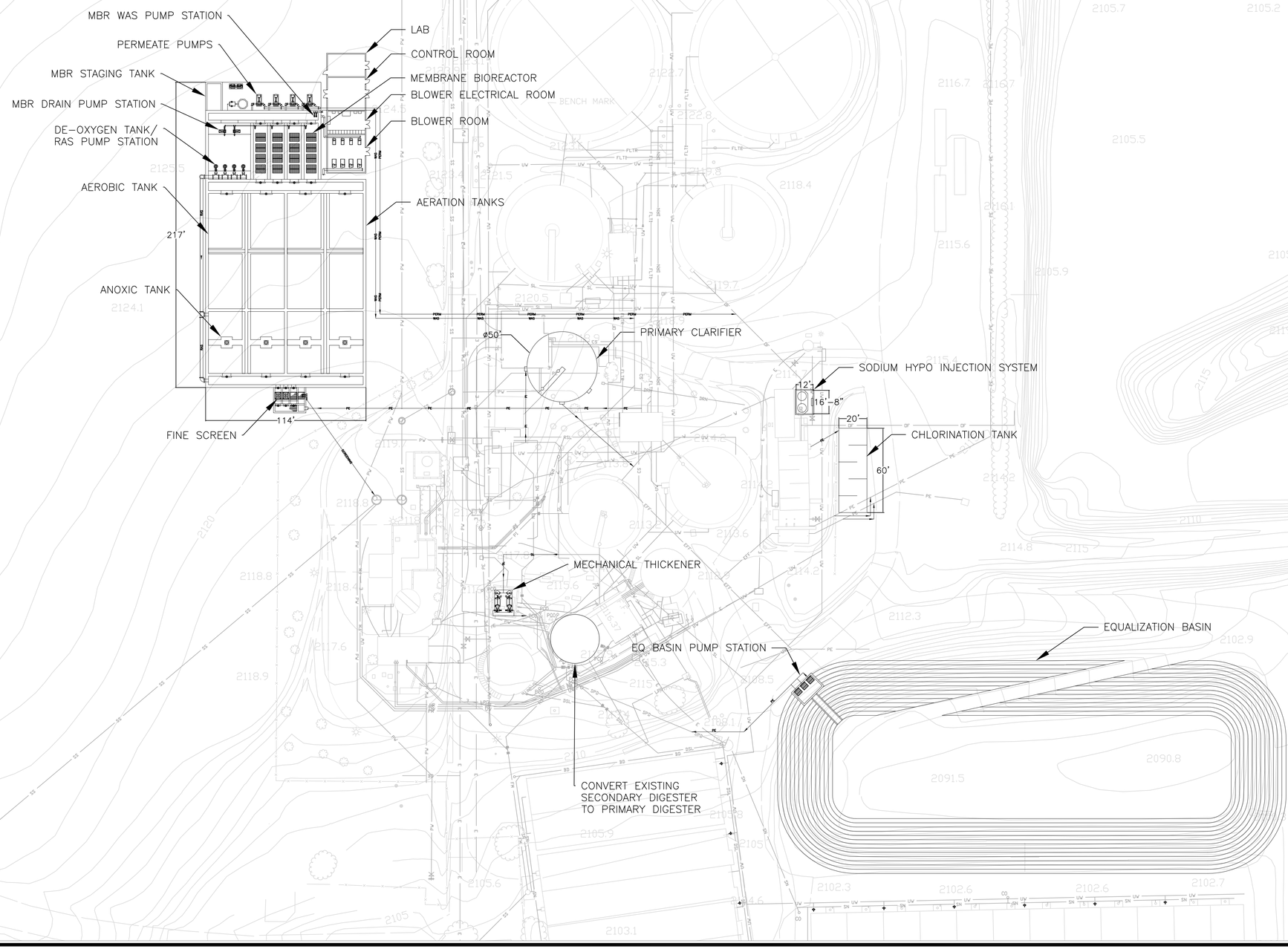
PROJECT LOCATION: CITY OF BANNING WASTEWATER TREATMENT PLANT
2242 CHARLES STREET
BANNING, CA 92220

DESCRIPTION: ALTERNATIVE 5 - MEMBRANE BIOREACTOR

PROJECT NO. 029RC1-512809

SHEET: G-105



MONTROSE ENVIRONMENTAL

MONTROSE ENVIRONMENTAL GROUP
1 PARK PLAZA #1000
IRVINE, CA 92614
WWW.MONTROSE-ENV.COM

REV.	DATE	DESCRIPTION

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

PLOT DATE: 2/27/2020 3:17 PM

STATUS: DRAFT

CLIENT: CITY OF BANNING

PROJECT LOCATION:
CITY OF BANNING WASTEWATER TREATMENT PLANT
2242 CHARLES STREET
BANNING, CA 92220

DESCRIPTION:
ALTERNATIVE 5 - MBR

PROJECT NO.
029RC1-512809

SHEET:
C-105

FILE: W:\PROJECT\CITY OF BANNING\6. PROJECT ENGINEERING AND DESIGN\06.01_PRELIMINARY DESIGN\DESIGN DRAWINGS\TEALAYOUT-V2\ALTERNATIVE 5 – MBR 20200227.DWG

A summary of the capital, annual O&M, and 20-year life cycle costs for Alternative 5 is shown in Table 41. Annual O&M costs are based on power, chemical, and labor and maintenance. Chemical costs include NaOCl, polymer, citric acid, sodium bisulfite, and sodium hydroxide. Costs are based on the hollow fiber membrane type.

Table 41. Capital, O&M, and life cycle cost summary for Alternative 5

Cost Component	Cost
Capital	
EQ Basin	$2,008,000
Primary Clarifier	$1,701,000
Chlorination Tank	$1,097,000
Sludge Treatment	-
Lab and Control Building	$978,000
MBR	$28,415,000
Total Capital Cost	**$34,199,000**
Annual O&M	
Power	$527,000
Chemical	$221,000
Maintenance and Spare Parts	$138,000
Total O&M Cost	**$878,000**
20-Year Life Cycle Cost	
$67,206,000	

8. COMPARISON OF WASTEWATER TREATMENT ALTERNATIVES

A comprehensive summary of the capital, annual O&M, and 20-year life cycle costs for the wastewater treatment alternatives developed for the City of Banning is shown in Table 42. The 20-year life cycle cost shows that Alternative 1 is the least expensive alternative. This alternative is essentially the baseline scenario to comply with Board Order and Title 22 requirements at 3.6 MGD, and utilizes the existing treatment process as much as possible. However, this alternative provides the least flexibility regarding expected effluent water quality, particularly for BOD_5 and TN. If future discharge permit limits become more stringent, or other constituents, such as phosphorus, become regulated, upgrades to Alternative 1 would be challenging and costly.

Table 42. Cost comparison summary for the treatment alternatives

Treatment Alternative	Capital	Annual O&M	20-Year Life Cycle
Alternative 1 Trickling Filter	$10,394,000	$393,000	$20,623,000
Alternative 2 Activated Sludge	$30,099,000	$532,000	$43,941,000
Alternative 3 IFAS	$33,333,000	$631,000	$49,704,000
Alternative 4 MBBR	$23,317,000	$737,000	$42,395,000
Alternative 5 MBR	$34,199,000	$878,000	$67,206,000

The cost comparison summary identifies three groupings of the treatment alternatives. Alternative 1 is significantly the cheapest all-around option and is in its own grouping. Life cycle costs for alternatives 2 – 4 are within $7,000,000 of one another and utilize the same treatment process with slightly varied components that alter the overall process operation. As expected, Alternative 5 is the most expensive alternative since the MBR system produces the highest effluent water quality. Out of the second grouping, Alternative 4 provides the lowest capital and life cycle cost option due to the reduction in required tank size as compared to conventional activated sludge. The capital cost for Alternatives 2, 3, and 5 are relatively close to one another, but the annual O&M costs dictate which alternatives become more costly over a 20-year life cycle. In order to compare these groupings, a summary of the expected secondary effluent water quality is provided in Table 43. The concentrations presented do not reflect tertiary filter effluent to show the comparison between biological treatment systems.

Table 43. Secondary effluent water quality comparison for the treatment alternatives

Parameter	Secondary Treatment Effluent Concentration (mg/L)				
	Alternative 1 Trickling Filter	Alternative 2 Activated Sludge	Alternative 3 IFAS	Alternative 4 MBBR	Alternative 5 MBR
BOD_5	24.74	4.78	4.58	4.34	0.86
TSS	6.31	10.96	10.43	6.64	0
TN	9.92	7.49	7.40	8.00	7.74

All of the Alternatives comply with the Board Order requirements with respect to nitrogen. Alternatives 2 – 5 produce better water quality than Alternative 1, can meet possible more stringent discharge limits, and have better flexibility to stay in compliance if treatment efficiency degrades. Alternatives 2 – 4 produce very similar water quality in regards to BOD_5 and TN, but Alternative 4 has the lowest expected effluent TSS which will enhance the performance of tertiary filters. Alternative 5 produces the best all-around effluent water quality, and an additional tertiary filter is not required to comply with Title 22 requirements unlike Alternatives 1 – 4.

A breakdown of the required WWTP upgrades for each alternative is provided in Table 44. The EQ basin, primary clarifier, chlorination tank, and lab and control building costs are the same among the treatment alternatives. The tertiary filter cost is the same for Alternatives 1 – 4, and no tertiary filter is required for Alternative 5. The cost of the sludge treatment upgrades varies among all treatment alternatives. Alternatives 2, 3, and 5 do not require any additional anaerobic digesters while Alternatives 1 and 4 will require a new anaerobic digester as discussed in Section 6.5. Although Alternatives 2, 3, and 5 do not show any costs associated with sludge treatment, modifications to existing digester operation will need to be made and a new sludge thickener will be required.

Table 44. Unit operation cost comparison for the treatment alternatives

Unit	Alternative 1 Trickling Filter	Alternative 2 Activated Sludge	Alternative 3 IFAS	Alternative 4 MBBR	Alternative 5 MBR
EQ Basin	$2,008,000	$2,008,000	$2,008,000	$2,008,000	$2,008,000
Primary Clarifier	$1,701,000	$1,701,000	$1,701,000	$1,701,000	$1,701,000
Tertiary Filter	$1,814,000	$1,814,000	$1,814,000	$1,814,000	-
Chlorination Tank	$1,097,000	$1,097,000	$1,097,000	$1,097,000	$1,097,000
Sludge Treatment	$1,400,000	-	-	$1,203,000	-

Unit	Alternative 1 Trickling Filter	Alternative 2 Activated Sludge	Alternative 3 IFAS	Alternative 4 MBBR	Alternative 5 MBR
Lab Building	$978,000	$978,000	$978,000	$978,000	$978,000
TF Modifications	$1,396,000	-	-	-	-
Activated Sludge	-	$22,501,000	-	-	-
IFAS	-	-	$25,735,000	-	-
MBBR	-	-	-	$14,516,000	-
MBR	-	-	-	-	$28,415,000
Total	**$10,394,000**	**$30,099,000**	**$33,333,000**	**$23,317,000**	**$34,199,000**

All of the proposed treatment alternatives are designed to meet the Board Order proposed limit of 10 mg/L TN. However, the total construction costs per tons of nitrogen removed varies between each option, and will give the City data to determine what is the most cost-effective alternative for nitrogen removal. Table 45 shows the comparison of total project construction cost and total cost of the biological system only per ton of nitrogen removed per year. Since the infrastructure of Alternative 1 is already in place, the $/tons/year is significantly less than Alternatives 2 – 5. However, based on the total cost per ton of nitrogen removal, Alternative 4 offers the best value to comply with the Board Order and to produce recycled water.

Table 45. Comparison of total cost per ton of nitrogen removed

Alternative	Mass TN Removed	Total Cost per Nitrogen Removed	Biological Process Cost per Nitrogen Removed
	tons/year	$/tons/yr	$/tons/yr
Alternative 1 Trickling Filter	192	$54,118	$7,268
Alternative 2 Activated Sludge	205	$146,562	$109,565
Alternative 3 IFAS	206	$161,921	$125,012
Alternative 4 MBBR	203	$115,103	$71,657
Alternative 5 MBR	204	$167,643	$139,290

9. SUMMARY OF ANALYSIS

On February 12, 2019, City and Montrose staff presented the preliminary results of the nitrogen removal evaluation to the City Council. A summary of the key points drawn from the nitrogen removal alternatives analysis, City staff input, and City Council input is provided below.

- Any decision to implement the selected treatment alternative must take into consideration not only costs, but also the following:
    1. When will the City actually see an average flow of 3.6 MGD? Based on the 2018 City Integrated Master Plan, the average daily flow is forecasted to be 2.80 MGD in 2025 and 4.29 MGD by 2040. Based on these projections, 3.6 MGD would not happen until 2032.
    2. When will the Regional Water Quality Control Board require the City WWTP to comply with the total nitrogen limit?
    3. When does the City plan to start using recycled water for irrigation or recharge purposes? The Beaumont Basin has a 330 mg/L TDS and 5 mg/L nitrate limit in the groundwater. To achieve the 330 mg/L TDS limit, WWTP effluent may require treatment by reverse osmosis.
    4. Would the City ever consider direct potable reuse for water supply augmentation?
    5. Do we expect to observe more stringent water quality requirements in the future? Alternatively, will the Regional Board consider raising the TN limits if there are no adverse impacts to groundwater quality?
    6. How will the beneficial reuse of recycled water affect the underlying groundwater in the basin? What levels of water quality are required to remain in compliance with the non-degradation standards of the region?
- The WWTP will require the following upgrades to treat an average daily flow of 3.6 MGD:
    1. Installation of a new equalization basin to handle daily flow fluctuations.
    2. Construct one new primary clarifier to provide redundancy.
    3. Increase sludge treatment capacity by installing a new mechanical thickener and new anaerobic digesters.
    4. The existing lab building is old and needs upgrades, and the control building will become obsolete once the WWTP SCADA system is upgraded. A new lab and control building are included in the cost evaluation.
- The cost evaluation suggests that Alternative 1 (increase trickling filter recirculation rate) is the cheapest option available to comply with Board Order and Title 22 requirements. However, this option has the least flexibility meeting discharge limits, and the existing trickling filter components are old and will require structure upgrades within 20 years. Therefore, this alternative is not recommended for future implementation.

- Alternatives 2 – 4 are similar in cost and operation. Among them,
    1. Alternative 3 (IFAS) is the costliest alternative without providing significant advantages in the effluent water quality or operational simplicity, so it should be eliminated from consideration.
    2. Alternative 2 (CAS) are ubiquitous throughout the United States, are reliable to meet discharge limits, easy to operate, and have the ability to be upgraded with IFAS or MBBR in the future if required. However, these systems require a larger footprint as compared to Alternative 4 to meet effluent requirements.
    3. Alternative 4 (MBBR) produces the best secondary effluent water quality out of these three alternatives and is the lowest capital and life cycle cost option. Alternative 4 is slightly more complex to operate, requires an external carbon input, and the number of municipal installations in the United States is significantly less than Alternative 2. However, due to the significantly lower capital cost of the MBBR system and the resiliency and reliability to meet discharge limits, Alternative 4 is recommended to be considered for future implementation.
- Alternative 5 (MBR) is the most expensive alternative, but it produces the best water quality. With advances in technology, the MBR system can be operated fairly autonomously and does not require much operator input. Alternative 5 sets the City up for any changes to discharge or reuse requirements in the future, and can produce recycled water without the use of tertiary filters. Additionally, if the City requires TDS removal, a reverse osmosis treatment train can be implemented post MBR. Alternative 5 offers the City the most flexibility regarding end uses, but comes at a significantly higher cost than the other treatment alternatives. The City is familiar with the design of MBRs based on the 90% design of an MBR facility in 2007.

10. IMPLEMENTATION PLAN

There are several matters the City needs to consider when selecting the most suitable option, such as nitrogen compliance, production of recycled water, fees associated with development in the City, population growth, future regulatory requirements, and the ability to increase water and sewer rates to customers to pay for the WWTP upgrades. Several progress meetings have been held with the City during which the design team and the City discussed the wastewater treatment alternatives evaluated in this Nitrogen Removal Feasibility Study. Based on the outcome of these discussions and the proposed regulatory requirements, Alternative 4, Moving Bed Biofilm Reactor is recommended for implementation at the City WWTP.

Alternative 4 not only successfully achieves Board Order nitrogen limits, but also is the most reasonably priced, reliable treatment alternative. This option will result in immediate Board Order and Title 22 compliance while offering a low-cost solution relative to other alternatives. Furthermore, this approach accounts for more stringent discharge limits in the future since more media can be added to the aerobic and anoxic tanks to increase treatment capacity, and the process can be modified to meet specified discharge limits. If the City determines immediate Board Order compliance is required and production of recycled water can be delayed, the construction of the cloth media filters and the chlorination tank upgrades could be deferred. While this phased approach option can save the City several million dollars in upfront capital costs, in the long run the overall project cost would be significantly higher.

Although there are few MBBR municipal installations in California, there are plenty of installations in the northern parts of the United States and in Canada where cold weather significantly affects organic and nitrogen removal performance of wastewater treatment systems. Municipal MBBR installations are starting to increase in the southern parts of the United States where organic discharge limits are tightened, and nutrient effluent requirements are implemented. Additionally, MBBR systems are widely used in the industrial wastewater treatment sector as these systems have the ability to accommodate high-strength wastewater loads in small footprints.

Alternatively, if more stringent regulations are expected and/or future indirect potable reuse is desired, Alternative 5, MBR, should be considered. As mentioned, MBR is the most advanced and reliable technology available, producing the best water quality for future reuse or groundwater recharge. If TDS removal is required in the future, the WWTP can be readily upgraded as pretreatment for reverse osmosis membranes. Since the City is considered a disadvantaged community, it may be difficult for it to receive funding for this alternative. It should also be noted that Alternative 5 is the costliest, and grants from the State of California will likely be required for its implementation.

Once the project is ready to commence, several implementation options are available. If the City uses a traditional Design-Bid-Build (DBB) method, it is estimated that the final design will be completed in ten months, permitting nine months, and construction and start-up be completed within sixteen months. By using the DBB method the estimated overall project schedule would be approximately 3 years including time to prepare and award the engineering design and construction contracts. Upgrades to the wastewater treatment plant would begin after the Regional Board reviews this feasibility study, and the proposed nitrogen and TDS limits are finalized. A preliminary implementation schedule utilizing the DBB method is provided in Figure 32. Alternative delivery methods, such as a Design-Build (DB) approach, can reduce the overall project timeline by one year, saving project costs by 10 – 20%. Overall, the DB method would minimize project costs by reducing the design and construction timeline, equipment costs by giving buying power to the contractor, and the number of change orders. Further, by using a DB method the involvement of a third party is not required for construction management.

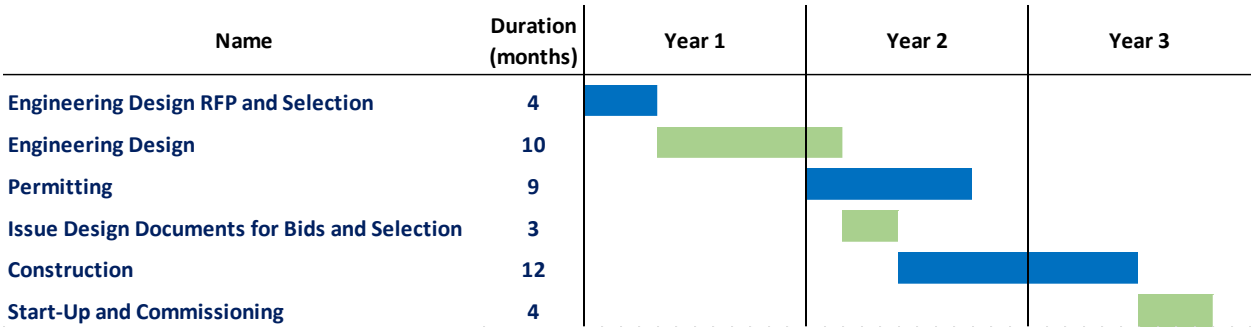


Figure 32. Preliminary implementation schedule utilizing the traditional Design-Bid-Build method

United States Department of the Interior

BUREAU OF RECLAMATION
P.O. Box 25007
Denver, CO 80225-0007

IN REPLY REFER TO:
LC-10100
1.3.11

January 14, 2025

VIA ELECTRONIC MAIL

City of Banning
Attn: Mr. Art Vela
Director of Public Works
99 E. Ramsey St.
Banning, CA 92220

Subject: Notice of Funding Opportunity No. R23AS00464 – WaterSMART: Title XVI Water Infrastructure Improvements for the Nation (WIIN) Act Water Reclamation and Reuse Projects – Your Application Titled, "Critical Wastewater Treatment Recycled Water Upgrades"

Dear Mr. Art Vela:

The Bureau of Reclamation (Reclamation) is pleased to inform you that your application, submitted by the second application due date of September 30, 2024, for the WaterSMART: Title XVI WIIN Act Water Reclamation and Reuse Projects Funding Opportunity was among those receiving the highest ratings and is now being considered for award with funding available under the Bipartisan Infrastructure Law (BIL), P.L. 117-58. Reclamation anticipates awarding Federal funds in the amount of $16,194,576 for your project.

In working with you to develop your financial assistance agreement, Reclamation will closely review the activities outlined in your proposal to ensure that activities eligible for funding are identified and that the proposed costs are allowable under financial assistance regulations and the Notice of Funding Opportunity (NOFO). If some costs or activities are determined to be ineligible or unallowable, Reclamation will work with you to refine the scope of work and budget for the project. In addition, Reclamation must have sufficient evidence prior to award that non-Federal cost share will be available. The final funding amount may be adjusted if necessary. Please note that a small portion of this amount may be set aside for Reclamation to ensure the project's Federal regulatory and statutory compliance, and to otherwise oversee the implementation of the project.

All new financial assistance awards for infrastructure projects must meet Buy America requirements. Office of Management and Budget (OMB) implementing guidance states that the Buy America provisions apply to projects carried out through Bipartisan Infrastructure Law (BIL) funding and annual appropriations. See OMB Memorandum M-22-11 for further details. Section 41101 of the BIL requires that all laborers and mechanics employed by contractors or subcontractor in the performance of construction, alteration, or repair work on a project assisted in whole or in part by funding made available under the BIL shall be paid wages at rates not less than those prevailing on similar projects in

the locality, as determined by the Secretary of Labor in accordance with Subchapter IV of Chapter 31 of Title 40, United States Code (commonly referred to as the Davis-Bacon Act).

All projects being considered for award of funding are required to comply with all Federal environmental and cultural resource requirements, including the National Environmental Policy Act, Endangered Species Act, Clean Water Act, and the National Historic Preservation Act. Ground-disturbing activities of any type, including fieldwork, monitoring or other activities may not occur until Reclamation has determined that all environmental and cultural resource compliance is complete.

In addition, funding for construction activities will not be released until Reclamation makes a determination of financial capability for the project.

The Reclamation regional or area office that will be responsible for awarding and administering your agreement will contact you in the coming months to finalize your award. In the meantime, if you have any questions regarding the process or your agreement, please contact Viranousack (Alex) Soubannarath, Lower Colorado Basin Regional Title XVI Coordinator, at (951) 695-5310 or vsoubannarath@usbr.gov.

Thank you for your interest and participation in the WaterSMART: Water Recycling and Desalination Programs. The success of the Title XVI Program depends on collaboration with partners to improve the reliability of water supplies.

Sincerely,

/s/ Diana Blake
Grants Officer

PROPOSAL

Design and Construction of the City of Banning Wastewater Treatment Plant and Recycled Water Project



Prepared by:
AECOM/W. M. LYLES CO.,
A Joint Venture

AECOM W.M. LYLES CO.
a joint venture

Submitted:
October 11, 2024
Attention: Barbara Mason



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Part IV: Construction & Start-Up Process.....29

Part V: Phase 1 Cost Proposal (under separate submittal)

Part VI: Required Forms (uploaded into OpenGov)

Appendix A: Preliminary Drawings and Schedule

Appendix B: Resumes

Please note that forms, insurance letters, surety letters and any other required documents have been uploaded separately to your OpenGov procurement site per the RFP instructions.



PART I

Transmittal Letter, Team Administrative, and Financial Capability

AECOM W.M. LYLES CO.
a joint venture

October 11, 2024

Barbara Mason, Purchasing Manager
City of Banning - Purchasing Division
99 E. Ramsey Street
Banning, CA 92220

Proposal for Progressive Design-Build Services for the City of Banning Wastewater Treatment Plant and Recycled Water Upgrades Project - RFP-24-074

We are excited by the opportunity to become a trusted partner of the City in developing the most cost-effective solution for your wastewater treatment plant upgrades that will minimize impacts to your rate payers while at the same time, provide a long-term solution to support community growth. Our team has worked hard to find **design-to-budget ideas for your project and we are confident that the solutions we present in our proposal can save the City$10M+** compared to the original concept. Highlights of our proposal include:

- **Experts skilled in progressive design-build and MBR systems.** AECOM/Lyles have worked together on numerous progressive design-build treatment plant upgrade projects totaling over $1B, as well as many MBR systems. These past experiences allow us to work together seamlessly to deliver your project and hone in on the biggest cost items, optimizing the budget for the City.
- **Experience with San Gorgonio Pass and desert communities.** From our wealth of experience delivering similar projects in surrounding communities (including Beaumont), we have a strong appreciation for pragmatic solutions that work for you.
- **A proven progressive design-build management approach.** We know how to streamline the crucial Phase 1 activities so that collaboration is fostered while still making timely decisions to maintain the overall project schedule. We are committed to a transparent Guaranteed Maximum Price (GMP) presentation and converting this project from Phase 1 to Phase 2.
- **Design to Budget Ideas that offer real savings.** We have left no stone unturned in looking at ways to save the City money while still achieving your project goals. From optimizing basin sizing, to finding a creative way to forego the reverse osmosis (RO) system, we offer the City ways to lessen the impact to your rate payers, while maintaining the resiliency to accommodate local population growth and future permit expectations.
- **A dedication to a quality project.** Our design to budget ideas do not come at a cost of quality or impacting the City's options in the future. We are committed to using proven vendors and quality suppliers and our design provides for easy future expansion with low capital expenditure.
- **Our corporate commitment to make this a success for the City.** We are committing the team provided herein for the duration of the project. We have learned that team continuity throughout the duration is critical to the overall project success and delivering the lowest total project cost.

Single Point of Contact for AECOM/Lyles – Project Manager Joe Lawrence is the single point of contact for the team, ensuring clear communication and streamlined project management.

Joe Lawrence
Design-Build Project Manager
26501 Madison Avenue
Murrieta, CA 92562
T: 916.644.9487 | E: jlawrence@wmlylesco.com

We appreciate the City using an industry standard template as the basis for the sample agreement, and we are confident that we can negotiate a contract with the City for this project. We also confirm that we have read and understood all elements of the RFP. Furthermore, in our cost proposal, we have provided a detailed scope of work of our services.

Bonding and Sureties – The AECOM/Lyles team confirms we will meet the bonding requirements outlined in the Request for Proposal (RFP). We have included in our proposal a Surety Letter of Intent and the *Proposal Bid Bond* as required in RFP section IV.E.

Financial Capacity – Both AECOM and Lyles confirm there are no changes in our firms' financial capacities and bonding capabilities. The financial statements included in our SOQ are the most current and there are no changes in our standings.

CEQA, Funding, and PLA Compliance – The AECOM/Lyles JV confirms we have reviewed the *CEQA, Funding, and PLA Compliance* requirements, signed and included the form in our proposal uploads in your procurement system, and agree to comply with the terms and conditions.

Per the instructions in the Request for Proposal, our Part V Phase 1 Cost Proposal has been submitted as a separate file. Part VI Required Forms have been completed and uploaded into the OpenGov procurement system.

We have assembled a truly collaborative and integrated team. We look forward to sharing more details on our proposal during the interview. AECOM/Lyles appreciates the time and commitment the City has invested in this procurement process and appreciate you meeting with our team during our proposal development. **Our goal as the City's of Banning's trusted partner is to implement a "no surprises" and "design to budget" commitment throughout the project. This can only happen through effective, open and transparent communication and we look forward to working side-by side with the City in delivering this project.** Thank you for your consideration.

Respectfully submitted,

AECOM/Lyles Joint Venture



Joseph B. Lawrence - Project Manager
SVP, Alternative Delivery Manager
Authorized Signatory
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O: 916.375.1833 | M: 559.647.6650
jlawrence@wmlylesco.com



Brian Daly, PE
SVP, Director North America Water Design-Build
Authorized Signatory
AECOM Technical Services, Inc.
O: 978.905.2527 | M: 781.799.1791
brian.daly@aecom.com



PART II

Project Team, Experience, and Approach

The AECOM/Lyles Team presented in our SOQ is 100% committed to the success of the City's WWTP and Recycled Water Upgrade project—from day one to day done.



"I am fully committed to collaborating with the City for the next several years to continue the implementation and construction of Banning's WWTP project, ensuring a safe and sustainable wastewater and recycled water system for decades to come.

– Joe Lawrence
Design-Build Project Manager



"I'm looking forward to this exciting partnership with the City of Banning where we explore cost-effective solutions, keeping the rate payers in mind at every step as we design to budget for this important project.

– Gabriel Perigault
Design Manager



"I pledge to open lines of communication with all stakeholders, including operations staff, to keep construction moving on the project and deliver first-class facilities of the highest quality, on budget and schedule – with no surprises.

– Marcos Reyes
Construction Manager

Key Project Personnel

As presented in our SOQ, the AECOM/Lyles key personnel have delivered together on design-build treatment projects in California with significant upgrade and maintenance of plant operations considerations, bringing demonstrated efficiency and collaboration to the City. Our management team—along with Treatment Process Design Lead Alex Franchi, Preconstruction Manager Vince Guillama, Construction Superintendent Anthony Pilato, Commissioning Lead Vijay Kumar, and other team members—remain fully committed to meeting all of the project objectives detailed in the City's RFP.

Team Enhancement

We are presenting one key team member enhancement in **Joe Lawrence as our Design-Build Project Manager**. Joe has a distinguished career in the water/wastewater industry, with 22 years of experience managing design-build projects for public and private water and wastewater treatment facilities. Throughout his career, Joe has been involved in all aspects of project delivery including project management, preconstruction services, cost control and budgeting, construction implementation, and start-up and commissioning on numerous alternative delivery projects, including design-build and progressive design-build projects. Many of these projects involved collaboration with the same AECOM/Lyles JV team we are proposing for this project.

While we have **NO CHANGE to the rest of our team or any of the key staff presented in our SOQ**, our team will be further enhanced during contracting efforts with disadvantaged subconsultants from our Good Faith Outreach efforts. We pledge to meet any goals required by the City and/or different funding sources and grants.

On the next page is an update to our organizational chart (Figure II-1) highlighting the enhancements to our team. We have also included a brief biography for our project manager Joe Lawrence that summarizes his qualifications. We would be happy to provide resumes for all of our team members at the City's request. **All other components of our team and SOQ remain unchanged.**

Benefits of the AECOM/Lyles Team

- ✓ **Extensive resources** that are fully committed to this project
- ✓ **Simultaneous and direct access to design and construction resources** at all times through our integrated joint venture
- ✓ **A team that has successfully worked together** to deliver other projects in the region
- ✓ **Proven ability to partner with owners through their first progressive design-build and get to Phase 2** without exercising the "off-ramp"
- ✓ **Collaborative design process:** price, constructability, operability are considered holistically
- ✓ **Innovative concepts** to minimize total project cost such as right-sizing tankage
- ✓ **Staff continuity** through all project phases
- ✓ **Maintain ongoing plant operations** with detailed construction sequencing
- ✓ **Comprehensive start-up and commissioning plan** to ensure operations staff is trained to operated the new facility

Enhancing our Team... *"W.M. Lyles Co., led by the exceptional project management of Mr. Joe Lawrence, delivered outstanding quality and expertise on the Galt WWTP Tertiary Filtration, UV Disinfection and Biosolids Improvements Project. Joe's leadership ensured timely completion within the 206-day timeline and minimal change orders. We're eager to collaborate with Joe and the W. M. Lyles Co. team again on future projects."* - James Boarer, P.E., Construction Manager, PSOMAS



Joe Lawrence

Design-Build Project Manager

Joe is a Senior Vice President at W. M. Lyles and Collaborative Delivery Manager with over 22 years of experience in managing and delivering large-scale water and wastewater treatment projects. He has a proven track record in pre-construction planning, project management, pre-construction services, cost control and budgeting, construction implementation, and start-up and commissioning on numerous design-build and progressive design-build projects. Joe is committed to delivering high-quality infrastructure while leading teams and managing complex project requirements.

Why Joe?

- ✓ Involved in every design-build project completed by AECOM WML in the last 15 years
- ✓ Brings expertise in **collaboration** and working with the team to **design to budget** for project success
- ✓ Met multiple times with the City of Banning and **understands the solutions** to upgrading the existing wastewater treatment plant
- ✓ Advanced understanding of various delivery methods, including design-build and progressive design-build
- ✓ Deep technical expertise, particularly in SCADA upgrades, biological treatment, tertiary filtration, and disinfection processes

Highly experienced progressive design-build project manager working on WWTP upgrades similar to the City of Banning

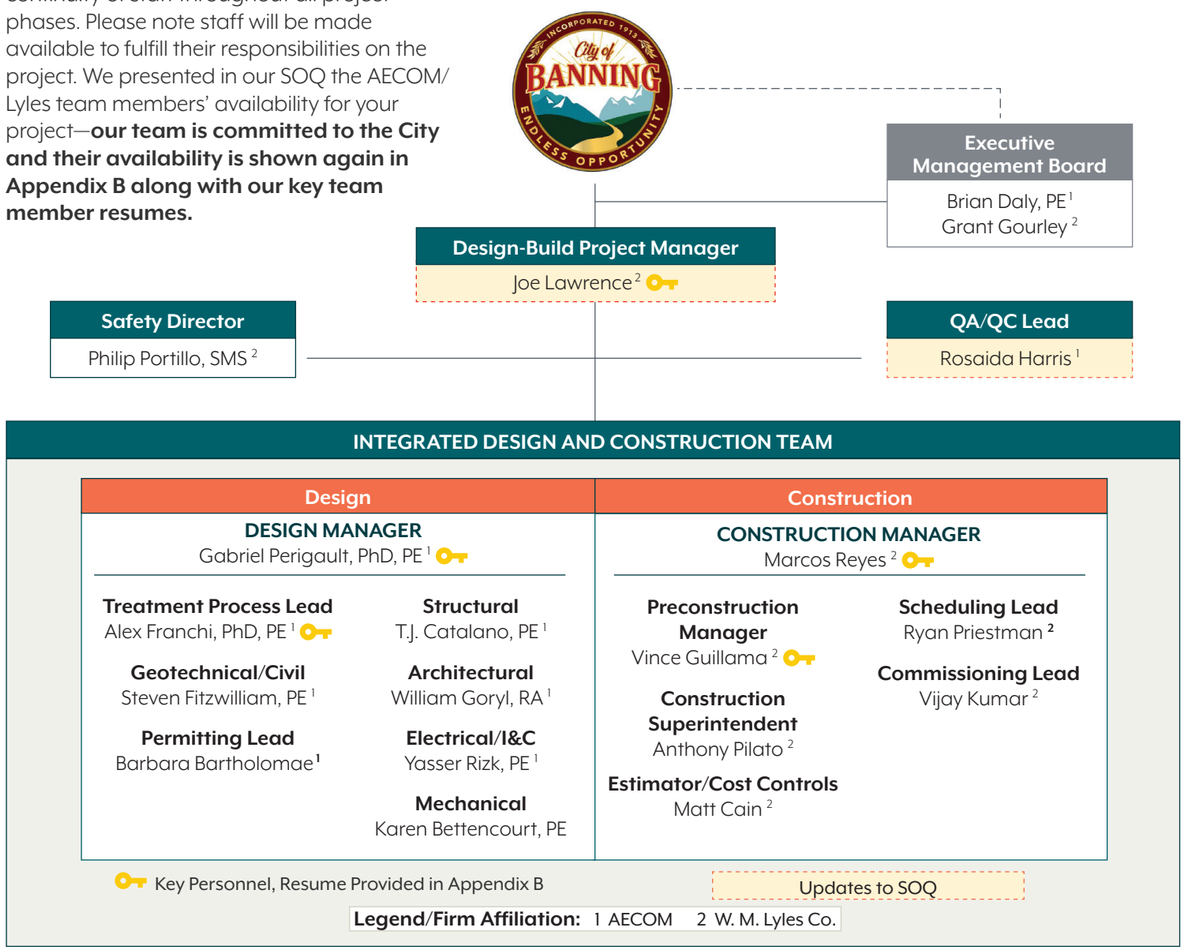
Joe brings 20+ years of experience in managing wastewater treatment plant upgrades with a primary focus on collaborative delivery. He brings detailed preconstruction phase and estimating experience combined with years of heavy civil construction and start-up and commissioning for water/wastewater infrastructure. He understands each step of the project lifecycle and how to lead a high-functioning team. **Joe has been working closely with AECOM for the past 15 years on design-build projects such as:**

- East County Advanced Water Purification (ECAWP) Packages 1 and 3 Progressive Design-Build
- City of Stockton Regional Wastewater Control Facility Progressive Design-Build Upgrades
- City of Davis Wastewater Treatment Plant Secondary and Tertiary Improvements, Design-Build
- City of Santa Cruz Graham Hill Water Treatment Plant Upgrades Progressive Design-Build

AECOM/Lyles project personnel are available to start work immediately and are committed to the City of Banning for the duration of your project

Figure 2-1: Organization Chart

Our combined organization promotes the continuity of staff throughout all project phases. Please note staff will be made available to fulfill their responsibilities on the project. We presented in our SOQ the AECOM/Lyles team members' availability for your project—**our team is committed to the City and their availability is shown again in Appendix B along with our key team member resumes.**



Good Faith Efforts

At AECOM/Lyles, we are dedicated to fostering diversity and inclusion through active engagement with Disadvantaged Business Enterprises (DBEs). Our comprehensive outreach strategy, including advertised public events, ensures economic growth and equal opportunity. We host public outreach events to share information on collaborative projects, maximizing participation from both local and competitive environments. For example, at Hi-Desert Water District, our open house with local unions, businesses, subcontractors, and the public resulted in multiple bids and met all SRF grant requirements. **For this project, we placed legal notice ads announcing the DBE opportunity in the Banning Record Gazette and performed searches on four websites (CA.GOV, DOT.CA, SBA, and CalTrans), resulting in solicitation of 1,223 DBEs. From that outreach effort, 21 DBEs have expressed interest in bidding.**

Team Experience

The AECOM/Lyles team has NO CHANGE to our project experience. The information presented in our Statement of Qualifications (SOQ) demonstrates a long history of working on design-build projects together as well as unmatched local experience working on similar projects for similar clients in Southern California. Table II-1 below summarizes the client reference projects previously presented. **Additional recent successful projects include the CR&R Riverside County Environmental Center in Perris, the Victor Valley Waste to Energy project in Victorville, Morongo WWTP in Cabazon, Beaumont, Hi-Desert, Yucaipa, Palm Springs and Lytle Creek WWTPs, all of which showcase our team's deep-rooted understanding of the local area.**

BEST for BANNING

Our team has prioritized this project over other opportunities in the marketplace. We have been tracking this project for 3+ years because the City is the type of client we want to work for—a pragmatic desert community looking to make every dollar count.

Table 2-1. Summary of Project Experience presented in our Statement of Qualifications

Project Name/Location	Scope of Services	Relevance	Self Performance Level	Similar Performance Criteria
East County Advanced Water Purification Progressive Design-Build, Santee, CA AECOM/Lyles JV	Progressive Design-Build for WWTP and AWT	Reuse, RO, New Plant, PDB, T22 compliance	78%	☑
S1 WWTP Improvements Progressive Design-Build Rialto, CA AECOM/Lyles JV	Progressive Design-Build of WWTP improvements	Design to Budget, significant cost savings realized	75%	☑
Regional WPCF Upgrades Progressive Design-Build Stockton, CA AECOM/Lyles JV	Progressive Design-Build of WWTP improvements	Design to Budget, adjusted GMP to meet Client's goals	78%	☑
WWTP Salt Mitigation Upgrade Project Beaumont, CA W. M. Lyles	Construction of treatment plant upgrades including MBR	Neighboring community facing similar challenges	78%	☑
HDWD Wastewater Reclamation Facility Progressive Design-Build Yucca Valley, CA W. M. Lyles	Progressive Design-Build of treatment plant including MBR and UV	Design to Budget, $2M in cost VE cost savings	75%	☑

Imperial Wastewater Treatment Plant Upgrade

Additional Project Experience

This comprehensive project for the City of Imperial, completed in 2021 by Lyles, involved significant upgrades to the existing WWTP:



- Upgrades to the existing influent pump station and the construction of several new facilities
- New facilities included a grit structure, aeration basins, **MBR facility**, and dewatering facility
- Designed to efficiently process an average daily flow of 2.4 million gallons of wastewater
- Initial stages involved demolition of an existing aeration basin, setting up a shoring and dewatering system, and excavating 15,000 cubic yards of earthwork
- The team then installed approximately 5,500 lineal feet of below-grade piping and constructed the aeration basins, membrane bioreactor basins, and the slab for the dewatering facility building
- The final stages involved the completion of the membrane bioreactor facility and installation of the above-grade process mechanical piping and equipment

Approach

Key staff have delivered together on progressive design-build wastewater projects and projects in the San Gorgonio Pass and desert areas, bringing lessons learned and collaboration to the City

Management of the Project Team

The AECOM/Lyles team has no other companies as part of our core team at this time. We have advertised this project for 30 days in the Press Empire and, if selected, we intend to add small business firms, such as surveyors, drillers and geotechnical firms, during Phase One to meet City goals and grant/funding source requirements.

As presented in our SOQ and reaffirmed in the previous subsection, the AECOM/Lyles key personnel have delivered together on design-build treatment projects in California. The team has **successfully employed designing-to-budget** on other projects and will work in close collaboration with City staff and its advisory team to implement this proven approach.

How Key Staff will Interact in a Collaborative Manner

The AECOM/Lyles team will be led by **Design-Build Project Manager Joe Lawrence.** Joe will bring his 22+ years of experience with water/wastewater treatment plant construction in California. Joe will have overall accountability and day to day contact with the City and your advisors through the entire project.

Design Manager Gabriel Perigault will lead the overall design of the project. He will work closely with the preconstruction and construction teams and your staff to deliver a design that meets your budget. He will lead the technical workshops that are associate with our collaborative approach. Gabriel has managed the design for numerous water and wastewater facilities, including the recent Davis, Rialto and Stockton WWTP design-build projects delivered with Lyles. With 30+ years of experience and a leader in innovative treatment technologies including MBR systems, he will guide the team and provide the City with a project that provides reliable performance while optimizing capital and operational expenses.

BEST for **BANNING**

Being a highly experienced, integrated 50/50 JV team functioning as one entity, our business operating culture is truly collaborative with all parties dedicated to the same goal of designing to a budget. This is in stark contrast to other DB entities who will have designers subcontracted to a general contractor.

Treatment Process Lead Alex Franchi will lead the treatment process train scheme and the technical details related to the MBR and disinfection systems. He will coordinate with Gabriel, Vince and the rest of the team to make sure the most cost-effective technical solutions are brought forward and he will be on point for discussions with critical technology vendors to ensure our design and the scope of supply align.

Preconstruction Manager Vince Guillama will work closely with Mike, Gabriel and the City's team to establish the initial project estimate and update it regularly as design decisions are made and the scope is finalized. He will also work closely with Construction Manager Marcos Reyes in developing and maintaining the project schedule. Vince is a proven collaborator in this role, having provided preconstruction services for a multitude of DB projects, notably the City of Davis, City of Santa Cruz, East County AWP (1&3), and City of Stockton Projects, all undertaken as part of the AECOM/Lyles JV.

Construction Manager Marcos Reyes will participate in constructability and VE reviews during Phase One. He will work with Vince in maintaining the project schedule. During Phase Two, he will oversee the construction of the upgrades. Marcos has over 15 years of experience managing construction of wastewater facilities. He is currently serving as WRF Construction Manager for the ECAWP Project, following his successful role as Construction Manager on the $25M Rialto WWTP Project (also operated by Veolia), both in collaboration with AECOM.

Constructability, Operability, Maintainability, Durability, Sustainability, VE, and Efficiency of Design and Construction

Applying the best aspects of progressive design-build. Our approach builds upon the work completed by the City and our concept is a starting point for discussions with the City's team (see Part 3). We applaud the City's approach to use the progressive design-build (PDB) model and we know that collaborative, cost-centric discussions will drive best solutions. We are no strangers to this process with PDB projects completed and underway in Rialto, Stockton, and the ECAWP program in Santee. Phase One management elements will be focused on workshops, design development, price certainty and construction sequencing. Preconstruction Manager Vince Guillama and Construction Manager Marcos Reyes will participate in the VE sessions and constructability reviews to provide their input.

Our JV will use Primavera P6 to track the schedule and adjust as needed. The meetings and workshops schedule will be critical in driving technical decisions to maintain overall project schedule and designing to budget as the primary goal through direct presentation of cost impacts as they relate to specific options. Details on our approach to both Phase One and Two are presented in the following subsections.

Phase One Approach

Our design to budget approach starts with a detailed agreement of the process train and **we will leverage vendor provided designs when they provide capital and operational benefits**.

Our scope and initial estimate will establish the City's the must have scope items. We will also make separate list of wish list items that can be added into the project during Phase One, as the budget allows.

Building on the baseline cost and critical guardrails established from the programming workshop, we will step through the workshop process. The baseline cost model will be used to measure alternatives or modifications against the initial layout to compare costs associated with alternative concepts, equipment or approaches that may be contemplated during the workshop process. Decision Log maintains positive momentum and serves as a go-to reference point so that decisions aren't constantly revisited.

We will use a clear process that documents agreed upon elements in the Decision Log to maintain positive project momentum. Elements that need adjustments or a different alternative will be vetted, refined and brought back to the City at a future meeting. We have learned that having a baseline upon which to compare "real-time" options allows the entire team to make educated, value-based decisions with the total project cost in mind. A critical Lesson Learned by our team is the importance of having sufficient engineering and planning budget. The additional effort placed on Phase 1 will result in significantly lower total project costs through sound decision making and review of total project lifecycle costs

BEST for BANNING

Our proven approach for PDB projects starts with an initial estimate that is based on real numbers from similar projects plus market outreach. The estimate is updated regularly, allowing the City to make value based decisions so there is no surprises at the GMP.

Disciplined cost accounting controls are the essential responsibility of the Project Manager in Phase One as engineering progresses to 100%. Weekly Estimates to Complete (ETC) are tracked by the Project Manager with weekly design cost reporting prepared by the JV controls team. Design to budget efforts is continual with regular construction cost and schedule adjustments reflected in the outcomes of design workshops, equipment/materials market interaction and early subcontractor inclusion.

As described later in this Section under the Collaboration heading, **we envision a workshop process to involve the City and its advisors to make the above decisions. The workshops will also be a key way we obtain operations team input and get feedback when finalizing equipment selection**.

PROVEN INNOVATION TO DRIVE DOWN PROJECT COSTS

Our VE and optioneering efforts on other design-build projects has resulted in an average savings to clients of 21% when comparing our solution to the owner's original concept

BEST for BANNING

OPTIMIZING DESIGN-TO-BUDGET THROUGH CREATIVE CONCEPTS

We recognize that all projects face some level of financial pressure. To this end we have already begun looking at potential alternatives to to meet the City's desired project budget. While these alternative will be developed more comprehensively during the phase 1 activities, we present a number of these in detail in Part III as a sign of commitment to the City that we take this responsibility seriously:

- ✓ **Right-sizing tankage and basins to save cost.** Our modeling and analysis shows that the sizing the aeration and mbr basins can be reduced, saving construction costs, while still providing the appropriate redundancy.
- ✓ **Three tank configuration of bioreactors.** Will provide required redundancy while providing cost savings.
- ✓ **Eliminate the initial need for the RO system and evaporation ponds.** We believe that blending MBR effluent and potable water can meet the nitrogen and TDS limits at a lower cost.
- ✓ **Hydraulics.** Maximize the use of gravity flow through the plant to lower pumping costs
- ✓ **Eliminate the third primary clarifier.** Savings can provided by not constructing the third primary clarifier without impacting the performance of the MBR system
- ✓ **Site layout.** The site's large area with limited interface points allows for spacious logistics, staging, and stormwater management. Early procurement and just-in-time delivery will streamline the project timeline and prevent delays.
- ✓ **Chlorination basin vs. UV disinfection.** Eliminate the construction of a large chlorination basin with a more cost-efficient and environmentally friendly UV disinfection.

Design

During Phase One, as part of the Progress Meetings, we will conduct design reviews on selected topics with the purpose of disseminating information, promoting discussion and obtaining feedback so that City staff understands the design and has enough information to approve the design. More resembling a workshop than a meeting, this approach to review meetings has been developed and honed on similar large and complex projects. We will manage design review meetings using the following best practices:

- ✓ Dedicated leader to facilitate
- ✓ Up-front technical discussion materials
- ✓ Clear agendas that specify: (1) purpose and decisions expected, (2) overview topics and issues, (3) discussion and review, (4) summary decisions made, and (5) approvals
- ✓ Clear, action-oriented minutes
- ✓ Follow-up action items and distribution of issue resolution

Schedule Management and City Reviews. We will use Primavera P6 to track progress and adjust course, as needed. The meetings, submittals, and review schedule will be critical in driving decisions to maintain overall project schedule. As described more fully in Part IV, we will use a cost loaded schedule and provide 3 week look aheads as appropriate.

Our Integrated JV Addresses City Concerns

Providing continuity in leadership between Project phases. A hallmark of how the AECOM/Lyles JV does design-build work is that we promote staff continuity throughout all project phases. This virtually eliminates any risk of discontinuity in leadership and any issues with information transfer. For instance, the project manager will stay engaged for all phases of the project. The design manager and all discipline leads will continue to be involved in the project after the design is complete, providing interpretation and responding to any questions in the field to make sure the design intent is carried out in



We will use 3D models during detailed design. We have experienced the benefits of using this tool in other projects as it provides a better perspective facilitating the understating among the design-build team, City staff, and other stakeholders, and, in the end, the decision-making process. It also helps break down the compartmentalization between design and construction, and avoid clashes between disciplines during construction, to see the project visualized early on.

what is being built. Similarly, the construction manager will engage in the project during phase 1 to understand the design, and provide constructability and VE input.

Compartmentalization between design and construction. As an integrated JV our delivery model breaks down the barriers that could compartmentalize design and construction activities. Our key staff have worked together before on progressive design-build treatment plant projects have a rapport and an efficient communication style that promotes collaboration. For example, our team does page flip reviews at critical milestones to make sure that the design and construction implementation members are all aligned in what is being presented and priced.

Contractor or equipment supplier interests overriding engineering-based decisions. All equipment and materials for the project will be reviewed and approved by the Engineer of Record that designed and specified these items, including any vendor provided designs. For critical equipment, including all mechanical equipment, AECOM/Lyles, in close coordination with the City, will also be in charge of recommending to the City suppliers, selecting the equipment and approving all shop submittals prior to release for fabrication. Alex Franchi will be involved with critical process equipment to make sure vendor supplied equipment align with overall design decisions and anticipated performance requirements. This approach provides an unbiased process that ensures that the City's preferences are considered and the best value with respect to cost, functionality, and durability are part of the selection process.

Phase Two Approach

Experience Developing/Managing the GMP

As an experienced design-builder, AECOM/Lyles has a unique advantage of developing realistic costs during the GMP development phase of the project. Our DB project manager, design and procurement team and subcontractor partners understand technical and quality requirements and are skilled at developing detailed, bottoms up cost estimates. They have long-lasting relationships with reputable equipment suppliers which reduces the risk of scope creep during the design and, ultimately, construction.

Additionally, our team will work closely with the City to implement decisions on equipment, materials of construction, and overall site considerations that will positively impact the GMP. Techniques will include using a decision log to document each decision made along with any associated cost impacts, so that a running tally of the current project cost is maintained and can be easily measured against a baseline. Our team will also make sure that multiple bids are received for not only the equipment but also subcontractors to achieve the lowest project cost possible. Internal contractor prequalification procedures will also verify that vendors and subcontractors selected for the project are financially stable and will provide the workmanship and ethics commensurate with the AECOM/Lyles JV philosophy. Beginning with our rigorous prequalification process, we will communicate with subcontractors the importance of quality, safety and performance, in addition to best value provided.

BEST for BANNING

We design and build to budget on all our design-build projects to ensure client satisfaction: the proof – no client has ever taken the off ramp at the GMP stage on any of our projects.

Our team recommends the GMP process occurs after the 60% design milestone in order to maintain the project schedule.

Estimating and Cost Monitoring

AECOM and Lyles have very successful histories managing costs on both lump sum and progressive design-build projects. Vince and Marcos will provide the City and its advisory team frequent cost estimate updates during design leading not surprise at the GMP. Our partnership with key subconsultants during the design phase will allow our team to further develop a reliable cost estimate for the GMP, that accurately captures the electrical components of this project. Highlights of AECOM/Lyles team estimating, and cost monitoring procedures include:

- ✓ An initial cost estimate will be performed before the kickoff workshop and updated on an ongoing basis.
- ✓ One difference maker for AECOM/Lyles is that we start with a detailed estimate from day one, drawing upon a wealth of similar past construction projects to establish a baseline estimate. We are much more accurate and transparent than our competition.
- ✓ VE and constructibility reviews are performed throughout the design phase.
- ✓ Another difference maker is the flexibility of contractual approach from conversion to a lump sum or cost plus with a GMP with a shared savings, depending on the City's preferences.

Biggest Lessons Learned Developing GMPs

AECOM/Lyles will meet the challenges of establishing the GMP price for the City's project, by staying flexible during the design process and keeping a strong focus on designing to budget. The three key issues we have encountered when designing to the GMP include:

1. **Defining project "must haves" to establish early cost certainty.** AECOM and Lyles use an early partnering approach through common sharing of project budgets, which allows both the owner and design-builder to establish "must-have" items as well as "wish list" items and make value-based decisions against a mutually agreeable baseline.
2. **Clear scope expectations/scope-creep.** Early agreement between the owner and the design-builder regarding the core project design criteria and scope is critical to cost, schedule, and project certainty.
3. **Escalation of materials.** Recent market volatility and global economics have affected material costs and could have a significant impact on overall project costs. Our constant bidding of wastewater projects in California allows us to stay in touch with market pricing and minimizes surprises at the GMP deliverable.

Other Mitigation Measures. AECOM/Lyles suggests holding regular meetings to openly discuss and evaluate engineering options, while providing a continual accurate update of the agreed upon budget and schedule, and jointly maintaining control of detailed scope. This approach has worked well on other projects and will serve as another way to facilitate design to budget.

Approach to Construction

AECOM/Lyles has a proven track record of successfully delivering complex treatment plant projects, particularly with desert communities. We have developed a robust approach to site layout, logistics, and construction sequencing that prioritizes efficiency, safety, and environmental stewardship. Details of construction approach are presented in Part IV of this proposal.

Site Layout and Logistics

We approached the site layout and logistical plan with a focus on maximizing efficiency and minimizing disruption. As part of this analysis we are also focused how decisions we make relative to the layout and logistics of build the new plant and how that could affect the day-to-day operations of your existing plant. Our approach has been developed to have minimal impact to current vehicular and pedestrian access and maintaining as little impact to your current facility.

The project site provides a large area with limited interface and tie-in points for the main portion of the work with the existing facility, affording a spacious area for site logistics, staging, and stormwater management both during and following construction. We understand that this project demands meticulous planning and execution to balance the need for efficient construction

Figure 2-2. Site Plan Logistics



with the necessity of minimizing environmental impacts. The uncomplicated nature of the site enables a straightforward approach to layout, logistics, and resource management, ensuring that all construction activities are confined within the designated boundaries while adhering to strict regulatory requirements. We do not foresee any resource limitations that would affect project progress. With the ability to self-perform 75% of the work, we can control costs, create efficiencies, enhance coordination, mitigate risks, and improve safety while enabling resource flexibility and ensuring quality. Our early procurement strategies and just-in-time delivery streamline project timelines by securing critical materials and equipment in advance, minimizing storage costs, reducing the risk of damage, and preventing delays in construction progress.

Location and Layout of Key Elements. Construction Laydown Areas: Strategically positioned within the site to allow easy access to materials while minimizing the footprint on undisturbed areas.

Laydown and Staging Areas. Located near the main construction zones to facilitate the efficient movement of equipment and materials, reducing downtime and delays. This will be constructed immediately adjacent to the work site to avoid double or triple handling of materials.



Access Roads and Traffic Management will be clear and concise, carefully planned to ensure safe and efficient movement of vehicles and machinery while minimizing impacts on surrounding areas. This will also allow easy access to all the different key element areas and keep truck haul roads away from trailers and parking areas for a straight, easy in and out. Traffic flow will be managed to prevent bottlenecks and maintain site safety. We expect a primary access point off Charles street past the existing entrance of the existing facility.

Parking. Designated parking areas will be established within the site boundaries to prevent off-site disruptions and ensure easy access for workers. Two designated areas will be created: one for CM/Project personnel and another for craft labor and subs.

Site Security Measures. A comprehensive security plan will be implemented, including fencing, surveillance, and controlled access points, to protect the site and ensure compliance with safety protocols. We will include a guard shack at the front gate and a separate entrance to avoid disturbing the existing plant entrance. Site fencing and security gates will be locked after hours. Web-based security cameras will also be installed.

Utilities Placement. Utilities will be strategically placed to support construction activities while minimizing interference with the natural environment and existing infrastructure.

Waste Management Facilities. Designated areas will be established for waste collection and sorting, ensuring that all waste is handled in an environmentally responsible manner. These areas will be strategically positioned near the main construction/staging area, as well as near the trailers and exit, for ease of access.

Containment within Boundaries. All elements, including laydown areas, staging zones, and access roads, will be fully contained within the specified site boundaries and established easements. This ensures that our activities do not encroach on protected areas or disrupt neighboring properties.

Mitigation Measures to Minimize Environmental Impacts. To further minimize environmental impacts, we will implement a range of mitigation measures, including sediment control, dust suppression, and noise reduction strategies. These measures will be continuously monitored and adjusted as needed to ensure compliance with environmental regulations and best practices.

Startup and Commissioning

Our startup and commissioning approach is presented in Part IV of this proposal. We acknowledge the procurement requirements regarding startup and commissioning, including the requirement for 30 days for startup and testing and pre-commissioning meeting to discuss plan with the City 3 to 6 months before startup and testing is scheduled to begin.

Permitting

BEST for BANNING

Our long-term relationships with California permitting agencies and regulators will provide the City with a streamlined process to meet the project schedule.

Anticipated Permits and Schedule. Please see our full project schedule included in Appendix A for a breakdown of the timeframe to apply for and obtain permits. Below is a list of anticipated permits:

City of Banning

- Community Development
- Building Permit
- Public Works Coordination
- Encroachment Permit Coordination

County of Riverside

- Dept. of Environmental Health
- Solid Waste Facility Requirements
- Fire Dept. - Hazardous Materials Div.
- Hazardous Materials Business Plan
- Transportation and Land Mgmt Agency and Planning
- Flood Control and WaterConservation District

CA State Waterboard R7: Colorado River

- Stormwater
- Industrial User Waste Discharge Reqmnts
- SWPPP Updates associated w/Industrial Activities
- Construction General Permit (w/SWPPP by contractor)
- Recycled Water
- Title 22 Eng. Report for Prod., Dist., & Use of Recycled Water

South Coast Air Quality Management District

- Authority to Construct Permit
- Permit to Operate (after Construction)

Understanding of Permit Process and Support for the City. For permitting and governmental approvals we will create a Permit Work Plan that will identify each specific permit required, the permitting agency contacts, submittal requirements, prerequisite conditions, processing times, and schedule for submittals. Key success factors for our plan include:

- ✓ Implementing up-front coordination with the City and permit agencies to facilitate the approval process. This will help minimize the risk of delays.
- ✓ Coordinating design activities with permit submittals
- ✓ Preparing discrete permit submittal packages
- ✓ Follow-up shortly after submittal to confirm information compliance and/or additional information required

Title 22 and RWQCB permits. The AECOM/Lyles Team will provide the necessary technical information to support development of the Title 22 Engineering Report permit approval process. We will provide the elements that are related to our scope of work, i.e., descriptions of the WWTP , pathogenic microorganism control, reliability of features for the new facilities, contingency plan, monitoring system, recycled reverse osmosis performance, advanced oxidation performance, operational optimization plan, and an operations and maintenance readiness plan.

CEQA Compliance. We will review the CEQA documentation and the design team will incorporate the specific requirements into the early design concepts. Specific measures will be taken to ensure applicable mitigation, monitoring and reporting measures will be included on design plans to foster compliance. At the onset of the project, a master list of Mitigation, Monitoring, and Reporting Program (MMRP) requirements that are applicable to each design element will be created and distributed to the project team.

Grant/Loan Compliance. AECOM/Lyles is very comfortable working on projects with SRF and WIFIA requirements; both the ECAWP, Davis and Stockton design-build projects received SRF funding. We will review existing grant and loan requirements, including documentation and reporting requirements, with the City at the onset and incorporate those procedures into our project management and execution plan to ensure schedule and funding compliance. Task and schedule reporting milestones will be added into our master project schedule.

Design Build Quality Control Plan

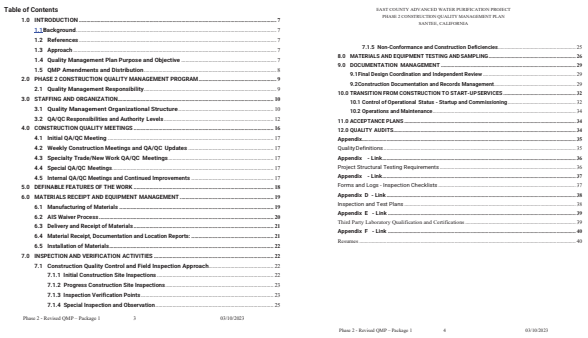
One of the benefits of AECOM/Lyles' extensive history of working together previously on PDB projects is that we have a well-established joined QA/QC program that provides robust oversight at every stage of the project. Building on the successful QA/QC programs we have executed together on the Rialto WWTP, Stockton WWTP, and Santa Cruz WTP PDB projects, we will implement the following program.

Our Certified Quality Management System

AECOM/Lyles will provide the City with a Quality Management Plan (QMP) that will define the procedures and protocols that we will utilize to provide QA/QC throughout the project, from design through construction, start-up and commissioning. The policies

and procedures provided within AECOM's Quality Management System (QMS) will be utilized as AECOM/Lyles' procedures to execute the QMP. The AECOM Water offices in the U.S. are an ISO 9001:2015 certified organization. ISO 9000 standards are globally recognized as the foundation of establishing quality management systems. Our QMP will include established procedures governing overall quality management and specific procedures for each phase of this project. The QA/QC program is enhanced when the City and the AECOM/Lyles Team works collaboratively on a daily basis to monitor progress. The AECOM/Lyles Team self-performing civil, concrete and mechanical aspects of the work provides optimum control of quality workmanship.

Construction work progress will be monitored and documented using the Site Field Resident's (SFR's) Daily Report which will document the progress of the work by recording the time development of the work, weather conditions, the crew sizes, equipment, etc. The SFR will review the reports to verify their accuracy. Work progress will also be documented in the CPM Schedule. This documentation includes operating logs, source and field testing/sampling log, records of inspections and tests with daily logs and site photographs, written reports and engineering data of material testing, audit reports (from third parties to the JV), certifications, proper equipment installation confirmed by manufacturer representatives, system test results, personnel qualifications and certifications records, procedures and document review records. QA/QC records will be uploaded to the agreed upon project portal on a routine basis for review by the City.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Through our numerous projects done together, we have developed a strong QA/QC program that blends design and construction activities.

Document Control and Records Management

We will launch and maintain an internet-based electronic Document Management System (DMS) to provide efficient loading and retrieval of project-related documents, provide links and search functions indicating where the documents are located within the DMS, and provide training for key City personnel that will have access to the DMS. All documents and records will be uploaded to the City's system on a routine basis to ensure your staff has access to current data at any given time.

The QA/QC staff is empowered to enforce all quality objectives and will maintain all the necessary recorded documents to provide the City with proper implementation of a QA/QC Program.

Key Personnel responsible for QA/QC

QA/QC Lead Rosaida Harris, will have overall responsibility for the Quality Management Plan (QMP). Rosaida is a QA/QC leader for AECOM Water projects. In close coordination with design and construction team,

Table 2-2. Our quality control process provides oversight at every step from concept to completion

Design-Build Quality Management	This plan will outline the quality assurance and quality control requirements for design, permitting, construction, commissioning, and testing phases of the project. The plan will detail procedures that we will apply to ensure that each element of the project is delivered with quality in accordance with the contract documents and industry standards. We will use standardized forms and checklists to document all procedures have been followed according to the plan.
Technical Reviews	Our ISO 9001 standards require review and sign-off by a Technical Quality Advisor for all key disciplines. This offers the project team timely reviews. Each submittal will be reviewed for engineering decisions and correctness of calculations, code compliance, as well as content, clarity and presentation, incorporation of standards, consistency with the City's project budget and schedule. Quality control reviews will be documented through our project website and each corrective action noted in our QA/QC log.
Construction Management and Inspection	The AECOM/Lyles team will provide full-time construction management services reporting directly to City staff to oversee construction activities and coordinate materials testing to confirm compliance with the design and approved shop drawings.
Acceptance Test Plan	This plan will outline the process and procedures for verifying all commissioning activities are coordinated, executed, and documented to demonstrate that the project performs satisfactorily in all manners, and meets all water quality objectives for final effluent reuse and disposal required by the Regional Board, including the Beaumont Basin Plan limits for TN and TDS.

she will be responsible for monitoring the QA/QC aspects of the project, coordinating with the appropriate lead engineers, construction management and site superintendents and technical discipline needs.

AECOM/Lyles Team has extensive QA/QC experience routinely performing full oversight of essentially self-inspection on many public projects. This experience will provide the City with a high level of transparency.

Team Partnership Environment

The AECOM/Lyles JV promotes collaboration across all elements of the project life-cycle and with all stakeholders—it is more than a philosophy, it is a core value. It demands proactive involvement, respectful dialogue, challenges to the status quo, and transparency by all parties. We have used our JV collaboration approach successfully on several of California's largest PDB projects. Internally, our design and construction personnel are fully integrated. This means that our designers are not designing in isolation; rather, they are in constant communication with construction personnel and your team to validate that key design decisions such as the location of construction joints, or the type of pipe restraint is consistent with what has been priced. This focused dialogue allows us to stand behind our commitment of "no surprises" at the GMP or at any interim pricing update. We commit to optimizing the City's goals and vision, and to best assure a successful project journey. This is illustrated on the next page in Figure II-2, which provides a roadmap that shows how we will develop and finalize the design during phase 1, maintaining the schedule while also incorporating crucial feedback from the City.

City Involvement and Communication

Key aspects of our collaborative approach that facilitate City involvement include:

- ✓ **Collaborative, detailed approach to ensure the right data is carried forward as design criteria.** The goal is to get all preferences and constraints on the table so the best options are advanced for implementation in the design.
- ✓ **Engineering meetings that seamlessly coordinate construction and operations elements.** Our design team holds internal weekly progress meetings. Every few weeks, production drawings are uploaded to MS Teams so that the estimating and construction teams can review. Joe, Gabe and Vince will efficiently manage constructability challenges to confirm the design drawings reflect the most cost-efficient approach to construct the project. As VE ideas arise they will evaluate the cost and schedule impacts and provide an overview to facilitate proactive dialogue with the City's project team. We will gain consensus with your team through bi-weekly coordination meetings that track overall status, and perform continuous constructability review and reach consensus on time sensitive issues.
- ✓ **Major milestone meetings to improve quality.** Our team meets ahead of major submittal milestones to QC the design plans, reports and specifications that accompany the submittal. This additional level of scrutiny holds all parties accountable on our team and further promotes our united, project-centric approach.
- ✓ **Real time pricing updates improve decision-making.** Starting with a solid initial estimate, we will isolate discrete alternatives with conceptual layouts; then provide real-time updates to show where the money is being allocated to facilitate value-based decision-making by the City.
- ✓ **Leadership meetings will increase collaboration and will occur throughout the project.** The City's team (including operations staff), owner's advisor and other stakeholders participation will be key to the project success. Meetings will be frequent early in the process, as Phase One decisions have the biggest impact on total project cost and operational considerations.
- ✓ **Executive meetings demonstrate our corporate commitment.** Monthly meetings between the City and our JV executive team (Grant Gourley and Brian Daly) can bring early corrective action. They also routinely reviews project status, adherence to the City's budget, staffing, and project challenges. Brian and Grant are design-build practitioners on numerous water/ wastewater design-build projects and will be actively engaged in the details of this project.

Project Manager Role

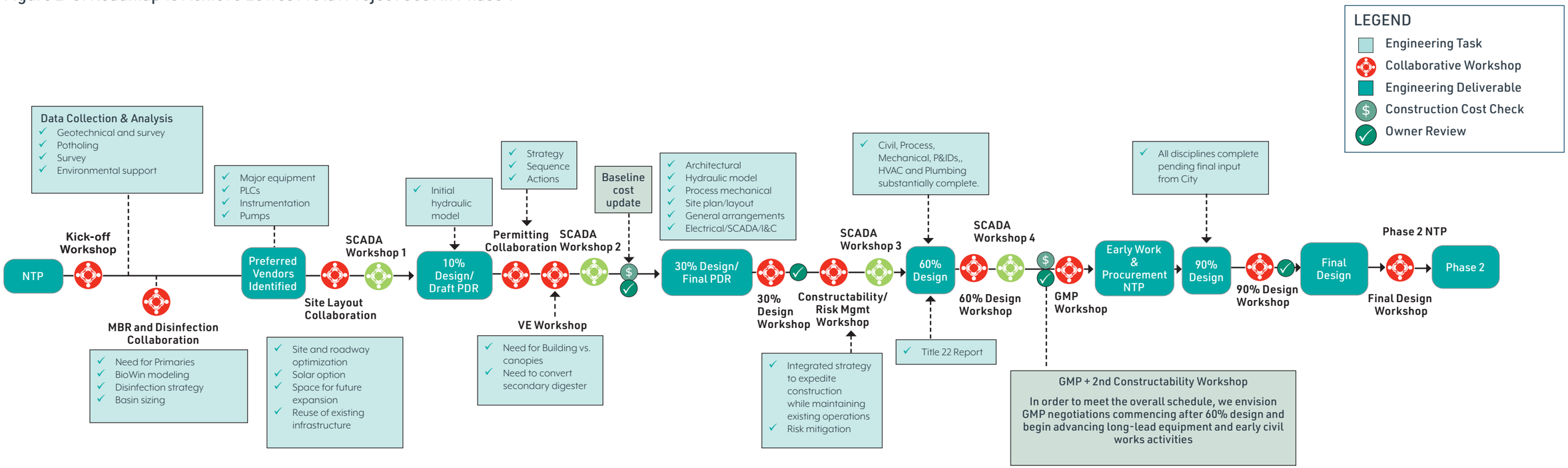
The project manager on this Project, Joe Lawrence, is responsible for overseeing the entire project team, including all firms and individuals involved in both pre-construction and construction phases. Joe has the authority to make critical decisions related to project management, resource allocation, and ensuring the project meets its goals and objectives. He plays a key role in integrating design and construction organizations, managing cost and schedule, and coordinating with key personnel and entities involved in the Project.



"I am fully committed to collaborating with the City and providing leadership to find the most cost-effective project that meets the City's objectives and provides for future growth and expansion.

– Joe Lawrence
Design-Build Project Manager

Figure 2-3. Roadmap to Achieve Lowest Total Project Cost in Phase 1



Our comprehensive approach to planning, collaboration and design development will result in clear decisions, streamlined procurement and construction and the Lowest total project cost delivered for your project

- A portion of the Project Progress Meetings will be allocated for Technical collaboration sessions. Only a few anticipated technical collaboration sessions are shown in this diagram.

- Value engineering will occur organically as part of our "Design-to-budget Approach". Value engineering will be specifically covered during the design workshops for the different design milestones as well as the cost update workshops.

- Dates and duration of activities, including anticipated permit sequence are included in the schedule, included in Appendix A.

BEST for BANNING

Our team will be well-prepared for each meeting, bringing the required detailed information to allow the City to understand the options and make the best choices to meet your budget

Below we present representative details to show how robust the preparation and documentation for each key meeting will be with the City so you can be confident in each decision made:

- ✓ **Kickoff meeting.** Discuss project expectations with the City including project execution, quality control, progress reporting, and deliverables. Review concept design and evaluate major unit process treatment that will meet the project performance goals. Make a preliminary selection of preferred major unit process options and vendors. A Project Quality Plan and Project Execution Plan will be developed for discussion in the kick-off meeting.
- ✓ **Technical Progress meetings.** The main purpose of the Technical Progress Meetings is to facilitate effective collaboration between the City and AECOM/Lyles to allow the selection of preferred unit process options that will be verified by subsequent design development. Evaluate and analyze the major unit process treatment alternatives that will meet the project performance goals and make a preliminary selection of preferred major unit process options.
- ✓ **Risk Management Workshop.** AECOM/Lyles will develop and maintain a risk log. The risk log is the key document used in managing risk. The log records risks identified during proposal and work plan development; workshops, technical reviews, and monthly project meetings; and through other events that occur during the project. An initial risk workshop will be used to build consensus among stakeholders and as a means to bring the Project together to identify and evaluate potential risks



PART III

Technical Approach

Delivering a quality project while driving down cost

Introduction

We appreciate the challenges the City faces in balancing numerous items associated with the expansion of its WWTP, including:

- ✓ Minimizing the cost to your rate payers
- ✓ Meeting future water quality requirements
- ✓ Promoting the use of recycled water
- ✓ Providing for long-term community growth

We will work closely with you to explore value based solutions and will be constantly challenging ourselves to make sure a design to budget approach is employed.

AECOM/Lyles has taken a close look at the City's initial concept and have noted several opportunities and challenges with this concept on Figure 3-1 on the following page. Later in this section, we present our concept that builds on the one presented in the DCR to optimize the project costs even further. We view this concept as the starting point on our collective journey to cost savings– throughout this section we present additional ideas, that if incorporated into the final scope, will provide the City additional cost savings while still meeting all of your core goals of this environmentally sensitive project.

BEST for BANNING

Throughout this Section we highlight how are team is committed to doing what is best for Banning. We will bring forward the most cost-effective solutions—but not at the cost of quality. We will not cut corners or propose items that are not in your best interest.

Our cost saving ideas can save the City more than $10M

Hydraulic Capacity

We understand the importance of efficient hydraulics and accurate flow splitting between unit processes. Our team will optimize the head loss through the plant to **reduce the energy costs associated with increased pumping, significantly reducing the initial capital and lifelong operating costs of the facility**.

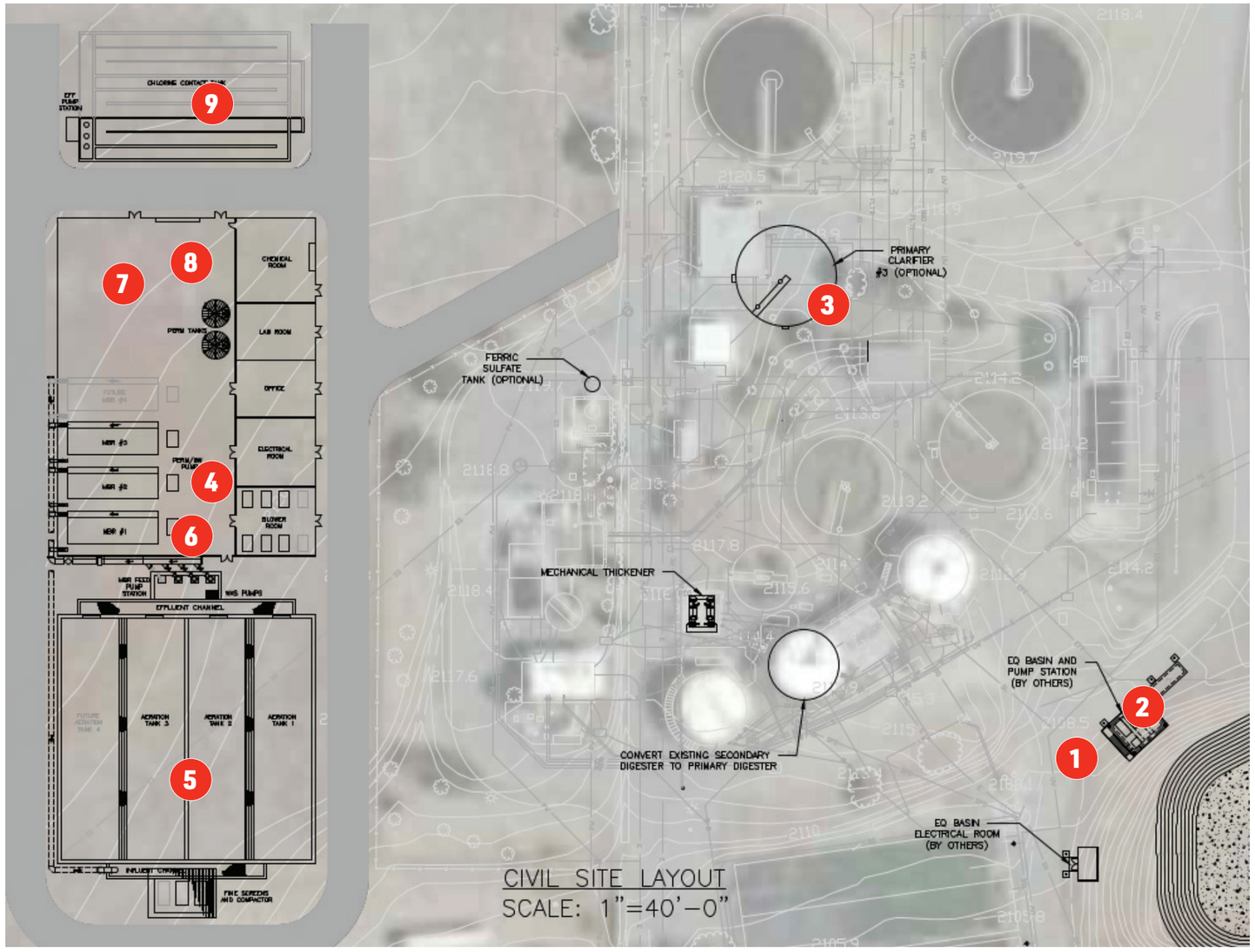
We will confirm existing profiles (as related to our new work) to ensure compatibility with existing plant tie-ins and prepare a comprehensive hydraulic profiles that considers minimum, average, and maximum flow rates and considers anticipated critical units out of service.

Figure 3-2 on page 3-3 show our initial hydraulic profile and a drawing is included in Appendix A. **Our proposed scheme will minimize pumping as the wastewater will only be pumped once from equalization through the MBR process**.

BEST for BANNING *Hydraulic Highlights- Building in Reliability & Flexibility for the future*

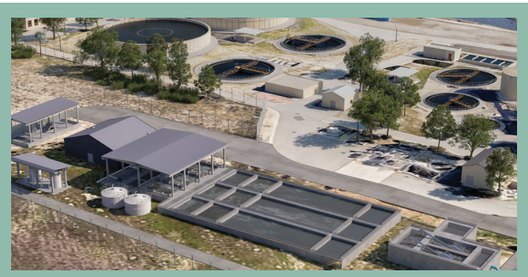
- ✓ **Redundant pumping (one redundant pump in all trains that convey the rated hydraulic capacity)**
- ✓ **In normal operation, one duty fine screen and one backup. Future third channel.**
- ✓ **Three aeration basins, two duty and one standby**
- ✓ **Three Membrane Tanks, two duty and one standby**
- ✓ **UV disinfection channel duty (~.5 MGD) and remaining flow directed to percolation ponds or UV disinfection channel off-line and all flows directed to percolation ponds**

Figure 3-1. Challenges and Opportunities with the City's Base Design presented in the DCR



When we looked at your DCR documents and drawings, we identified several key areas that were potentially adding cost, were technically complex or had implications for long-term operations or future expansion. These key items are summarized below and on page 18, we present our recommended solutions to improve the project budget and overall plant performance.

1. **Plant wide comprehensive hydraulic approach** – Due to flat topography of the site careful consideration must be given to minimize long term operations costs associated with pumping flow multiple times vs use of gravity conditions where possible.
2. **Water quality and flow data availability** – use of historical data can be supplemented with text book evaluations for overall plant design considerations
3. **Balancing the use of existing assets verses constructing new systems** - utilization of existing plant primary clarifiers versus need for an additional primary as it relates to the overall ability of the plant to meet future effluent guidelines.
4. **Identification of critical equipment and preselected vendors** – this strategy will allow all parties to gain early certainty in performance, project schedule and total project cost early in the project .
5. **Beaumont Basin water quality requirements (specifically for Total Nitrogen)** present a unique challenge for reuse and overall design of the facility. Consideration and inclusion of a supplemental carbon source will be required to meet RWQB requirements.
6. **Identifying design elements and construction approach to take advantage of adjacent structures** will shrink the overall footprint on site, reduce subsurface utilities and lower the total project cost.
7. **Getting the sizing correct**- Right sizing building and units to accommodate immediate needs and potential future regulatory or facility expansion
8. **Costly RO system adds significant complexity** to the plant layout and more important operator interface, monitoring and maintenance .
9. **Industry accepted CCT approach using Sodium Hypochlorite works against the Beaumont Basin TDS requirements** and challenges long term treatment goals. Using a technologically accepted alternative will lower overall operations cost, promote reuse, and align with long term TDS goals





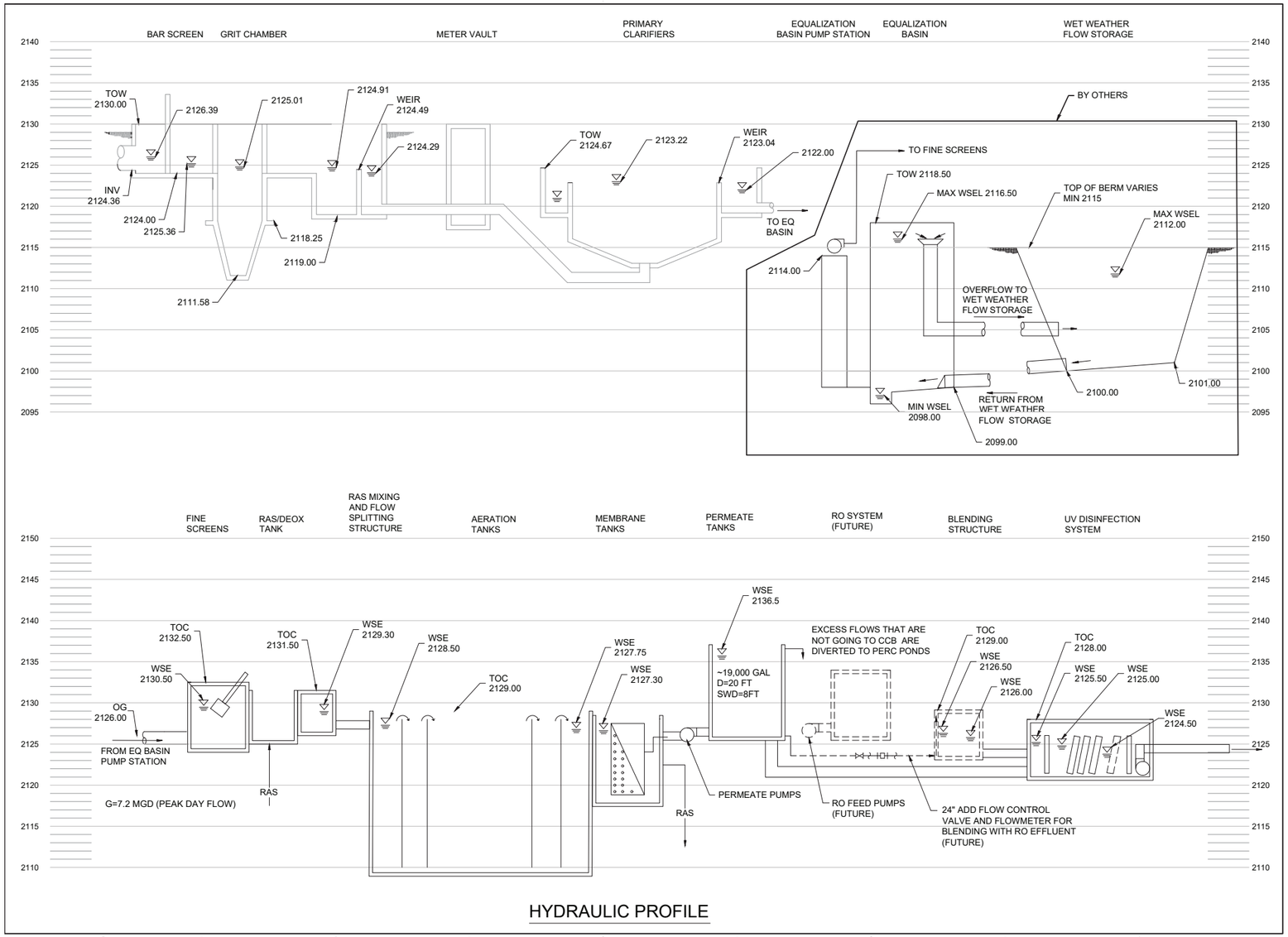
OUR INNOVATIVE CONCEPTS WILL SAVE THE CITY MONEY

- ✓ Shrink the size of the basins while still providing sufficient redundancy
- ✓ Using existing assets instead of new construction where practical
- ✓ Strategy to eliminate the need for the costly RO system will still meeting reuse goals
- ✓ Placing MBR under canopy instead

Details of our cost saving solutions are presented on Figure 3-3 and throughout this section

Figure 3-2. Our Hydraulic Profile Minimizes Pumping Costs

Our initial assessment is that the new primary effluent equalization basin pump station can convey the primary effluent from the equalization pump station to the proposed 2-mm mechanical screens. Effluent will be combined with return activated sludge (RAS) from the membrane tanks and then flow by gravity to a splitter box for even distribution through each aeration tanks and ultimately to the membrane tanks. Treated effluent (permeate) will be pumped out of the membranes to fill permeate tanks that will feed the UV disinfection process and or discharge to the percolation ponds (via the existing chlorination tank).



HYDRAULIC PROFILE

AECOM W.M. LYLES CO. a joint venture

PROJECT

BANNING WWTP RECYCLED WATER UPGRADES PROJECT

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Banning, CA

CLIENT

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REGISTRATION

CONCEPTUAL

ISSUE/REVISION

I/R	DATE	DESCRIPTION

PROJECT NUMBER

04191986

Designed By:	JF
Drawn By:	IB
Dept Check:	CB
Proj Check:	GP
Date:	OCTOBER 2024
Scale:	AS NOTED

DISCIPLINE

GENERAL

SHEET TITLE

HYDRAULIC PROFILE

SHEET NUMBER

00 G-006

Based on flow data presented in the Carollo study (2018) and the primary effluent equalization design documents, we believe the maximum day flow of 7.2 MGD shown in the conceptual design documents correlates to a peak hour wet weather flow. Based on the most current equalization basin and pump station design provided we believe the stated peak hourly flows can be managed by the equalization basin volume and the maximum daily flow rate should be in the range of 5 to 5.5 MGD which could also be mostly absorbed by the EQ basin. We recommend that early in the design setting a reasonable maximum day flow to secondary treatment that balances design hydraulic throughput with the cost of implementation.

We will confer with the City prior to finalizing design decisions cost and operational implications. **This collaborative effort will provide the City with all the technical and non-technical information necessary to make value-based, design to budget decisions that meet the City's current needs while also creating a plan for the future.**

BEST for BANNING

Future-proofing the WWTP for future flows and loads

- ✓ Piping sizing and layout for fourth aeration basin
- ✓ An expandable flow splitter box
- ✓ Space in membrane tanks for additional membranes to accommodate flows for a fourth aeration basin
- ✓ Space in the UV channel to accommodate additional UV banks for additional disinfection capacity
- ✓ Tie ins and layout for a future RO system and space for evaporation ponds
- ✓ Electrical systems expandable to accommodate the expanded facilities described above
- ✓ Spare I/Os in PLCs
- ✓ Spare conduits for electrical and instrumentation.

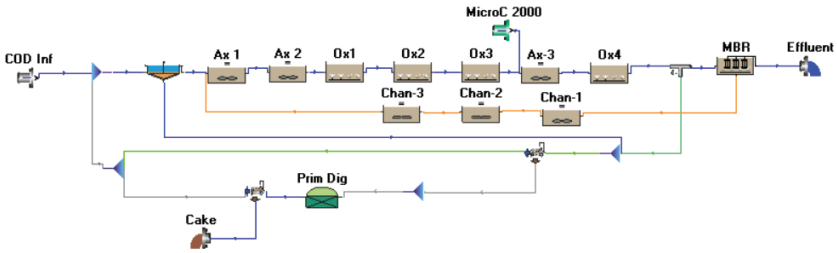
Treatment Processes, Equipment Selection & Capacity

Our team has invested significant effort over the last several months to develop concepts that demonstrate our project understanding, innovation and commitment to partnering with the City to deliver fiscally responsible solutions that consider both up-front capital and long-term operations cost savings, as summarized on **Figure 3-3** on next page.

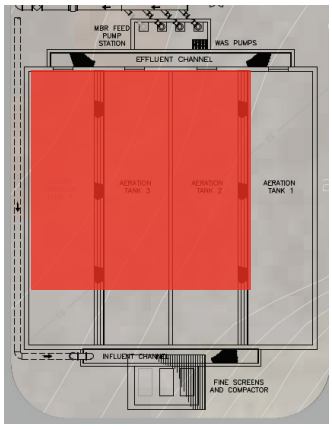
Determining the volume requirements for the major new process areas and establishing mass balances and critical process requirements for mechanical equipment is dependent on flows and wastewater constituent loads. The recommendations we are presenting herein are a result of our of review the water quality data provided coupled with industry accepted guidelines and representative data from other plants in the area. Our concept is to provide a facility that is right-sized without over-designing and causing challenges to the operations staff and having facilities that may not be needed for many years.

We successfully used a similar approach for City of Stockton, for the upgrade and expansion of their WWTP. Thus, as discussed in our confidential meeting with you, our base approach for your facility is to design the MBR facility to treat the 30-day maximum monthly of 3.6 mgd with BOD, TSS and TN concentrations as specified in the July 2024 CDR presented with the RFP.

In support of our approach, we developed an initial plant-wide process model in Biowin. We estimated primary clarifier TSS removal efficiencies using historical correlations between hydraulic retention times and TSS. The anticipated removal efficiency ranged from 55-60% for 2mgd to 45-50% for a peak of 3.6mgd.



Our modeling shows 1.2 MG is available within a three aeration tank configuration



Our modeling indicates that the City would have sufficient capacity with our proposed three aeration tank approach with a combined volume of 1.2 million gallons. **This approach provides sufficient redundancy to allow a tank to be removed from service and is about 17% smaller than the volume shown in the draft drawings in RFP.** This design to budget mindset is the cornerstone of our approach to assist the City with stretching is dollars to get the most out of the facility.

We had a VE session and spoke to hollow fiber membrane vendors about best practices and O&M considerations. This helped us achieve a layout that streamlines construction, considers future expansion and reduces the total project cost.

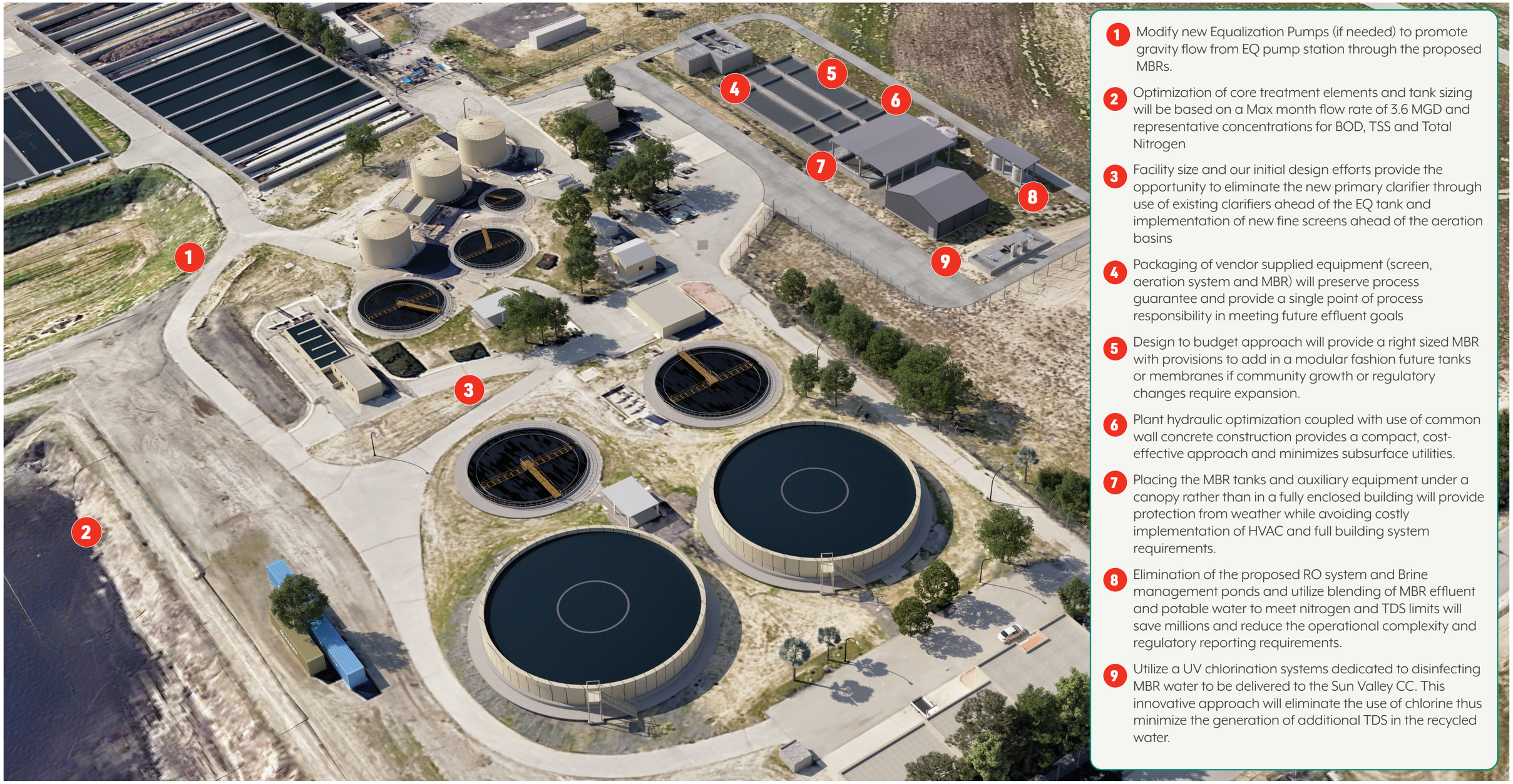
Key concepts for the development of the design of the new treatment facilities are here discussed following the flow of water from primary settling, through equalization and pumping, fine screening, biological treatment with a MBR system (aeration tanks and membrane tanks), and disinfection.

BEST for BANNING

Proven Experience implementing our Proposed Solutions

- ✓ **Beaumont.** MBR system installation at neighboring desert community
- ✓ **Stockton:** we analyzed the flows and loads, and future flow projections to implement a strategy that deferred some expansion to a future date, if and when it was needed.
- ✓ **Multiple MBR installations:** we have developed designs for similar-sized facilities such as Sand Island WWTP (Hawaii), City of Brandon (Canada), North Gate (Arizona), Provo (Utah).
- ✓ **Rialto.** Progressive Design-build where AECOM/Lyles did significant design to budget VEs to find a project scope that solved Rialto's WWTP issues while staying within their budget.
- ✓ **High Desert.** Progressive Design-Build of treatment plant including MBR and UV

Figure 3-3. Our Design Concept Provides Numerous Cost Saving Options



1. Modify new Equalization Pumps (if needed) to promote gravity flow from EQ pump station through the proposed MBRs.
2. Optimization of core treatment elements and tank sizing will be based on a Max month flow rate of 3.6 MGD and representative concentrations for BOD, TSS and Total Nitrogen
3. Facility size and our initial design efforts provide the opportunity to eliminate the new primary clarifier through use of existing clarifiers ahead of the EQ tank and implementation of new fine screens ahead of the aeration basins
4. Packaging of vendor supplied equipment (screen, aeration system and MBR) will preserve process guarantee and provide a single point of process responsibility in meeting future effluent goals
5. Design to budget approach will provide a right sized MBR with provisions to add in a modular fashion future tanks or membranes if community growth or regulatory changes require expansion.
6. Plant hydraulic optimization coupled with use of common wall concrete construction provides a compact, cost-effective approach and minimizes subsurface utilities.
7. Placing the MBR tanks and auxiliary equipment under a canopy rather than in a fully enclosed building will provide protection from weather while avoiding costly implementation of HVAC and full building system requirements.
8. Elimination of the proposed RO system and Brine management ponds and utilize blending of MBR effluent and potable water to meet nitrogen and TDS limits will save millions and reduce the operational complexity and regulatory reporting requirements.
9. Utilize a UV chlorination systems dedicated to disinfecting MBR water to be delivered to the Sun Valley CC. This innovative approach will eliminate the use of chlorine thus minimize the generation of additional TDS in the recycled water.

Vendors Selection for Large and Critical Processes and Electrical Components

During the early stages of Phase I, a critical step will be the identification, pre-selection of vendors for competitive solicitation efforts of critical equipment including an MBR package (potentially inclusive of fine screens, aeration system (blowers and diffusers), permeate pumps, and membrane equipment) and UV disinfection system. We have found this approach to be effective as it provides MBR vendors sufficient control over the scope of supply to allow provision of a reliable performance guarantee while still maintaining a competitive procurement process. We will also consider other long lead equipment such as transformers and electrical switchgear. This step will be completed in collaboration with the City and your advisory team to ensure that the pre-selection includes the City's preferences and ability to provide reliable service following post construction.

Early solicitation and selection allows the design to confidently identify footprint, piping and electrical and instrumentation requirements to provide an accurate final design that avoids design revisions and other costly surprises during the construction phase. This effort will also mitigate schedule constraints, secure early pricing certainty and help to reduce the total project cost.

From our past experience with MBRs and other technologies, we have developed a strong understanding of what works and what doesn't work. We align with industry leading vendors that provide process and performance guarantees for their equipment. Our approach further encourages flexibility from the suppliers to contribute their know-how to ensure innovation is incorporated, that is budget-conscious.

Our procurement approach has been successfully implemented on numerous past progressive design build projects for public agency Owners that have secured both SRF and WIFIA project funding. We will develop and finalize a cost evaluation for use in evaluating the equipment proposals. With the City's input, we will carefully document our evaluation so that once it is complete, the decision-making process will be thorough and clear. On previous projects, Owners have chosen to proceed with advancing the procurement process through and early GMP and lock critical equipment vendors into guaranteed pricing for the project. We would look to explore this option with the City (typically around the 30% design phase). A key benefit is obtaining shop drawings during the design phase which will expedite the design and delivery of the equipment and over all reduce the risk of design and construction challenges later in the project.

BEST for BANNING

When we procure the MBR system we will specify to the vendor key parameters for them to base their proposal on–Specifying what works rather just accepting whatever arrangement the vendor typically provides.

BEST for BANNING

We will take a close look if primary clarifiers are actually needed as part of the new treatment system—eliminating them would provide cost savings to the City

Discuss the anticipated useful life of the proposed systems

A key element to ensure value for the City is to ensure the quality of the construction and a long useful life for the equipment selected. In general concrete structures and buried civil infrastructure will last over 50 years. Equipment useful life will depend on materials used as well as proper installation, and O&M: however, Table 3-1 presents planning level useful life expectancies.

Table 3-1. Anticipated Useful Life

Infrastructure	Anticipated Life
Concrete structures	50 years
Permeate tank	30 years
Membranes	10-15 years
UV System	20 years
Blowers	20 years
Pumps	15-20 years
Fine Screens	20 years
Buildings & Canopies	20-25 years
Rotary Drum Thickener	15-20 years

Primary Clarifiers

The design team assessed the two existing primary clarifiers. Based on our previously mentioned removal rates for TSS and BOD and the use of 2 mm fine screens, we believe a third primary clarifier can be deferred to the future and not be provided as part of this project. There are many MBR plants of a size similar to this one that operate without any primary clarification. Our review of past condition assessments revealed that the primaries are in good condition, and could be left in operation to provide continued removal of solids upstream of the fine screens. The size of the aeration tanks, aeration system (blowers, diffusers) we have modeled (for a 1.2 MG overall tank volume) accounts for the elimination of the third clarifier. A secondary benefit of this approach is its support for achieving Total Nitrogen reduction goals in the plant. **An additional primary tank could remove too much carbon from influent and require a costly additional chemical dosing system ahead of the membrane tanks to achieve this water quality goal**.

Equalization Pump Station and Off-line Equalization

Although this process is currently being added under a different project it is important to confirm during design that the equalization pumps provide sufficient head and flow to meet the elevation requirements for the new fine screens to optimize the water level in the aeration and membrane tanks. Early in the design, an assessment should be made of the optimal elevation for siting the new MBR facility. There is typically significant cost and operability differences between locating the aeration tanks aboveground, below ground or partially in the ground, based on geotechnical conditions, construction costs and operability. Once this is established, the operating conditions for the EQ pumps can be finalized.

Fine Screens

The build-up of debris within the membrane tanks is operationally unacceptable and an ongoing challenge for MBR operations. MBR manufacturers properly require the installation of fine screens upstream of the MBR to remove inorganic material, fibers, and hair present in the wastewater stream before they get into the membrane tank. Manufacturers of hollow fiber membranes, typically, require 2 mm or smaller openings to protect the membranes while flat sheet MBR systems allow larger openings as their cassettes are less affected by the accumulation of solids.

Our approach considers in-channel gravity rotary drums equipped with perforated plates as they provide proper protection for the membranes, are easy to maintain and provide efficient solids collection and handling.

Figure 3.4 illustrates a layout for in-channel gravity rotary drum screens at your new plant. Primary effluent after diurnal equalization will be pumped from the new primary effluent pump station into the fine screening influent channel. Two screens, each sized for 100% capacity will designed. Space for a third screen will be reserved for future expansion. The solids collection and management system can be equipped with an integral bagging system that will both assist with solids consolidation into the solids container with the additional benefit of odor mitigation.

Aeration Tanks

Hydraulic and biological modeling of the new aeration and MBR facilities will be important in optimizing the design of the anoxic/aerobic zones and RAS de-oxygenation zone to meet the anticipated permit requirements for nitrogen.

We have conducted a preliminary plant-wide treatment model based on the data available with the RFP, supplemented and enhanced with plant influent data (COD, N and P) collected by this team on wastewaters of similar strength and community demographics in southern California. We also considered anticipated loads generated by your solids processing and digestion (three primary digesters) systems—particularly the stream containing the high ammonia concentration from the drying beds and future dewatering. Some of the key considerations are described on the two pages.

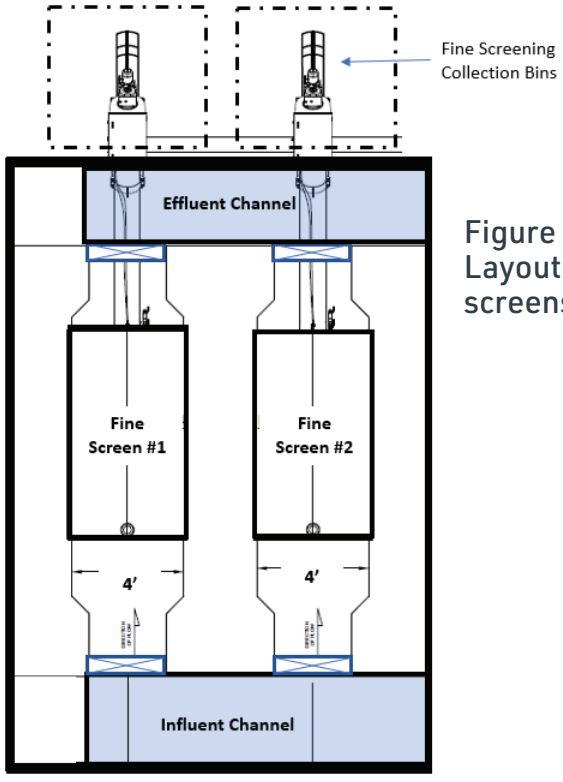


Figure 3-4. Layout for fine screens

After review of three and four-tank configurations, a three-tank configuration for the aeration tanks is recommended to minimize overall cost. Based on the conceptual-level process modeling results, a total volume of 1.2 million gallons. An aerobic Solids Retention Time (SRT) of 8 days was assumed under winter conditions and a maximum Mixed Liquor Suspended Solids (MLSS) concentration of 8,000 mg/L was used. This is well below what most MBR facilities can operate (10,000 mg/l). The aerated zones in the three aeration tanks will be supplied air from a common air header system and three blowers in a two duty/one standby configuration. Space will be allocated for a fourth MBR of identical dimensions and additional blowers to allow the City to build additional treatment capacity in the future.

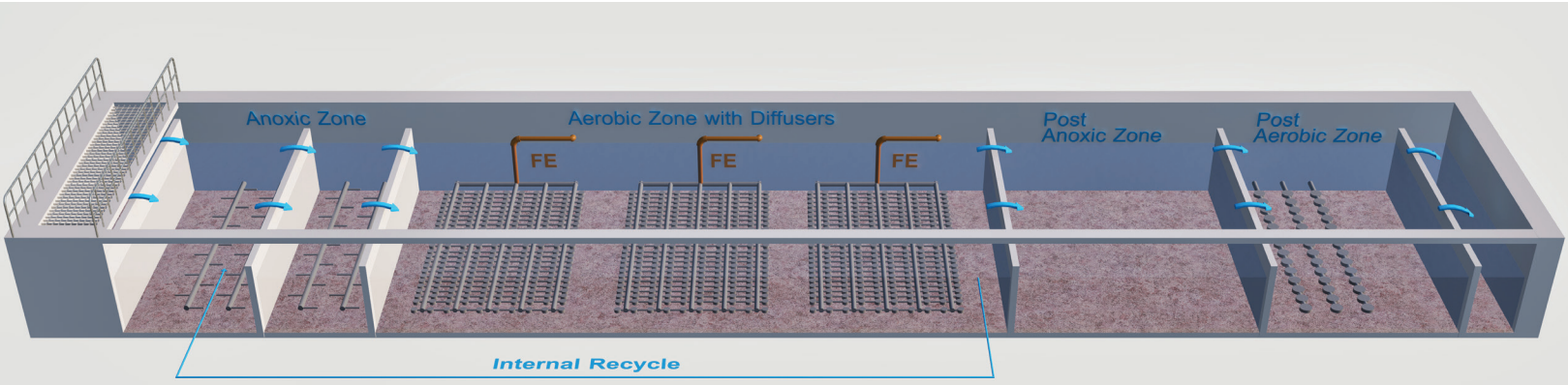
A 4-stage Bardenpho process will allow the City to reliably meet the plant effluent Total Nitrogen (TN) limit of 10 mg/L (see Figure 3.5). The "Pre-Anoxic" zone will receive nitrate from the Return Activated Sludge (RAS) from the downstream membrane tanks (see following section on the membrane tanks) and Internal Mixed Liquor Return (IMLR) as shown below. Following the Pre-Anoxic zone will be a single aerated zone with dissolved oxygen control. The "Post-Anoxic" zone in each reactor will provide endogenous denitrification. In the final "Post-Aerobic" stage, the mixed liquor will be aerated to oxidize remaining ammonia prior to the mixed liquor flowing into effluent channel. With the RAS and IMLR pumps, the operators will have an opportunity to optimize nitrogen removal through the different seasons.

A mixed RAS Deoxygenation Zone with 5 minutes of contact time at the 3.6 MGD design condition will allow the dissolved oxygen to be depleted prior to the RAS being mixed with primary effluent. Depleting the dissolved oxygen in the RAS ahead of the primary effluent will allow more readily degradable carbon to be available for denitrification in the Pre-Anoxic zones without the need for an expensive additional carbon chemical system.

Blower Selection – High-speed turbo blowers and hybrid (rotary screw) blowers will be considered for process aeration. Blowers are also required for scouring the membrane cassettes to manage membrane fouling. For the size of this facility, a positive displacement blower is most common. Final selection will not be based solely on membrane supplier preferences or the lowest equipment cost, but will also consider operating cost and maintenance requirements, with the City's input to ensure this key process mechanical equipment meets the City's needs. As noted above, space will be provided in the blower room for installation of an additional blower(s) in the future.

Diffuser Type Selection – There are a wide variety of diffusers available in today's markets in many different shapes and materials. Each performs differently in a site-specific environment in terms of fouling and long-term oxygen transfer efficiency. Our team has performed diffuser analysis for other facilities in California and will bring that experience to the City. Fine bubble disc and tube diffusers will be considered since they are most commonly used and multiple manufacturers are available for competitive bidding. Selection will be based on the option that meets the oxygen transfer requirements and efficiency at the lowest cost.

Figure 3-5. The aerated zone that follows the Pre-Anoxic zone would be comprised of three separate diffuser grids



Diffuser Layout – Aeration diffusers provide air for both oxygen transfer and mixing energy in the aerated zones in each aeration basin. They must be laid out in patterns that allow the changing oxygen demand along the length of the aerated zone to be efficiently met. Diffusers are typically laid out in a tapered density pattern as the first level of control of airflow rates. Higher oxygen transfer is required in the upstream section of the aerated zone where oxygen demand is highest, resulting in a need for a higher diffuser density, and lowest at the end of the aerated zone prior to the Post-Anoxic zone. Diffusers will be designed in specific grids sized to allow localized control. The aerated zone that follows the Pre-Anoxic zone will be comprised of three separate diffuser grids, each with a Dissolved Oxygen (DO) probe, an air flow control valve with high precision actuator and air flow meter. The aerated zone downstream of the Post- Anoxic zone will have a single diffuser grid. The ultimate diffuser layout will be proposed by the diffuser supplier in concert with the MBR supplier and in close coordination with AECOM/Lyles.

Airflow Control System –Our experience has shown that primary effluent constituent loads to the aeration tanks will change throughout the day due to diurnal changes in their concentrations (cBOD5, TKN). In-line analyzers (DO probes) and automated control systems (most open valve/blower output) providing an instantaneous response to these changing conditions will be implemented.

The design will be based on tapered DO setpoints for the three diffuser grids in the aerated zone that follows the Pre-Anoxic zone such as 2, 1.5 and 1 mg/L. The aeration system will have sufficient turndown to allow lower setpoints to be used to optimize performance and minimize energy consumption. The DO concentration at the end of the aerated zone will be designed to be no higher than 1 mg/L since the IMLR pumps send mixed liquor from this location to the Pre-Anoxic zone.

The DO in the aerobic zone following the Post-Anoxic zone will be designed for greater than 1 mg/L to ensure residual ammonia is thoroughly oxidized.

Optional Aeration Improvement. There has been an increasing trend in the industry in the use of Ammonia Based Aeration Control (ABAC) to control airflow while using DO probes to establish both maximum and minimum set points. In our experience from implementing ABAC in other facilities, this is a reliable control philosophy that further minimizes blower power consumption while optimizing process performance. However, ABAC requires ammonia probes and associated maintenance and calibration. Information on

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A small, low cost supplemental carbon addition system will allow the plant to meet treatment objectives without a costly RO system

ABAC can be provided to the City to determine if its implementation is justified and best meets the City's needs. This will be one of the topics planned for one of our technical collaboration segments.

Large bubble mixing is proposed for use in the RAS de-oxygenation zone, bioreactor mixed liquor effluent channel and the anoxic zones as this mixing approach has the lowest energy costs. Note the proposed **use of a PE/RAS flow splitter box eliminates the need for a flow distribution channel and its associated mixing requirement**.

Supplemental Organic Carbon Addition – While advanced WWTPs commonly achieve an effluent TN of less than 10 mg/L without any carbon supplementation, our approach for deferring the RO will require an effluent nitrogen of approximately 6 mg/L for meeting blended water quality requirements for reuse at Sun Lakes. Since this lower level of effluent nitrogen may not be achievable, we recommend including a supplemental carbon feed system. By providing carbon storage, pumping, piping, and distribution diffusers in the Post-Anoxic zones in the three aeration tanks, supplemental carbon can be added as needed. Micro-C 2000, a non-hazardous glycerin-based product produced and marketed by Environmental Operating Solutions, Inc. are commonly used for facilities of this size and is recommended by AECOM/Lyles. Dosage rates can be controlled by a nitrate-N probe in each Post-Anoxic zone. This approach will reduce TN to a level low enough to minimize the amount of potable water used for blending to defer the RO system construction.

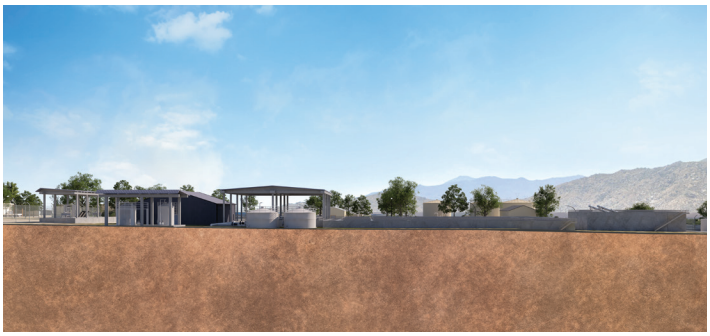



Figure 3-6. A 3-tank configuration is cost effective and allows for easy expansion in the future

Membrane Tanks

Based on our experience from developing designs for similar-sized facilities, and following discussions with several prominent MBR suppliers, our team has developed a preliminary layout with several innovative/ alternative ideas that enhance the system layout, performance and operator interface. The design is based on typical dimensions using hollow fiber cassettes. Flat plate technology can also be used in a similar configuration.

Figure 3.6 illustrates a 3-tank configuration and how we propose to integrate the membrane tanks within the new biological system.

The concept layout shown utilizes the Veolia Leap MBR cassettes. This approach will require four cassettes (500EV modules), and with one membrane tank out of service will meet the City's peak flow (3.6 mgd) and load requirement. The proposed two-row cassette layout is advantageous since it reduces the length of the tanks and provides a more compact common-wall design and provides a conservative flux rate of 14 gfd under average day flow conditions. During the detailed design we will explore with the City the option to add an additional six feet of length to accommodate additional cassettes consistent with a fourth (future) aeration basin.

In this layout, the footprint includes an average sidewater depth of 20 feet (which we deem to be optimal for aeration design) and will be gravity-fed through a common channel that collects flow from all aeration tanks in service. Lastly, two duty RAS pumps will be required to pump up to 15 MGD (400% of the primary effluent flow rate) to limit the membrane tank MLSS to 10,000 mg/L at the design condition. At plant influent flows and loads in the near-term, the RAS pumping rate is anticipated to be 100 to 150% of the primary effluent flow rate. Waste Activated Sludge (WAS) pumps (one duty/one standby) will also pump sludge from this channel to the mechanical thickener.

Our initial cost assessment of this layout suggests that **a concrete structure with common walls for the entire MBR system is the lowest cost option**, in comparison to concrete aeration tanks followed by elevated individual stainless steel membrane tanks that will require additional piping, controls and electrical elements.

Other key design-to-budget aspects of our robust and flexible membrane tanks approach include:

- ✓ Total membrane filtration area and range of design fluxes minimize fouling for the following flow conditions: 30-day ADWF of 3.6 MGD; peak 24-hour average flow up to 5 MGD.
- ✓ Provide spaces to accommodate additional membranes for future flows without capital expansion
- ✓ Provide redundancy to allow one membrane tank to be removed from service for the clean-in-place procedure required
- ✓ Minimize pumping energy by pumping only RAS back to the aeration basin rather than pumping ML (PE + RAS flows) to the membrane tanks
- ✓ Safe delivery and storage areas for membrane cleaning chemicals (i.e, sodium hypochlorite and citric acid)

Scum Management. Scum formation is anticipated to occur at some undefined frequency in the three aeration tanks and MBR tanks. A manual weir gate is proposed at the end of each tank that allows the operators to lower the weir to remove scum from the tanks. A similar manual weir gate will be provided in the RAS channel at the end of the membrane tanks. In both cases scum will be conveyed to a scum wet well and pumped to the digester inlet.

Final Disinfection

A portion of the MBR effluent will be used for unrestricted water reuse (irrigation) and will require Title 22 disinfection. The remaining MBR effluent diverted to percolation ponds does not require disinfection and will reduce the size of this systems thus right sizing the overall application lower both the capital and long-term operating costs of the facility.

The DCR base approach project includes chlorine disinfection using a three-pass 110,000-gallon chlorine contact basin (LxWxD of 60x20x12 feet, respectively) to provide a chlorine residual that provides 450-milligram minutes per liter (mg-min/L) under a minimal modal contact time (CT) of 90 minutes. The chemical for disinfection is NaOCl. Per the 2022 Feasibility Report, the cost of this contact basin and chemical storage and feed system is ~ $2.4 M. This is a solid approach that follows industry accepted practice and guidelines.

Our team examined this approach and applied some additional critical thinking including operability, meeting future water quality requirements, and providing recycled flow to the Sun Lake Country Club. We concluded that a UV system would best serve the City's goals for this project while meeting disinfection requirements. We believe **UV is a more cost-effective solution that is readily expandable to accommodate future demands.**

One of the key considerations of our proposed modification is that chlorine disinfection utilizes sodium hypochlorite (NaOCl), which increases the Total Dissolved Solids of the effluent. We estimate the additional TDS added to the MBR effluent within the 12-15 mg/l. This outcome is contrary to the City goals associated with the anticipated RWQB requirements and need to reduce TDS overall to provide a suitable water source to the Sun Lake Country Club. The additional costs associated with an RO system, brine management and disposal approach make our approach highly attractive. We have also considered a cost effective unique approach to the recycled water production for the country club described in greater detail below. **Eliminating the hypochlorite disinfection approach will save up to $75k to $95k annually.**

In recent years and on several projects (Rialto, Stockton) AECOM/WML have compared the life cycle cost of UV and chlorine disinfection (both chloramination and free chlorine) and UV disinfection has turned out to be the most economical alternative. For Banning, because of the improved UV transmittance of membrane effluent (>65%), UV disinfection is particularly attractive.

We have done a preliminary design for a UV facility for 1.07 mgd (the combined amount used by Sun Lake CC and by the new plant)and this will require a single channel (LxWxD of 35x5x8 feet, respectively) with three UV banks (two duty and one standby, each bank with 4 modules with 8 250 W lamps per module). Our preliminary estimate of the construction cost for this system is approximately $ 0.75 M

The approximate annual power usage and cost to treat 1.07 mgd are 140,160 kW and $14,160, respectively. An additional bank can be added to increase the firm capacity for this system to 1.6 mgd, if additional capacity is needed in the future.

Primary Sludge and Waste Activated Sludge Processing

While co-thickening primary sludge and waste activated sludge (WAS) is shown in the RFP documents, our experience is that the primary sludge will likely not be consistent enough to give a stable operating point for the mechanical thickener. This could result in the need to construct, operate, and maintain a large combined sludge storage tank with feed pumping ahead of the thickener to provide a more consistent solids composition by mixing and equalization. With respect to gas production it is beneficial to avoid spikes can result from intermittent feed pumping and instead have a mostly continuous feed of sludge (especially primary) to the digester which can provide constant gas production and more stable digester operation. Therefore, the team proposes to keep the two sludges separate and the primary sludge will be fed to the digesters as it is done in the current operation while thickening the WAS. Since primary sludge readily thickens, we suggest adding a density meter to the combined discharge of the primary sludge pumps to provide feedback to the operators for achieving the desired primary sludge feed concentration to the digesters.

Our recommendation is to provide two rotary drum thickeners (one operating, one spare) to thicken WAS with space for expansion in the future. We agree with the RFP selection of rotary drum thickening (RDT) as the most cost-competitive thickening technology for this application and installation size. Furthermore, there is demonstrated experience with the unattended operation of RDTs with WAS feed, which provides the City with greater flexibility for 24-hour WAS processing and constant feed to the digester while saving on capital cost by installing a smaller unit.

Mechanical thickening will be provided with the associated polymer feed system. We recommend that the skid system using liquid polymer totes. Both thickening and polymer system will be installed outside under the canopy structure.

Recuperative Thickening Alternative. A main driver for the mechanical thickening is the optimization of digestion capacity. As an alternative to thickening WAS prior to digestion or separately thickening primary sludge in the future, the City could consider recuperative thickening of digested sludge. Recuperative thickening consists of pumping some sludge from the digester, thickening it and returning thickened sludge into the digester. This could be cost-competitive and provides several operational benefits. First, it keeps the digester feed operation the same as it is currently. It can be operated on demand, when there is a need for more digester capacity. The feed to thickening is more uniform since it is digested solids, making it easier to control the thickening performance. Recuperative thickening does not require tanks upstream or downstream, and the thickening process can happen for each digester in sequential order. The limit of thickening is typically based on the type of digester mixing system. Although replacing the digester mixing system is not part of this project, it may be possible to change the digester mixing system in the future to further increase overall capacity. For example, this could be done using low speed, high torque mechanical mixers similar ones our team is implementing on the East County AWP project in Santee.

Conversion of the Secondary Digester to a Primary Digester. As stated in the RFP scope, the secondary digester needs to be upgraded to a primary digester to ensure the City can continue producing Class B biosolids. We will provide new digester heating system similar to the heating systems of the other digesters for the familiarity of operation and controls. Digester gas handling and use for the upgraded digester will be connected to the existing boiler and the digester gas flare. Although the upgrade of the digester gas system is not in the scope of this project, once the thickening system is selected and designed, the potential peaking factors in digester gas production in the future upgraded system be evaluated. If the digesters feeding happens over short periods of time at higher rates, the digester gas peak flows may potentially be higher than the existing system capacity and may require an upgrade.

Our Solution alleviates the need for RO

A key element of this project is to produce recycled water suitable for irrigation within the boundaries of the Beaumont Basin, specifically the Sun Lakes Country Club.

The DCR includes an RO system to reliably meet the water quality objectives for this basin, specifically TN ≤ 5 mg/l and TDS ≤ 330 mg/L. All other uses have less restrictive water quality objectives. We anticipate that the water quality generated by the MBR system will have a TN < 6.3 mg/l and TDS of ~380.

The proposed RO solution has substantial capital and annual operational costs to the City. Additionally, the handling of multiple chemicals for scaling minimization and periodic cleaning of the membranes will place additional stress on the operations staff and possibly require additional personnel support. Lastly the option requires a large amount of land allocated for brine disposal evaporation ponds (potentially up to 15 acres or more depending on the treated flow).

Per the 2022 Feasibility Study, the construction cost of these facilities is estimated at $8.75M. The cost for power and chemicals for a 0.4 mgd system is estimated at ~$260k per year. Additional O&M costs to be considered include labor for operations and maintenance for the RO system and brine evaporation ponds, spare parts, and environmental monitoring for the evaporation ponds and ultimate disposal of the brine salt which will likely need to be treated as a regulated or hazardous waste depending on the concentration of certain metals.

Having completed several recent RO systems associated with water reuse project, we are very aware of items that lead to the successful design and operation of these complex systems. Water characterization that includes silica and phosphates concentrations are essential to understanding membrane fouling, chemical recovery and performance warranty offered by the vendors. Many communities have invested in extensive water quality sampling and pilot studies to determine the ultimate efficacy of using a proposed RO system. We appreciate the challenges the City is facing with providing a sustainable water source for Sun Lakes and other recycled uses and believe that it is the City's best interest to consider another option.

Deferment and potential elimination of the RO system reduces the overall risk exposure to both the City and its operators. Our team has a solution that is sustainable and cost effective (both capital and operations). Our

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Eliminating the need for the RO system will save the City nearly $9M in construction expenditures.

option will eliminate the capital expenditure of $8.75M associated with the RO and brine management ponds and the annual operating costs of $260K/year would be offset by a similar cost, however with significantly less stress placed on the operations staff. There is also the elimination of the brine salt disposal which may requires specialized handling and disposal requirements due to heavy metal concentrations.

To accomplish the project goals without the use of an RO system, AECOM/Lyles suggests the blending of MBR effluent with potable water. The key elements of this approach are:

Optimize total nitrogen removal in the biological process from 7.5 mg/l to 6.3 mg/l to reduce the amount of potable water needed for blending.

Blend MBR effluent and potable water for irrigation at Sun Lakes Country Club only. Per the 2023 water quality reports the potable water of the City of Banning, TN is ~1.5 mg/l and TDS is ~200 mg/l.

Using this scheme, 0.55 mgd of UV-disinfected MBR effluent will be blended with 0.21 mgd (143 gpm) of potable water at the Sun Lakes Country Club. The resulting blend will provide 0.76 mgd of irrigation water and meet the TDS and TN requirements for the Beaumont Basin.

The estimated yearly cost of the potable water is ~ $390k using $3.88 per HCF (2024-2025 retail rate). This expected to be even lower, that the O&M cost for the RO and evaporation ponds facilities when adding in the additional labor and brine salt disposal costs.

Considering that blending with potable water is only required for the flow pumped to the Sun Lakes Country Club, this approach will meet ALL irrigation demands (1.07 mgd), using 0.86 mgd of recycled water produced at the WWTP and 0.21 mgd of potable water, while deferring or totally eliminating the capital and O&M costs associated with an RO system and evaporation ponds.

As part of our blending concept we will prepare a technical memorandum focused on salinity and nitrogen management and we will endeavor to meet with the Regional Board to get obtain their concurrence with this cost effective solution.

Non-Process Design and Auxiliary Facilities

Once the key decisions are made regarding the major process facilities then the remainder of the project elements can be developed. These non-process related features of the project will be documented in the PDR, additional meetings with the City staff will be conducted to further flesh out existing operational needs and practices at the WWTP. Some initial thoughts about the approach and challenges are presented below for civil/site work, geotechnical, and building services. All of these engineering and architectural design disciplines are located together in one place – the AECOM design center.

Civil/Site Work

Key features include:

- ✓ New force main to transfer flow from the equalization basin to the to the new MBR facility.
- ✓ New force main to transfer treated effluent from the UV system to the the reservoir tank.
- ✓ New pipe to transfer excess flow from the permeate tank to the evaporation ponds
- ✓ New roadways and parking to support the new MBR treatment facility.
- ✓ Management and establishment of site specific stormwater measures
- ✓ Onsite vehicular access and roadway systems that accommodates chemical deliveries and emergency vehicles
- ✓ Site grading that promotes positive run-off away from buildings and structures

We plan to follow existing pipeline alignments where possible to best avoid any conflicts with existing structures and subsurface obstacles. Site grading will be developed around new facilities such that there is a natural transition from new to existing facilities.

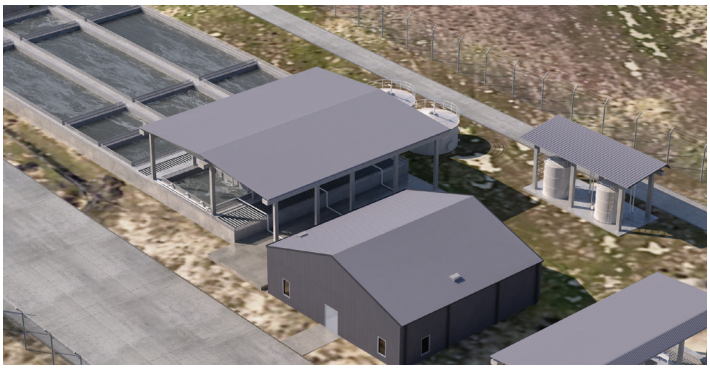
Geotechnical Field Investigations

We will perform subsurface geotechnical investigation in the vicinity of proposed new structures to determine soil conditions to assist in the development of detailed design and construction cost estimates. Investigations will include review of available geotechnical maps and documents along with site reconnaissance and obtaining appropriate permits. Soil borings will be conducted with hollow stem auger methods. Borings will be advanced to an appropriate depth determined during preliminary investigations and soils will be collected for laboratory testing and analysis including moisture and density, grain size distribution, Atterberg limits, corrosion potential, and direct shear testing. A geotechnical report will be developed including results of field investigation and laboratory testing and will provide geotechnical engineering recommendations for seismic design, foundations, slope stability and earthwork. Based on preliminary review of site conditions and provided subsurface information we anticipate that foundations

for the main proposed structure development will primarily consist of shallow foundations (spread and continuous footings, mat foundations).

Process Building

Our concept for the new process building includes a new pre-engineered metal building on a reinforced concrete slab floor with individual equipment support pads. The process building will house the main electrical room that will support the upgrades, blowers, chemical metering, as well as a new laboratory and office space. Initial collaborative discussions will include identifying the needs of the City and WWTP staff to right size this building and provide value based design to budget. Building will be designed to 2022 Building Code. All finishes (both interior and exterior) will be developed and selected collaboratively between our team and your staff. Building layout will consider ADA requirements in appropriate areas. Windows and Doors will meet the intended use of the areas (i.e. finishes, size, area requirements, area classification).



Power Supply & Electrical Equipment

Evaluation of the existing electrical distribution will be critical in developing the electrical design on the new treatment facility. One of our team's initial efforts in support of the electrical design will be to evaluate the total operating demand of the existing WWTP loads and review 12-month peak demand KW from the utility. Then with an inventory of existing equipment to remain and proposed equipment our electrical design team will verify that the existing transformer and switchboard have enough capacity to run the new and existing loads.

It is anticipated that the existing electrical system is in good condition and will be expanded upon as part of the facility upgrades. The upgrade will include 480VAC feeders installed from the existing spare breakers at the existing main switchboard SWBD-MS. The following presents our approach to the electrical design of the upgrades.

- ✓ The new electrical system equipment will be housed in air conditioned, environmentally controlled electrical rooms.
- ✓ During the design phase, a detailed and comprehensive electrical load analysis to evaluate plant service loading at the main switchboard as well as each MCC, distribution and lighting panels. The load study will be used to support the plant upgrade and to confirm each electrical system loading.
- ✓ The motor control centers, variable frequency drives (VFDs)switchboards, distribution panels and lighting panels shall be provided with integral surge protection devices (SPDs) for increased electrical system reliability and for safe operation.
- ✓ Overall short circuit withstand and interrupt rating of the equipment will be determined as required.
- ✓ To optimize plant power operation and to monitor electrical energy and electrical protection functions, the electrical distribution equipment shall be provided with a plant wide power monitoring system connected in a network to a dedicated power monitoring workstation.

Standby Power

- ✓ Evaluate capacity required to provide standby power for both new and existing facility loads and provide a standby diesel engine generator set.
- ✓ Standby generator to be provided with double wall, sub-base fuel tank sized as required for 48 hours of full load operation.
- ✓ Automatic Transfer Switch (ATS) to be provided to transfer from utility power to standby generator power if utility power is unavailable. Transfer switch to be open-transition type

Instrumentation & Controls

The distributed PLC-based SCADA system will include a client server environment, highly integrated Human Interface (HMI), and process control distributed to the unit process. Workshops will be held to develop the specific design approach for the new system, including requirements for redundancy and reliability. Balance of Plant PLCs will be distributed throughout the site and connected via a fiber optic communication backbone. Vendor-provided PLCs will control packaged systems and connect to the local balance of plant PLCs. The SCADA system will be flexible and expandable to allow for future process enhancements and hardware changes.

The system will provide information to the Operators and other users from any system access point. Operator control commands generated from an HMI shall be executed in the respective PLC. Access and information may be expanded and available based on needs, technology, and cost of ownership.

The commonality of control will extend throughout the facilities control hierarchy from the discrete devices in the field, to the PLCs, and the HMI. Specified instruments will monitor plant process parameters to optimize plant operation. Operator and machine safety will be integrated into the monitoring and control of the facilities. The alarm management system will provide a uniform and easily understood operator alarm notification presented at the HMI. Software and control system integration will monitor and control the process and provide text-based reports for operations and regulatory reporting needs.

Energy Incentives

There are several energy incentive options that will help adding solar energy to the project a substantially more affordable proposition. Adding solar energy to the project will pay by itself in a few a years and help offset the added energy consumption from the added treatment processes.

Solar Incentives (Federal ITC)

The Federal Investment Tax Credit (ITC) allows the water treatment facility to claim 30% of the total cost of their solar installation. This includes solar panels, inverters, labor, and other associated costs like permitting fees. The ITC applies to projects completed between now and 2032, providing significant tax savings. For instance, a $100,000 solar installation would result in a $30,000 tax credit, reducing upfront expenses. If the facility's tax liability is less than the credit, the remaining amount can be carried over into future years. This makes solar installation more affordable and offers a quicker return on investment.

Battery Energy Storage Incentives (SGIP)

The California Self-Generation Incentive Program (SGIP) provides rebates for battery energy storage systems (BESS). The rebate starts at $150 per kilowatt-hour (kWh) of installed battery capacity. After the SGIP rebate is applied, the federal Investment Tax Credit (ITC) allows you to claim 30% of the remaining project cost. For example, if a battery system costs $100,000 and qualifies for a $15,000 SGIP rebate, the ITC would then apply to the remaining $85,000. This combined approach can significantly reduce the overall cost.

Direct Pay Provision

For tax-exempt entities like nonprofits or government-run facilities, Direct Pay allows them to receive the full value of the ITC as a direct payment instead of a tax credit. This ensures that even entities without tax liabilities can fully benefit from both the ITC and any bonus credits.

Innovation & Design Optimization

Please refer to Figure 3-3 for a graphical summary of our innovation and optimization concepts. Below, we summarize them.

Design Criteria. Base the process volumes on 3.6 MGD 30-day average flow rate with average influent concentration data to avoid over-building tank volume in comparison to assuming maximum month load peaking factors. Revisit peak-day flows as it is likely will be lower than 7.2 mgd.

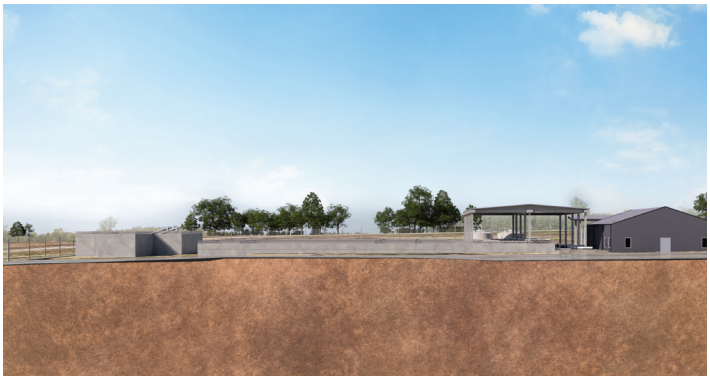
Overall Site Layout and Piping and Pumping. Efficient layout and adequate sizing of yard piping will ensure the project set the stage for the future capacity expansions beyond this project. Our approach minimizes pumping by providing gravity flow for most of liquid train, with only two pumping stages (permeate pumps and disinfected effluent pumps) from the fine screens discharge to the recycled water storage tank.

Headworks and Primary Treatment. Defer construction of a third primary clarifier. Performance of the two existing clarifiers is anticipated to be adequate for flows up to the deswign flow of 3.6 MGD.

Biological Treatment. A four-stage Bardenpho configuration will allow optimization of nitrogen removal and flexibility to reduce the effluent TN as desired to eliminate the need for RO.

Disinfection. UV offers cost savings and provides additional flexibility for future expansion.

Eliminate Costly RO. Use Potable Water or Raw Water for Blending RW to SL Golf Course to Eliminate the Need for RO.





PART IV

Construction & Startup Process

Understanding the balance required between efficient construction, maintaining plant operations and preserving environmental conditions, we have devised a comprehensive plan that addresses all aspects. With our proven track record and strategic planning, we are poised to deliver a project that exceeds your expectations.

Introduction

We've developed a comprehensive sequence plan, layout, and schedule addressing site logistics, safety, and compliance to balance efficient construction with environmental preservation. AECOM/Lyles has extensive experience working in dry and windy landscapes like the City of Banning, having successfully completed projects in neighboring communities, including a similar project in nearby Beaumont. This regional expertise, combined with our local craft labor resources and access to local subcontractors, ensures we can secure the right partners to deliver your project successfully. **Our team lives and works in Riverside and the surrounding area and have strong relationships with local subcontractors/ suppliers** through our dedicated outreach efforts and repeat business on completed and ongoing projects. This network allows us to quickly secure qualified subcontractors familiar with the local conditions. Our regional projects include the Hi-Desert Wastewater Reclamation Facility, CR&R Riverside County Environmental Center, VVWRA Hesperia Subregional MBR Plant, VVWRA Apple Valley Subregional MBR Plant, Morongo WWTP, Palm Springs WWTP, Yucaipa WWTP, Yucaipa Water Treatment Plant and Lytle Creek WWTP. These successfully completed projects demonstrate our ability to leverage our resources and local reputation to deliver positive results.

Construction Planning and Sequencing

With years of experience in managing large-scale infrastructure projects, we have developed a robust approach that prioritizes efficiency, safety, environmental stewardship, and the operation of existing facilities.

Your project site is ideally situated, with many of the proposed new facilities located on the adjacent lot. This allows a straightforward approach to site layout, logistics, and resource management. Notably, the bulk of the proposed facilities are greenfield in nature, confined between the existing plant entrance road, Charles St, and the Animal Shelter facility. Reference Part II: Site Layout for further discussion. Other than the smaller-scale RDT, Digester improvements and a few miscellaneous improvements at the existing plant, this limits the impact on the existing facilities and personnel. Shutdowns of the plant are also limited, allowing for the completion of the main MBR facilities to be constructed almost in whole, off to the side, and without straining existing space and resources. When work involves interaction with existing facilities, AECOM/Lyles will submit a detailed shutdown request that includes a field coordination meeting and a comprehensive plan submission, for City approval at least two weeks prior to the scheduled activity.

Our early procurement strategies and just-in-time delivery streamline project timelines by ensuring that critical materials and equipment are secured in advance and arrive when needed. Our QA/QC team will implement a QR code tracking system to verify that all process equipment is checked in upon delivery, ensuring it arrives undamaged and meets project specifications. This provides an early opportunity to confirm that the equipment is in proper condition before installation. Additionally, the City can use the QR code system for real-time, on-the-spot compliance verification in the field. This proven approach will minimize storage costs, reduce the risk of damage, and prevent delays in construction. Our specific strategy for your project, including the advancement of a 60% GMP in line with early procurement and work packages, allows us to achieve your construction schedule and proactively address current long lead durations on critical

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We have assigned **Philip Portillo**, who has nearly 12 years of safety experience, to serve as our Safety Director. He will work closely with the local safety manager to ensure our site safety representatives are all well qualified and expertly trained. Our safety team will passionately pursue compliance with safe practices dictated by locations, conditions, and circumstances unique to this project.

equipment and materials. We advocate for early Phase 2 NTP following GMP, and ahead of the Final Design. This is specifically discussed in the Schedule section.

Approach to Self-Performance

AECOM/Lyles has the capability to self-perform approximately 75% of the construction work on this project, including all earthwork, concrete, structural steel and metals, mechanical piping, equipment installation and instrumentation integration for the project. This allows us to control project costs, maintain efficiency, enhance coordination, mitigate risks, improve safety, enable resource flexibility, control schedules, and ensure quality. **The benefit to the Ciy is the lowest total project cost due to reduced schedule and elimination of double markup on subcontractors.**

As a JV, this self-performance responsibility is shared by both parties and is supported by the capabilities of both AECOM and Lyles. This approach provides the City joint and several accountabilities while providing confidence in the availability of resources. Also, the integration of design scope with primarily self-performed construction scope and a limited number of dedicated subcontractors reduces the layers and amount of markup embedded in the price. What sets us apart for the Banning project is our unmatched self-performance experience with MBR. **We have installed, modified, removed, and replaced more MBR cassettes than any other contractor in Southern California**, giving us deep insight into both effective and flawed designs. For Banning, this means AECOM/Lyles will not only execute the MBR installation with precision but will also bring invaluable expertise to guide the design for optimal operations and long-term maintenance. Our team will design the MBR tanks, bridge crane, permeate piping, and air piping connections to ensure the safe and efficient removal and replacement of the MBR cassettes—prioritizing the safety of the operations team long after our work is complete.

While Lyles self-performs a majority of the work, we typically subcontract specialty trades such as concrete reinforcing steel (rebar), masonry, painting and coating, interior finishes, and electrical. This allows AECOM/Lyles to leverage the expertise and experience of industry leaders who can provide input in schedule, budget, and constructability, expanding the benefit of trade partners beyond installation only. Our goal is to align with subcontractors and vendors who share our "project-first" mindset, are local to the project thus keeping the money spent in the community, fostering a collaborative work atmosphere that delivers high-quality results for the overall benefit of the project.

Securing Competitive Bids

AECOM/Lyles will collaborate closely with the City to tailor our procurement strategies to the project specifics to ensure that adequate vendors and subcontractors are identified, facilitating maximum competitive bidding from qualified firms. Before beginning procurement, anticipated purchase agreements and subcontracts will be prioritized based on complexity, manufacturing lead time, historical performance of the vendors/ subcontractors, impact on schedule and sequencing, overall value, and long-term O&M. Using this methodology, our team will identify critical scopes and recommend that some be competitively procured early, aiding the GMP development, and allowing the design to be tailored accordingly. This approach maximizes design efficiency and ensures that the City and other stakeholders are fully satisfied with the critical elements. The procurement of the remaining work will be timed to provide maximum pricing competition, particularly for commodities such as concrete, piping, and metals. We will reach out to trusted partners to ensure participation as well as solicit the overall market through Good Faith Efforts (GFE). The team will use Building Connect or other solicitation software to ensure GFE documentation and related requirements are adhered to along with maximum distribution.

Our team will use both one-step best value and low lump sum procurement approaches across the various scopes.

- ✓ Best value selection will be used for complex scopes or where subcontractor input during the design would benefit the project. These are typically initiated through RFP that is tailored to the scope specifics and will conform to minimum 30-day solicitation requirements. RFP scoring will be based on criteria established with the City and include experience, safety record, bonding capacity, and other proof of financial stability requirements followed by technical requirements and pricing. Following panel review, the highest scoring proposer will be recommended to the City for confirmation and subsequent award. Interviews and/or reference validation may be required.
- ✓ Low lump sum selection is typically used for more straightforward scopes where the benefit of subcontractor input in the design is minimal (i.e. painting & coating) or for commodity or equipment purchases that are specification-based (piping, valves, etc.). Lump sum selected proposers will still be prequalified to ensure responsible and responsive bids before selection.

Our final selections will be made with City input and consensus, following thorough bid validation. We will clearly define roles, responsibilities, and expectations with all selected subcontractors to ensure seamless collaboration and alignment with our project goals.

Communication Strategies

Our approach to self-performance, sub-selection management, and communication is designed to maximize efficiency, quality, and collaboration with you and your Owner's Advisor throughout the project.

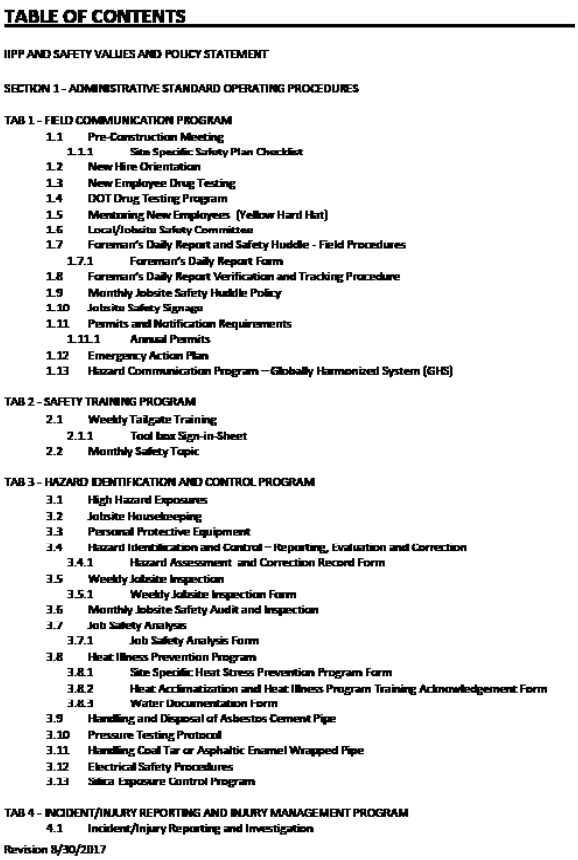
We will establish a dedicated SharePoint site to share updates, schedules, technical information, and other relevant documents in real-time. This centralized platform will ensure transparency and facilitate efficient information exchange among all participants and will be accessible to all stakeholders. This site will also store and allow access to the Submittal, RFI, and PCO/Change Logs, as well as Daily Construction Reports, Testing Reports, etc.

Our project team will hold regular progress meetings with the City and other stakeholders, supplemented by as-needed ad-hoc meetings to address specific issues or opportunities. We encourage open dialogue, actively listen to feedback, and being responsive to any concerns or questions that arise from the team, implementing or revising best practice strategies where applicable. Project decisions made during these meetings will be documented in a Decision Log and stored on the project SharePoint site as well.

The construction team will meet weekly with superintendents and foremen and as needed to review the 3-week schedules and ensure that all preceding work and resources are onsite or in transit. Premobilization or Kick-off meetings for any new subcontractors on site will be conducted to ensure that all new personnel are aware of the project details, safety requirements, site access, and hauling routes, etc. Noncompliance is unacceptable and may result in the replacement of nonconforming personnel. To address client interface, we will maintain open and consistent communication with the City and other stakeholders throughout the project. This will also involve regular progress updates, transparent reporting through our dedicated SharePoint site, and scheduled meetings to discuss any emerging issues or opportunities. Our goal is to foster a collaborative environment where client feedback is actively sought and integrated into project decision-making.

Through our focus on self-performance, rigorous sub-selection, and proactive communication, AECOM/Lyles will ensure a well-managed, collaborative project environment that delivers outstanding results.

Figure 4-1. Safety Manual Table of Contents



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Revision 8/30/2017

Shown above is an example of a Table of Contents that we include in all of our Safety Manuals. This enables easy navigation and quick reference to specific safety topics. It also clearly demonstrates the comprehensive nature of our safety planning, covering all critical aspects for a safe and successful project.

Approach to Safety

With AECOM/Lyles, safety isn't just a priority; it's our most important core value, ingrained in every aspect of our operations. We are dedicated to implementing an effective safety program on your project that emphasizes best practices, rigorous safety protocols, workforce training, and fostering a culture centered around safety. Our commitment extends to providing a safe and healthy working environment during all phases of the project for all employees (both our and yours),

subcontractors, project stakeholders, and the community. Our most important resource is our people and our priority is to ensure their wellbeing.

Our commitment to safety begins with the designation of a full-time, on-site Safety Coordinator who is responsible for overseeing all safety protocols throughout the project. This ensures that safety remains a top priority every day, on every part of the site.

We have established a comprehensive safety review process that includes regular safety meetings, where issues are proactively addressed, and any concerns are resolved quickly and efficiently. Our safety framework also includes thorough documentation of all safety procedures, ensuring full compliance with regulations and that all team members have access.

Central to our approach is the meticulous evaluation of risks associated with the project. We recognize that every project comes with its own set of challenges and potential hazards. Therefore, we conduct thorough risk assessments to fully identify and understand these potential hazards. This allows us to devise strategies for equitable risk identification and distribution, ensuring that safety concerns are addressed proactively throughout the project lifecycle. Job Site Safety Analyses (JSAs) are developed for each task on a daily basis, followed, monitored, and revised as necessary. Every employee has the authority to stop work at the first sign of an issue. This allows the team to come together and reassess a situation and provide alternate safer approaches.

We emphasize workforce training to promote safety excellence. Our team receives extensive training and resources to navigate diverse construction environments safely. This training is both general to our industry as well as specific to the project site and the tasks at hand and would look to integrate your staff into this training protocol as well. This empowers our workforce to recognize and respond to hazards, fostering a culture of vigilance and accountability.

We prioritize site safety and security through specialized training in construction traffic management and equipment handling. All personnel receive material safety training to ensure proper chemical handling and storage. Strict access controls and personnel tracking systems maintain a secure job site, allowing us to deliver high-quality results on schedule while safeguarding everyone involved. A guard shack and security guard will be utilized for the site entrance off Charles St. to direct both construction traffic and check-in visitors and direct them accordingly or deter unnecessary personnel. All construction facilities around your project site will be fenced.

By aligning with your O&M goals, we reinforce our commitment to these safety initiatives. This dedication to safety is demonstrated by both AECOM and Lyles, which have a Worker's Compensation Insurance Interstate Experience Modification Rate (EMR) well below industry averages statewide and nationally.

Table 4-1. AECOM/Lyles EMR Numbers

AECOM and Lyles prioritize safety, as shown by our low EMRs. This shared commitment minimizes risks and supports the City's goals for a successful project..

EMR	2024	2023	2022
AECOM	0.57	0.62	0.58
Lyles	1.0	0.93	0.74

Design-Build Schedule

AECOM/Lyles understands that the City expects to issue the Notice to Proceed in December 2024, with the goal of achieving Final Acceptance in the 4th Quarter of 2027. To meet this objective, we have developed a comprehensive Critical Path Method (CPM) schedule outlining all major activities and milestones from the Contract Date to Final Completion. As shown in **Appendix A,** our schedule includes approximately 375 activities with a critical path that extends from NTP through PDR/10% Design, 30% Design, 60% Design, GMP and Construction Amendment Approvals, early equipment and subcontractor procurement, Aeration Basin construction, MBR facility construction, start-up, and into Plant Commissioning and Acceptance activities. Using the December 10, 2024 tentative NTP date listed in the RFP, our team anticipates Substantial Completion on August 16, 2027, followed by Final Completion and Acceptance on November 9, 2027. This provides for approximately 33 working days of total float against the City's Final Completion goal.

We understand the City's schedule requirements for key milestones, approvals, construction, shutdown and tie-ins, procurement, start-up and testing and our schedule clearly outlines the necessary design, construction, and start-up phases. We will collaborate with the City and plant O&M staff to proactively address project requirements, define responsibilities, and maintain momentum while maintaining existing operations.

Our dedicated scheduler will work closely with Joe Lawrence, Gabe Perigault, Vince Guillama, key subcontractors, trusted suppliers, and the City to iteratively refine the schedule throughout the design phase. We will provide regular monthly schedule updates as well as at each design milestone (30%, 60%, etc.) and at any major change or update in scope or duration. Three-week schedule updates will be provided at each Progress Meeting to help provide more detailed information on ongoing or anticipated activities to enhance coordination with the existing plant operations.

Project Schedule

The project schedule includes 33 working days of float, which provides some flexibility, but requires careful management to avoid delays. Proactive monitoring of progress against the schedule is essential, with immediate action taken at the first signs of potential delays. Identifying opportunities to recapture lost float is crucial to maintaining the project timeline. Delays in procurement, civil works, design, or other aspects can quickly erode this buffer due to the schedule's tightness. Therefore, vigilant planning and monitoring are necessary to keep the project on track and avoid consuming the float.

This strategy will require associated amendments to allocate the necessary funds. However, it will significantly reduce the need for extensions and ensure a more streamlined project timeline.

Early Procurement of Equipment and Materials

Recognizing the City's willingness to request modifications to funding deadlines to accommodate extended construction durations, while desiring a 2027 completion, our team recommends the early procurement of major and/or long-lead-time equipment pieces. This approach offers several advantages:

Design Efficiencies: Early procurement expedites the receipt of shop drawings for key equipment allowing designs to be tailored around the specific equipment for the project, avoiding generic representations and potential costly revisions during the submittal and construction phases. **This further ensures a precise fit and optimal system configuration from the outset**.

Price Certainty: Early contracting locks in prices for high-value equipment, reducing uncertainty and conservatism in the GMP or related contingencies and effectively shielding the project from unpredictable market fluctuations and potential supplier escalation. Global conflict often strains supply and drives up costs. Early price certainty provides a solid financial foundation for the project moving into construction.

Supply Chain Mitigation: Procuring equipment early can avoid vulnerable points in the supply chain, such as potential production lulls during Phase 2. Coming out of COVID and the resulting ramp-up to meet high demands exposed the economic and supply chain vulnerability to work stoppages such as the recent East and Gulf Coast longshoreman and harbor disputes. Climate change and major natural disasters in and around major manufacturing facilities can also prove to be an issue. We are already hearing of extended delays related to certain electrical equipment manufacturers in and around North Carolina and have already seen deliveries for PLCs and VFDs on current projects increasing up to 56 weeks after submittal approval, still affected by the lingering pandemic effects. By obtaining submittals and releasing as far in advance as reasonable, we can minimize the risk of overall project delays and ensure a steady progression of work.

Schedule Condensing: By strategically shifting components of the procurement forward, overlapping with Phase 1, we can condense the overall project



Lyles' recent success with the Hi-Desert Water District (HDWD) exemplifies the value we can bring to the City of Banning. When HDWD needed to select equipment for their MBR units, we guided them through a complex procurement process that demanded a deep understanding of technical specifications and budget constraints. Our collaborative approach, transparent analysis, and constant communication empowered HDWD to make informed decisions that aligned with their goals and priorities. By involving HDWD throughout the process, we ensured the selected solution met their unique needs and expectations, delivering a cost-effective, high-quality result that met all technical requirements. Given the similar scope and terrain of the City of Banning project, we are confident in our ability to replicate this success. Through our collaborative, transparent, and data-driven approach, we will deliver a project that exceeds expectations and sets a new standard for municipal water infrastructure in the region.

schedule. This streamlined approach optimizes the construction timeline for greater efficiency.

To take advantage, we anticipate early procurement of the following major equipment pieces in order to advance early design and ensure on-time delivery;

- ✓ Electrical Gear (PLCs, VFDs, MCCs, Transformers, etc.)
- ✓ Fine & Course Bubble Diffuser Systems
- ✓ Aeration Blower Equipment
- ✓ Membrane Bioreactor Equipment

Early Procurement of Subcontractors

Similar to the critical equipment and materials strategies noted above, our team recommends the early procurement of select subcontractors. Specifically, this would include electrical and instrumentation (EI&C), pre-engineered metal buildings (PEMB), and concrete reinforcing. While requiring design details to advance sufficiently at earlier stages with a higher upfront effort, this approach offers several advantages:

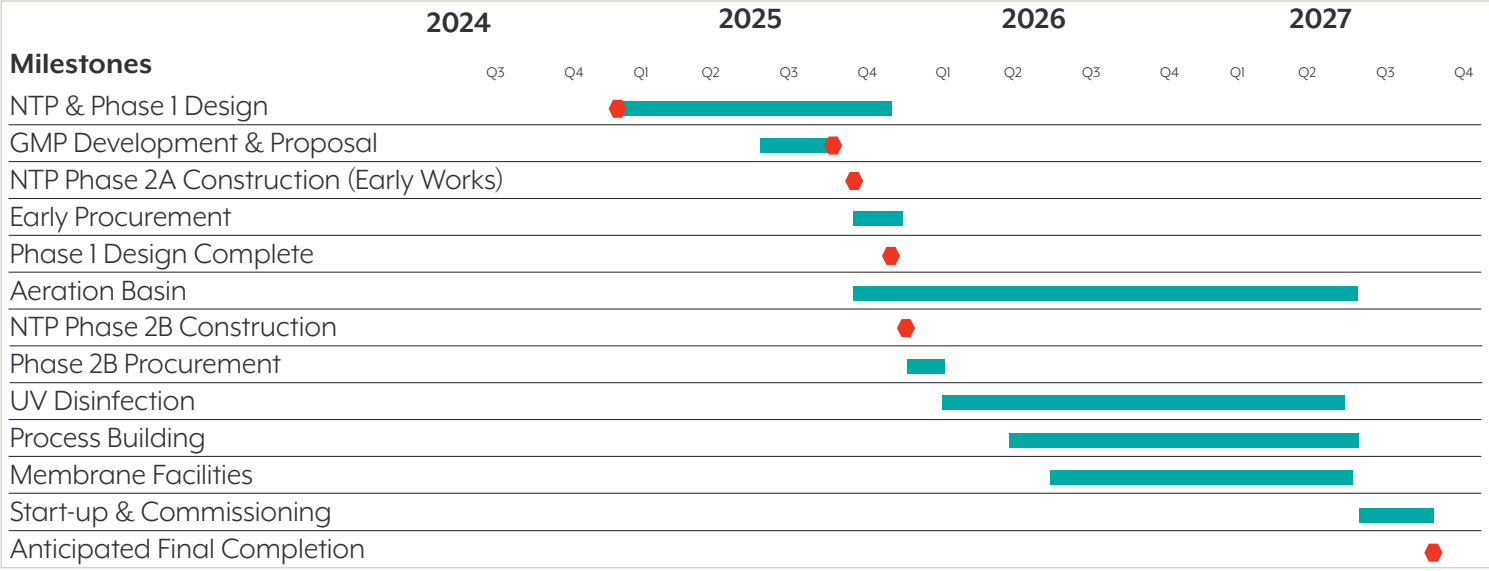
Increased Constructability: Bringing a subcontractor on prior to the completion of Final Design, in this case between the 60% and 90% stages, allows us to take advantage of the specialty expertise, ensuring that the design as shown can be built and used efficiently as well as providing the ability to take and use real-time and real-world alternate approaches that have the potential to save time, cost, and/or reduce risk for the subcontractor and the project overall.

Budgeting and Price Certainty: Early subcontracting also helps lock in pricing for critical specialty scopes not performed by the AECOM/Lyles team. We rely on our partners to review and back-up our original budget assumptions advanced from early design and estimate iterations as well as provide their current understanding of the market conditions in their specific sectors for a more precise GMP. The subcontractor input on design ensures that the design details necessary for pricing are available and accurate, reducing conservatism and contingency.

Supply Chain Mitigation: Just like general contractors, subcontractors are exposed to the same vulnerabilities in the supply chain related to limited supply, work stoppages, conflict, etc. Deliveries for PLCs and VFDs on current projects are increasing up to 56 weeks after submittal approval, still affected by the lingering pandemic effects. Getting early development, shop drawings, and into the fabrication queue for these types of items is imperative for on-time project completion. We then rely on and support our subcontractors to coordinate with their known contacts as well as maintain dates and track deliveries to minimize the risk of delays and ensure a steady progression of work for them and the project overall. Electrical gear on this project has limited float and has the potential to push start-up beyond the intended completion dates if not properly managed.

Schedule Condensing: Early subcontracting also allows our subcontractor to procure equipment and materials during Phase 1 that would traditionally not be available until first executing a subcontract and then second-tier purchase agreements after a Phase 2 NTP, extending project duration. For this project, acquiring a concrete reinforcement (Rebar) subcontractor in lockstep with the 60% Design and GMP is imperative. This allows for the necessary time for the rebar design, submittal, approvals, and fabrication to advance specifically for the Aeration

Figure 4-2. Milestone Schedule



Basin well ahead of the Final Design. This ensures that rebar can be onsite at the earliest possible date to maintain construction on one of the most critical structures due to its depth and the proximity of other structures within its excavation footprint.

Early Work Packages

In order to take advantage of early procurement, design for specific aspects of the work must be substantially advanced to allow vendors and subcontractors to accurately price the work, and with minimal revisions. Several of these packages will be developed as part of the 60% Design and will be provided to the City for review and comment before being revised and stamped for construction use. This will require our design team to advance selection of and design around critical equipment pieces ahead of the Final Design. This will allow the submittal, review, and release of long lead items. Additionally, advancement of this design will allow the construction team to excavate, install underground utilities, and move into foundation construction while preparing for equipment installation during the fabrication period. To ensure on-time completion, we anticipate the development of an early work package for the Aeration Basins allowing for civil work (including mass excavation) and structure foundations. Completion of this deep structure is critical to advancement of the MBR Tank and all other structures within the AB excavation footprint. **Early procurement is a key strategy for ensuring a more streamlined project timeline, staying within budget, and ultimately delivering a superior final product for the City.**

The Phase 1 Design period is anticipated to be 390 calendar or 275 working days through December 15, 2026. We anticipate GMP development beginning in July 2025, following completion of the 60% Design, moving into a City approval of an early works GMP. Approval of Construction or NTP 2A by October 30, 2026 ahead of Phase 1 completion. The early works GMP NTP marks the go-point to procurement of major equipment and critical material, taking advantage of the strategies noted. Phase 2B NTP is anticipated to occur shortly thereafter, marking the issue of the full construction documents and the start of the balance of the construction and remaining procurement.. This approach saves the project approximately four months and avoids a down period allowing design completion for negotiations, amendment drafting, and agreements. The design and construction teams are able to roll seamlessly from design into construction and engineering support during construction, maintaining team focus and momentum.

Cash Flow

AECOM/Lyles recognizes that one of the most important monthly deliverables is providing an accurate cash flow forecast for the City's use and for coordination with funding agency requirements. We will provide an initial Cash Flow curve related to the anticipated schedule, equipment and material deliveries, and construction operations for the City's use. Any changes or updates in either the schedule or expected dollar distribution will be communicated with the greater team. Note that all costs incurred are summarized weekly, and tracked against the initial budget. Additionally, an "estimate to complete" is performed routinely to track the status of the project against the remaining budget. Any deviations from the expected or forward-looking budget concerns are brought to the overall project team during Progress Meetings. These estimates will also be compared against the baseline drawdown schedule to ensure that the City can proactively manage its financial needs. This will be made available as part of our open-book process to ensure no surprises throughout the project delivery.

Functional Testing, Startup, Acceptance Testing and Transfer of Operations

Proper implementation of these activities is a key element in achieving ultimate success for this project. These steps will be the culmination of nearly a decade of hard work invested by the city into this project. Recognizing the significance, we have already started planning for start-up in our design, as designing with the end performance goals in mind is a key tenet of the AECOM/WML Team's approach to design-build.

Prior to any commissioning, startup, training, or performance testing activities, our team will develop testing and training plans that align with City staff schedules to demonstrate the efficiency of the new facility. Many key items have already been considered in developing our conceptual design and proposal offering. Some key elements of plan are presented in the following subsections.

The plan will be documented in our Startup and Commissioning Plan. This approach has been implemented successfully on other projects involving complex startup and sequencing efforts, including California WWTP design-build projects for the cities of Davis, Rialto, and Stockton.

Equipment Documentation and Testing

Many of the requirements for equipment and system testing can be found in the Final Design Specifications and will be implemented during construction. These activities include:

- ✓ Leak testing of tanks and pipes
- ✓ Electrical and instrumentation tests (aka dry testing)
- ✓ Vendor certification (where applicable) of installed process equipment

Other activities will be addressed in a draft startup and commissioning plan developed and submitted to the City and its Advisor for review during the early stages of construction. Examples of planned activities include:

- ✓ Confirmation that all process equipment supplier O&M manuals have been received
- ✓ Inspection of the electrical power system completed by the local power authority
- ✓ Vendor startup and checkout of process equipment

The plan will include ample time for manufacturers' representatives to be on site and to allow time for potential revisits and adjustments. Results of the equipment testing, including vendor startup and checkout reports, will be compiled and submitted as documentation of the testing program. Certificates of Proper Installation (COPI) will be prepared and signed by equipment manufacturer representatives.

System/Clean Water testing

After the individual process components are functionally tested, a series of systems tests will follow. Whereas the equipment testing will have focused on individual units, these tests will be structured to confirm that inter-related components will work correctly. Typically, this testing is done with clean water. For example, one aeration tank, membrane tank, and permeate tank would be filled with water. A temporary pump would be installed at the permeate tank to recycle a water stream back to the fine screens where one screen would be in service and treated flow would travel by gravity to the in-service aeration basin and membrane tank. Here, a permeate pump would transfer flow back to the permeate tank. This would result in a constant flow of water thought the fine screen/MBR system and testing of all associated equipment (blowers, diffusers, pumps etc.) Once testing is complete, the water would be transferred to the next screen/aeration/MBR tank for the next round of testing and so on until and all facilities are satisfactory. Examples of systems that will be tested include:

- ✓ Aeration/biological systems including membranes, pumps, blowers, diffusers, and instrumentation
- ✓ UV disinfection systems
- ✓ Dewatering equipment, pumps, VFDs, pipelines, valves and control logic
- ✓ Standby and emergency systems, including generators and UPS systems
- ✓ Power distributions and MCC equipment

Additional vendor documentation including additional COPI forms will be submitted at the completion of the systems testing process documenting the successful results of the functional testing.

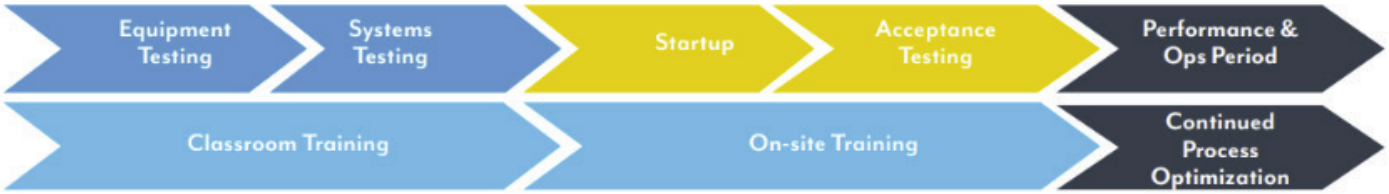
Wastewater Startup

Startup of the new facilities on wastewater will follow completion of all pre-startup checks. This will be performed in accordance with a written startup plan and under the direction of our team's startup manager.

For the most operational flexibility, startup of the new MBR facility can be done in a stepwise manner: first the biological treatment process will be started up with the objective of discharging fully treated but undisinfected effluent to the onsite disposal beds. Because biological treatment systems need to grow sufficient mass of bacteria to treat the incoming wastewater, the start-up must be done in gradual increments to slowly ramp up treatment capacity. This will require close coordination between the existing WWTP and the startup of the MBRs as the bulk of treatment will still need be provided by the existing trickling filters.

Following systems testing with clean water, off-site biological material (waste activated sludge or seed) will be collected and transported to the site and introduced to the biological (SBR or MBR) system. This critical step will require a well thought-out plan of introducing raw wastewater to the new plant in a controlled manner.

Figure 4-3. The AECOM/Lyles team will develop a well thought-out Startup Plan



Small batches of wastewater will initially be received, with the treatment process closely monitored to ensure complete treatment. These batch increments will be slowly increased (typically 5 to 10% per day) until one treatment train is full and treated flow is of a high enough quality to discharge to the effluent beds. The next step is to bring the second aeration tank online and continue to slowing ramp up the wastewater flow while monitoring mixed liquor concentration levels and permeate quality. These steps will allow a viable biological community to be established that will be capable of treating the full plant flow. This process typically takes four to six weeks to complete.

Following the establishment of a strong biological community, the plant will be run for a few weeks to ensure all systems are working and fine-tuned prior to formal acceptance testing. At some point prior to acceptance testing but after full plant flow is achieved, UV disinfection will be placed in service for its Title 22 treatment. UV testing as required by DDW will be accomplished.

All equipment will be operated in accordance with the operational needs of the plant at flow/process loading rates as determined by the AECOM/Lyles Team. The purpose of the startup testing will be to demonstrate the operational readiness of the equipment and the functionality of associated instrumentation.

Acceptance testing

Following functional testing, we propose to operate the new facilities during a two-week acceptance test to demonstrate satisfactory performance and compliance with Title 22 reuse regulations and effluent bed discharge requirements.

In general, the liquid processes will be operated to treat the influent flow and loads that enter the treatment facility over the 14-day test period, with reuse water treated in quantities as needed and the remainder of the flow discharged to the effluent disposal beds.

During the acceptance test we anticipate that sampling and testing will be in accordance with the discharge permit requirements. Composite samples of the influent and final effluent will be collected and analyzed at the required permit frequency. In addition, sampling of the primary influent and effluent will be included for targeted water quality parameters.

Once the acceptance testing has been completed, normal industry practice is to transfer full operational responsibility back to the Owner.

BEST for **BANNING**

Vijay Kumar, a seasoned Startup and Commissioning Manager, brings 27+ years of hands-on experience in water/wastewater treatment system installation, commissioning, and optimization. A notable example is his Commissioning Engineer role on the $54.4M City of Beaumont WWTP Salt Mitigation Upgrade Project. This extensive project demanded the demolition, modification, and construction of various system components. Vijay's technical expertise and problem-solving skills ensured a successful, on-schedule commissioning process. His comprehensive knowledge and experience make him an ideal partner for efficient and reliable water/wastewater treatment projects.

APPENDIX

A

Preliminary Drawings and Schedule



CITY OF BANNING, CALIFORNIA

RFP-24-074

BANNING WASTEWATER TREATMENT PLANT RECYCLED WATER UPGRADES PROJECT

BANNING, CALIFORNIA
OCTOBER 2024

AECOM W.M. LYLES CO.
a joint venture

PROJECT

BANNING WWTP
RECYCLED WATER
UPGRADES PROJECT
2242 Charles Street
Banning, CA

CLIENT

City of Banning, CA
2242 CHARLES STREET
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CHELMSFORD, MA 01824
PHONE: (978) 905-2100
www.aecom.com

REGISTRATION

CONCEPTUAL

ISSUE/REVISION

I/R	DATE	DESCRIPTION

PROJECT NUMBER

04191986

Designed By:	JF
Drawn By:	IB
Dept Check:	CB
Proj Check:	GP
Date:	OCTOBER 2024
Scale:	AS NOTED

DISCIPLINE

GENERAL

SHEET TITLE

COVER SHEET

SHEET NUMBER

00 G-001

PATH/FILENAME: L:\DCS\PROJECTS\WTR\04191986_BANNING_WWTP\600_CAD_GIS\610_CAD\20-SHEETS\G\00 G-001.DWG
LAST UPDATE: Wednesday, October 2, 2024 9:49:16 AM
PLOT DATE: Friday, October 4, 2024 10:47:44 AM

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00 G-004	DESIGN CRITERIA
00 G-005	PROCESS FLOW DIAGRAM
00 G-006	HYDRAULIC PROFILE

CIVIL

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00 C-102	ENLARGED PLAN

ARCHITECTURAL

00 A-101	ARCHITECTURAL VIEWS

PROCESS

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00 D-102	MBR PLAN AND SECTION

PROCESS FLOW ABBREVIATIONS

AAB	AERATION AIR BLOWER
BSC	BAR SCREEN
BW	BACKWASH
CCT	CHLORINE CONTACT TANK
DS/DSL	DIGESTED SLUDGE
GR	GRIT
GP	GRIP PUMP
HEX	HEAT EXCHANGER
HW	HOT WATER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
MBR	MEMBRANE BIOREACTOR
MBS	MECHANICALLY CLEANED BAR SCREEN
POL	POLYMER
PFD	PROCESS FLOW DIAGRAM
RAS	RETURN ACTIVATED SLUDGE
RLS	RAW SLUDGE
RO	REVERSE OSMOSIS
RSP	RAS PUMP
SCC	SCREENING COMPACTOR
SCN	SCREENINGS
SE	SECONDARY EFFLUENT
SH	SODIUM HYPOCHLORITE
WAS	WASTE ACTIVATED SLUDGE
WSP	WAS PUMP

AECOM W.M. LYLES CO.
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PROJECT

BANNING WWTP
RECYCLED WATER
UPGRADES PROJECT
2242 Charles Street
Banning, CA

CLIENT

City of Banning, CA
2242 CHARLES STREET
BANNING, CA 92220
951.922.3100 tel
www.BANNING.CA.US.com

CONSULTANT

AECOM TECHNICAL SERVICES, INC.
250 APOLLO DRIVE
CHELMSFORD, MA 01824
PHONE: (978) 905-2100
www.aecom.com

REGISTRATION

CONCEPTUAL

ISSUE/REVISION

I/R	DATE	DESCRIPTION

PROJECT NUMBER

04191986

Designed By:	JF
Drawn By:	IB
Dept Check:	CB
Proj Check:	GP
Date:	OCTOBER 2024
Scale:	AS NOTED

DISCIPLINE

GENERAL

SHEET TITLE

INDEX OF DRAWINGS AND PFD ABBREVIATIONS

SHEET NUMBER

00 G-002

PATH/FILENAME: L:\DC2\PROJECTS\WTR\04191986_BANNING_WWTP800_CAD_GIS\810_CAD\20-SHEETS\G\00 G-002.DWG
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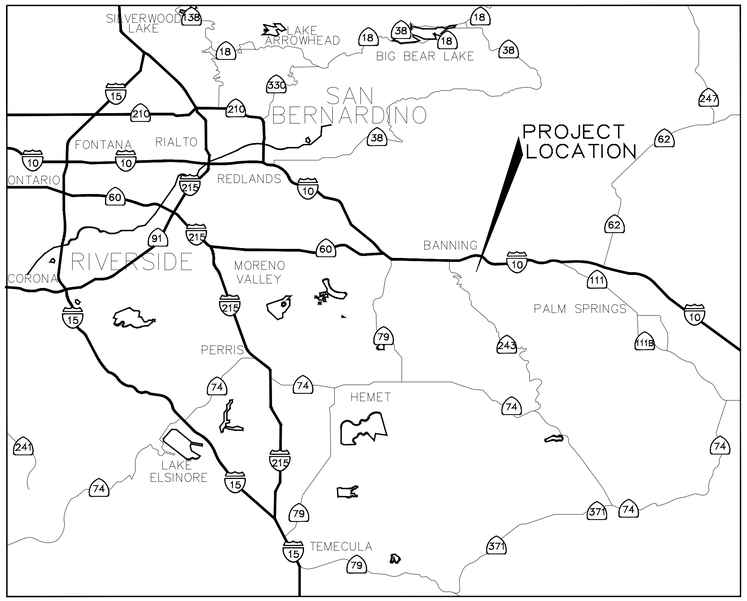
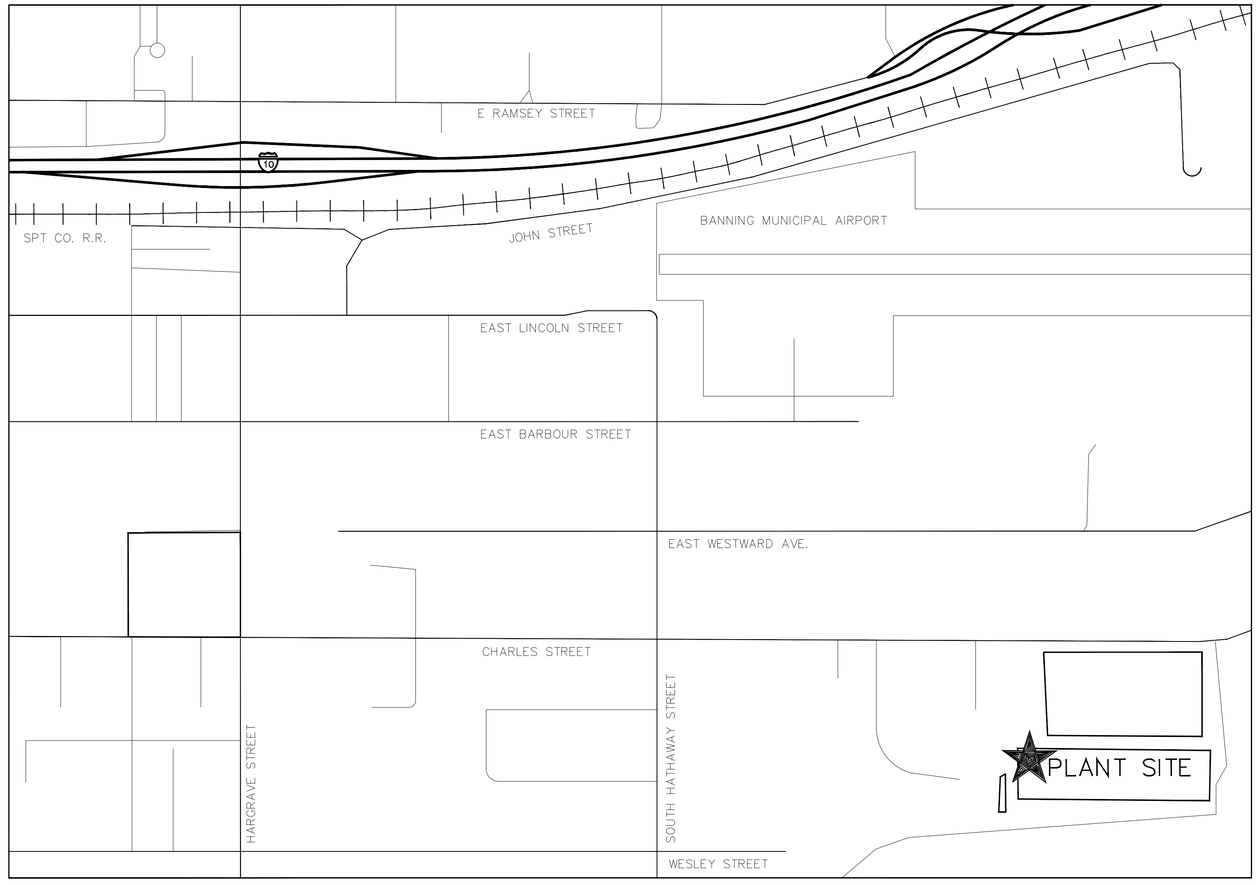
PLOT DATE: Tuesday, October 8, 2024 11:06:53 AM



VICINITY MAP

NOT TO SCALE



PROJECT LOCATION MAP

NOT TO SCALE

1984

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PROJECT

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I/R	DATE	DESCRIPTION

PROJECT NUMBER

04191986

Designed By:	JF
Drawn By:	IB
Dept Check:	CB
Proj Check:	GP
Date:	OCTOBER 2024
Scale:	AS NOTED

DISCIPLINE

GENERAL

SHEET TITLE

VICINITY AND LOCATION MAP

SHEET NUMBER

00 G-003

PATH/FILENAME: I:\DCS\PROJECTS\WTR\04191986_BANNING_WWTP\900_CAD_GIS\910_CAD\00-SHEETS\G00 G-003.DWG
LAST UPDATE: Friday, October 4, 2024 10:50:01 AM
PLOT DATE: Friday, October 4, 2024 11:53:31 AM

DESIGN INFLUENT WASTEWATER FLOW

ITEM	UNIT	EXISTING	UPGRADE
AVERAGE DAILY FLOW	MGD	3.6	3.6
MAX DAY PEAK HOUR FLOW	MGD	7.2	7.2
INFLUENT WASTEWATER CHARACTERISTICS			
BOD	MG/L	317	3.6
TSS	MG/L	318	7.2
TOTAL NITROGEN	MG/L	>58	

DESIGN EFFLUENT QUALITY

ITEM			
BOD	MG/L	30	<5
TOTAL INORGANIC NITROGEN	MG/L	22	<7.5
TSS	MG/L	30	<5

PRIMARY TREATMENT

ITEM			
HEADWORKS			
MECHANICAL BAR SCREEN	NUMBER	1	
CAPACITY	MGD	5	
OPENING SIZE	IN.	0.25	
MANUAL BAR SCREEN	NUMBER	1	
OPENING SIZE	IN.	1.5	
COMPACTOR	NUMBER	1	
CAPACITY	CU. FT/HR	133	
GRIT BASIN	NUMBER	1	
DIAMETER	FT	18	
GRIT WASHER/CYCLONE	NUMBER	1	
CAPACITY, EACH	MGD	3.6	
FERRIC SULFATE FEED PUMP	NUMBER	2	
CAPACITY, EACH	GPH	28	
MOTOR, EACH	HP	0.5	
HEAD, EACH	PSI	150	
STORAGE CAPACITY	GAL	2000	
PRIMARY CLARIFIERS	NUMBER	2	1 (OPTIONAL)
WEST TANK			
DESIGN FLOW RATE	MGD	1.6	
DIAMETER	FT	45	
SIDE WATER DEPTH	FT	6.5	
EAST TANK			
DESIGN FLOW RATE	MGD	2	
DIAMETER	FT	50	
SIDE WATER DEPTH	FT	7	
EQ BASIN STATION PUMPS (BY OTHERS)	NUMBER	3	
CAPACITY, EACH	MGD	3.6	
MOTOR, EACH	HP	70	
EQ BASIN VOLUME	MG	2.1	

NOTE:
(1) TO BE USED FOR MBR SYSTEM AND CHLORINE CONTACT TANK.
(2) CONVERT EXISTING SECONDARY DIGESTER TO PRIMARY DIGESTER.
(3) ALL DRAWINGS ARE CONCEPTUAL AND SUBJECT TO CHANGE BY THE DESIGN BUILD ENTITY.

SECONDARY TREATMENT

ITEM	UNIT	EXISTING	EXPANSION
MECHANICAL FINE SCREEN	NUMBER		2
CAPACITY, EACH	MGD		5
OPENING SIZE	MM		2
MEMBRANE BIOREACTOR (MBR) UNIT			
AERATION BASIN, EACH (L, W, D)	FT		115, 23, 20
NO. OF BASINS	NUMBER		3 (2+1)
MEMBRANE TANK, EACH (L, W, H)	FT		15, 19, 10
NO. OF TRAINS	NUMBER		3
DESIGN MLSS	MG/L		6,000 – 8,000
DESIGN AEROBIC SRT (WINTER)	DAY		8
RAS PUMPS	NUMBER		3+1
CAPACITY, EACH	GPM		3,700
MOTOR, EACH	HP		40
PERMEATE/BACKPULSE PUMPS	NUMBER		3+1(SHELF SPARE)
CAPACITY, EACH	GPM		1,270
MOTOR, EACH	HP		15
WAS PUMPS	NUMBER		1+1
CAPACITY, EACH	GPM		40
MOTOR, EACH	HP		TBD
MBR CHEMICAL FEED SYSTEM			
CITRIC ACID PUMP	NUMBER		1+1
CAPACITY, EACH	GPH		6
MOTOR, EACH	HP		1
HEAD, EACH	PSIG		60
SODIUM HYPO PUMP (NOTE 1)	NUMBER		1+1
CAPACITY, EACH	GPH		6
MOTOR, EACH	HP		1
HEAD, EACH	PSIG		60
STORAGE CAPACITY	GAL		2500
AERATION BLOWERS	NUMBER		2+1
CAPACITY, EACH	SCFM		1,800
MOTOR, EACH	HP		TBD
AIR SCOUR BLOWERS	NUMBER		2+1
CAPACITY, EACH	SCFM		800
MOTOR, EACH	HP		50
AIR COMPRESSOR	NUMBER		1+1
CAPACITY, EACH	SCFM		26
MOTOR, EACH	HP		7.5
HEAD, EACH	PSIG		125

UV SYSTEM

ITEM

NUMBER OF CHANNELS = 1
NUMBER OF BANKS = 3 (2 DUTY + 1 REDUNDANT)
DESIGN UVT = 65% (PER NWRI UV DISINFECTION GUIDELINES DOCUMENT)
DOSE = 80 MJ/CM2 UNDER MAXIMUM DAY FLOW (PER NWRI UV DISINFECTION GUIDELINES DOCUMENT)
CAPACITY = 0.5 MGD MBR FLOW

INTERNAL MIXED LIQUOR RECYCLE PUMPS

ITEM

NUMBER = 3 – 1 (SHELF SPARE)
CAPACITY, EACH = 3300 GPM
MOTOR, EAC H= 15 HP
HEAD, EACH = 5 FT

BIOSOLIDS PROCESSING

ITEM	UNIT	EXISTING	EXPANSION
MECHANICAL THICKENER	NUMBER	1	1
INFLUENT SLUDGE FLOW, EACH	GPM		40
DAILY SLUDGE GENERATION	LBS/DAY		4,500
NEAT POLYMER 40% FEED PUMP	NUMBER	2	1+1
CAPACITY, EACH	GPH	0–25	1
MOTOR, EACH	HP		0.5
HEAD, EACH	PSI		60
ANAEROBIC PRIMARY DIGESTERS	NUMBER	2	1(NOTE 2)
DIAMETER	FT	35	35
SIDE WATER DEPTH	FT	26	21
WATER SURFACE ELEVATION	FT	24	19
TOTAL VOLUME	GAL	172,718	136,735
SOLIDS RETENTION	DAYS	20	20
HEAT EXCHANGER	NUMBER		1
CAPACITY, EACH	GPM		100
MOTOR, EACH	HP		10
HEAD, EACH	FT		173
HOT WATER BOILER*	NUMBER	1	
CAPACITY, EACH	BTU/HR.	640,000	
HOT WATER CIRCULATION PUMPS	NUMBER	2	
CAPACITY, EACH	GPM	90	
HEAD, EACH	FT	90	
MOTOR, EACH	HP	–	
HEAT EXCHANGER	NUMBER	1	1
CAPACITY, EACH	BTU/HR.	300,000	415,000
SLUDGE DRYING BEDS	NUMBER	12	
DIMENSIONS OF EACH BED (L, W)	FT	135x25	

AECOM W.M. LYLES CO. a joint venture

PROJECT

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CLIENT

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CONSULTANT

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PHONE: (978) 905-2100
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REGISTRATION

CONCEPTUAL

ISSUE/REVISION

I/R	DATE	DESCRIPTION

PROJECT NUMBER

04191986

Designed By:	JF
Drawn By:	IB
Dept Check:	CB
Proj Check:	GP
Date:	OCTOBER 2024
Scale:	AS NOTED

DISCIPLINE

GENERAL

SHEET TITLE

DESIGN CRITERIA

SHEET NUMBER

00 G-004

PATH/FILENAME: L:\DCS\PROJECTS\WTR\04191986_BANNING_WWTP800_CAD_GIS\910_CAD\20-SHEETS\G\00 G-004.DWG
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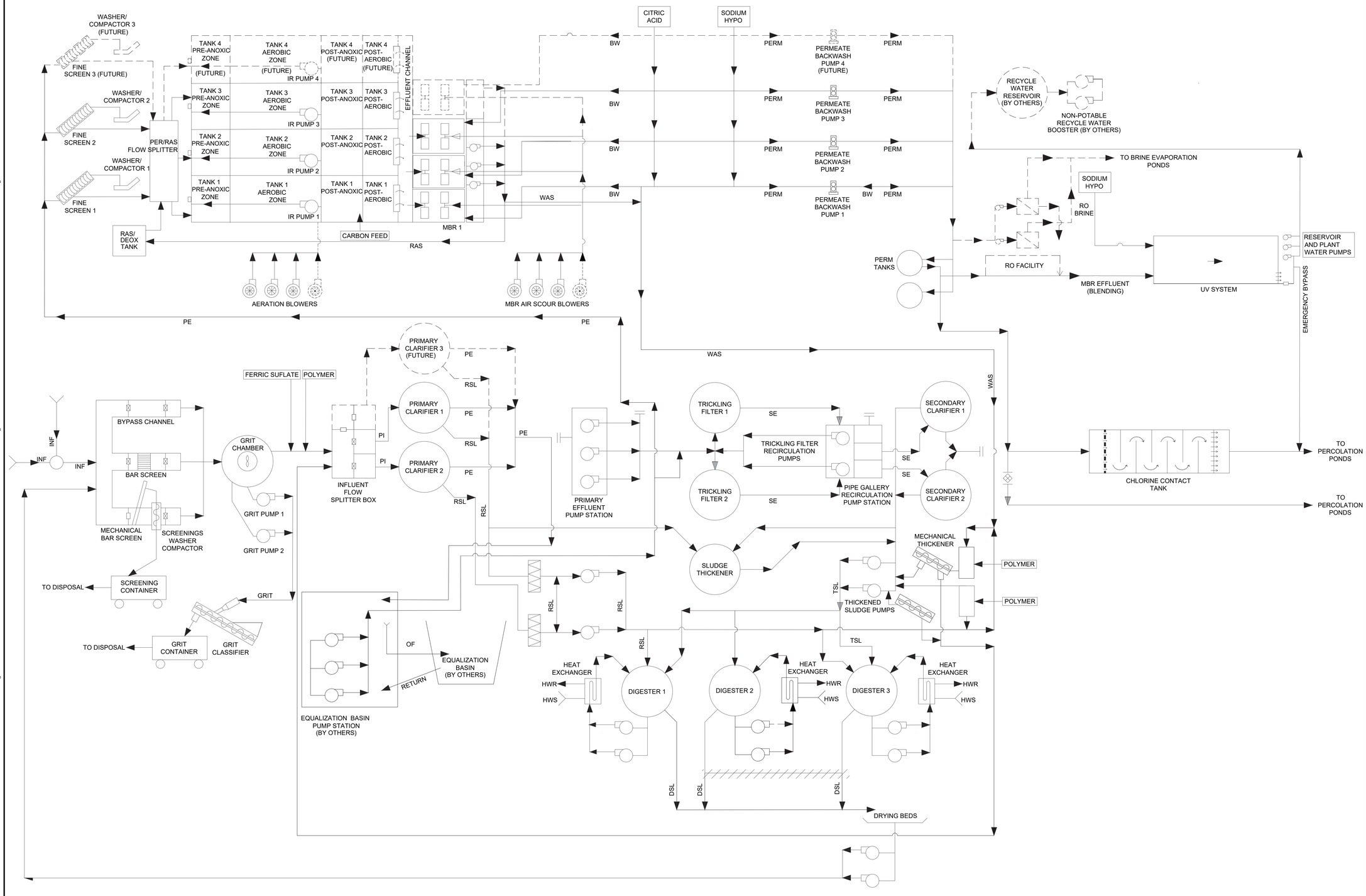

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LAST UPDATE: Monday, October 7, 2024 2:01:43 PM
PLOT DATE: Tuesday, October 8, 2024 10:56:39 AM

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REGISTRATION

CONCEPTUAL

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I/R	DATE	DESCRIPTION

PROJECT NUMBER

04191986

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Dept Check:	CB
Proj Check:	GP
Date:	OCTOBER 2024
Scale:	AS NOTED

DISCIPLINE

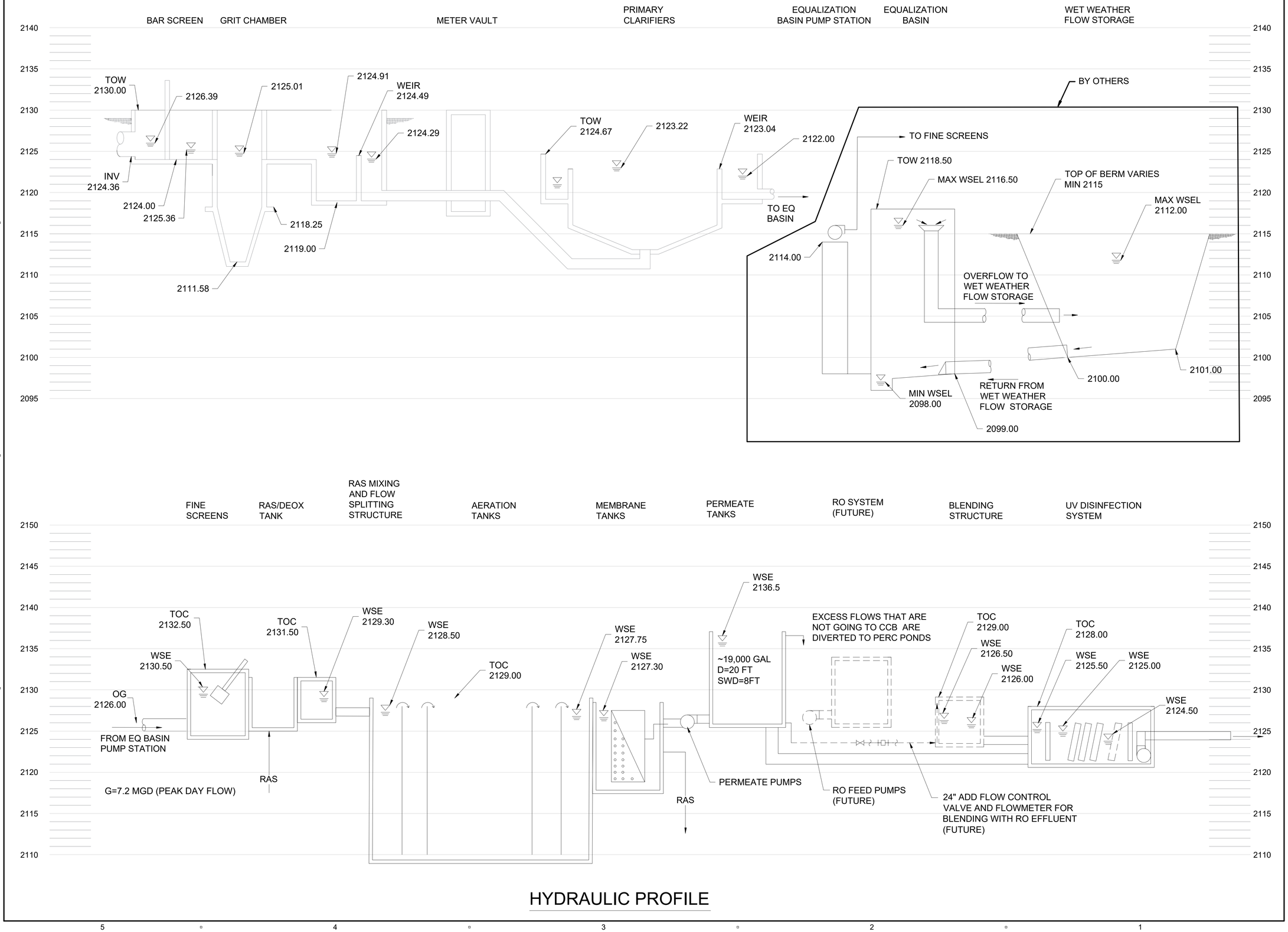
GENERAL

SHEET TITLE

PROCESS FLOW DIAGRAM

SHEET NUMBER

00 G-005



HYDRAULIC PROFILE

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LAST UPDATE: Monday, October 7, 2024 4:05:01 PM
PLOT DATE: Tuesday, October 8, 2024 11:06:24 AM

1987

AECOM W.M. LYLES CO.
a joint venture

PROJECT

BANNING WWTP RECYCLED WATER UPGRADES PROJECT

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CLIENT

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REGISTRATION

CONCEPTUAL

ISSUE/REVISION

I/R	DATE	DESCRIPTION

PROJECT NUMBER

04191986

Designed By:	JF
Drawn By:	IB
Dept Check:	CB
Proj Check:	GP
Date:	OCTOBER 2024
Scale:	AS NOTED

DISCIPLINE

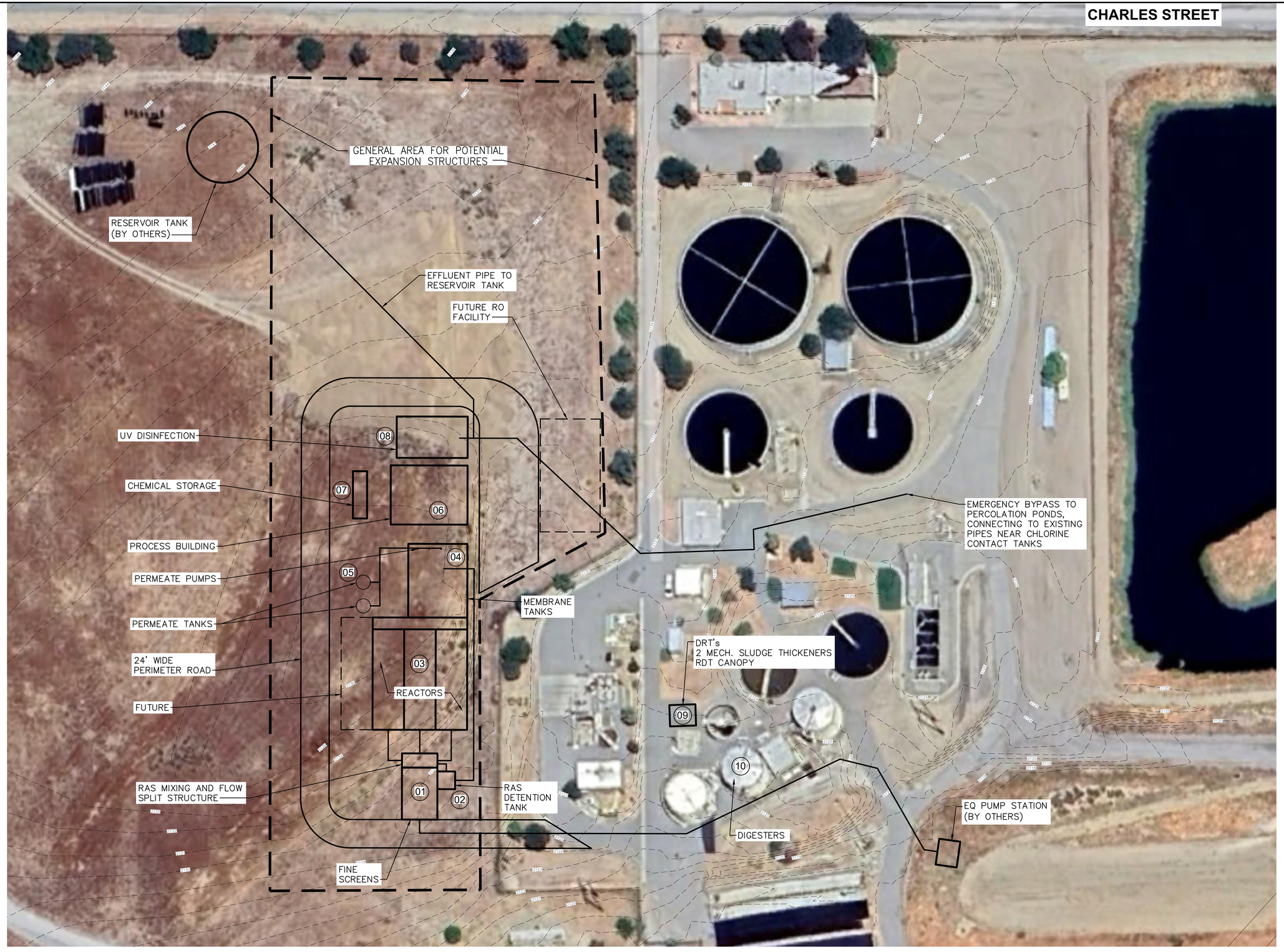
GENERAL

SHEET TITLE

HYDRAULIC PROFILE

SHEET NUMBER

00 G-006



PLAN

SCALE: 1"=40'

1"=40' 40' 20' 0 40' 80'

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PROJECT

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REGISTRATION

CONCEPTUAL

ISSUE/REVISION

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PROJECT NUMBER

04191986

Designed By:	JF
Drawn By:	IB
Dept Check:	CB
Proj Check:	GP
Date:	OCTOBER 2024
Scale:	AS NOTED

DISCIPLINE

CIVIL

SHEET TITLE

SITE PLAN

SHEET NUMBER

00 C-101

PATH/FILENAME: C:\USERS\TH1BOOM\AECOM DIRECTORY\04191986_BANNING_WWTP900_CAD_GIS\910_CAD\20-SHEETS\C\00 C-101.DWG
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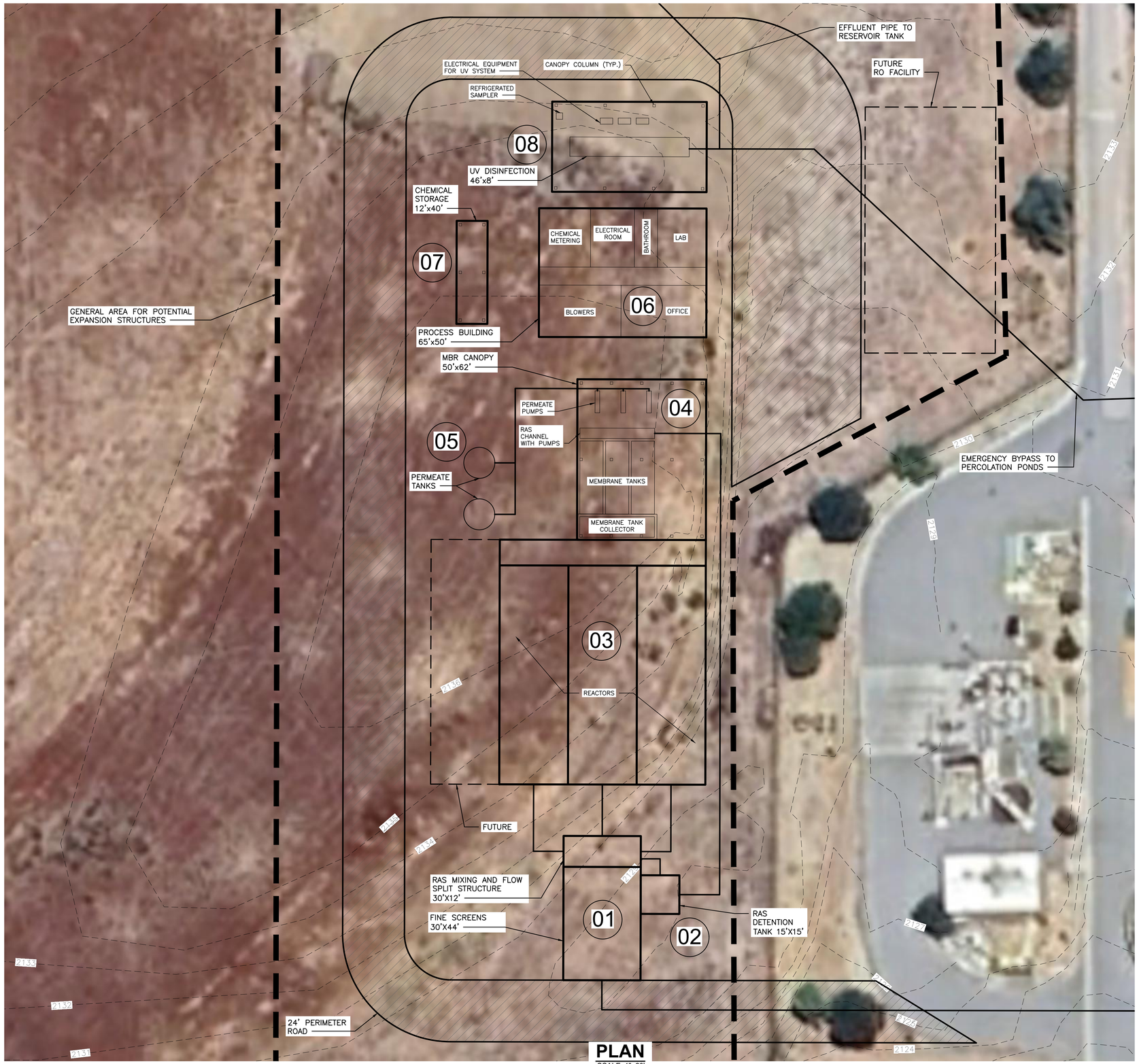

PLAN
SCALE: 1"=20'

1"=20' (20' 10' 0 20' 40')

PATH/FILENAME: C:\USERS\THIBODM\AECOM DIRECTORY\04191986_BANNING_WWTP900_CAD_GIS\810_CAD\20-SHEETS\C\00 C-102.DWG
LAST UPDATE: Tuesday, October 8, 2024 11:41:35 AM
PLOT DATE: Tuesday, October 8, 2024 1:46:26 PM

1989

AECOM W.M. LYLES CO.
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PROJECT

BANNING WWTP RECYCLED WATER UPGRADES PROJECT

2242 Charles Street
Banning, CA

CLIENT

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REGISTRATION

CONCEPTUAL

ISSUE/REVISION

I/R	DATE	DESCRIPTION

PROJECT NUMBER

04191986

Designed By:	JF
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Dept Check:	CB
Proj Check:	GP
Date:	OCTOBER 2024
Scale:	AS NOTED

DISCIPLINE

CIVIL

SHEET TITLE

ENLARGED PLAN

SHEET NUMBER

00 C-102



VIEW - LOOKING NORTH EAST

NOT TO SCALE



VIEW - LOOKING SOUTH WEST

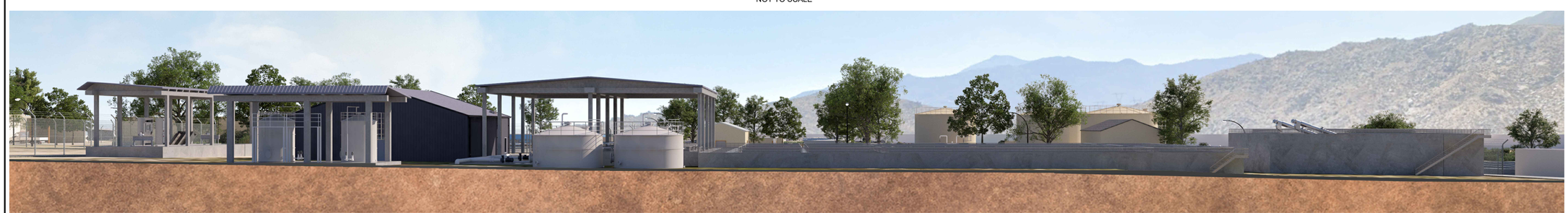
NOT TO SCALE

1 Fine Screens
2 RAS Deox Tank
3 Biological Reactors
4 MBR
5 Permeate Tanks
6 Process Building
7 Chemical Storage
8 UV Disinfection



ELEVATION - LOOKING WEST

NOT TO SCALE



ELEVATION - LOOKING EAST

NOT TO SCALE

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Proj Check:	GP
Date:	OCTOBER 2024
Scale:	AS NOTED

DISCIPLINE

ARCHITECTURAL

SHEET TITLE

ARCHITECTURAL VIEWS

SHEET NUMBER

00 A-101

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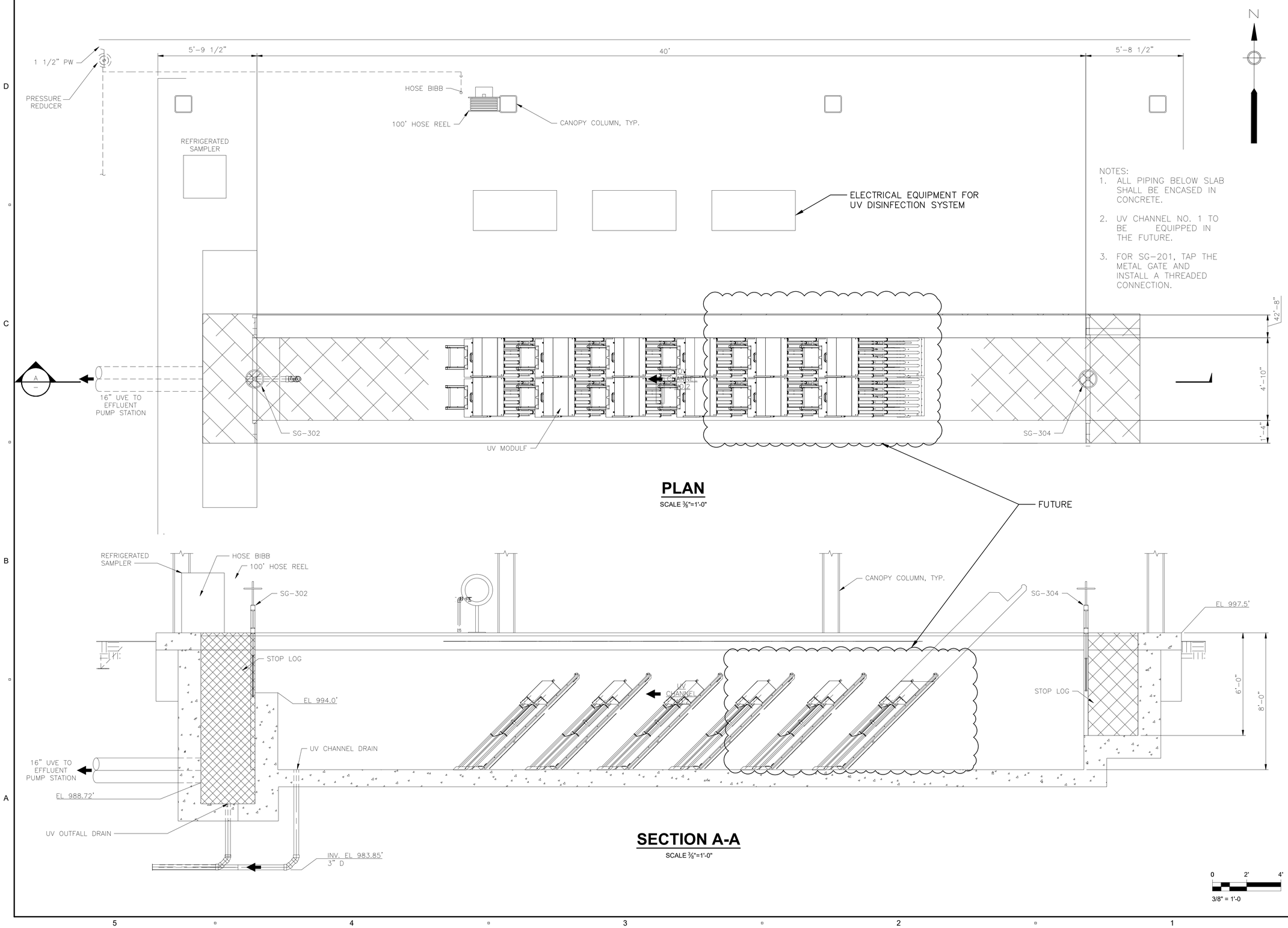

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ISSUE/REVISION

I/R	DATE	DESCRIPTION

PROJECT NUMBER

04191986

Designed By:	JF
Drawn By:	IB
Dept Check:	CB
Proj Check:	GP
Date:	OCTOBER 2024
Scale:	AS NOTED

DISCIPLINE

PROCESS

SHEET TITLE

UV CHANNEL PLAN AND SECTION

SHEET NUMBER

00 D-101

PATHFILENAME: C:\USERS\THIBODM\AECOM DIRECTORY\04191986_BANNING_WWTP\600_CAD_GIS\910_CAD\20-SHEETS\D\00 D-101.DWG
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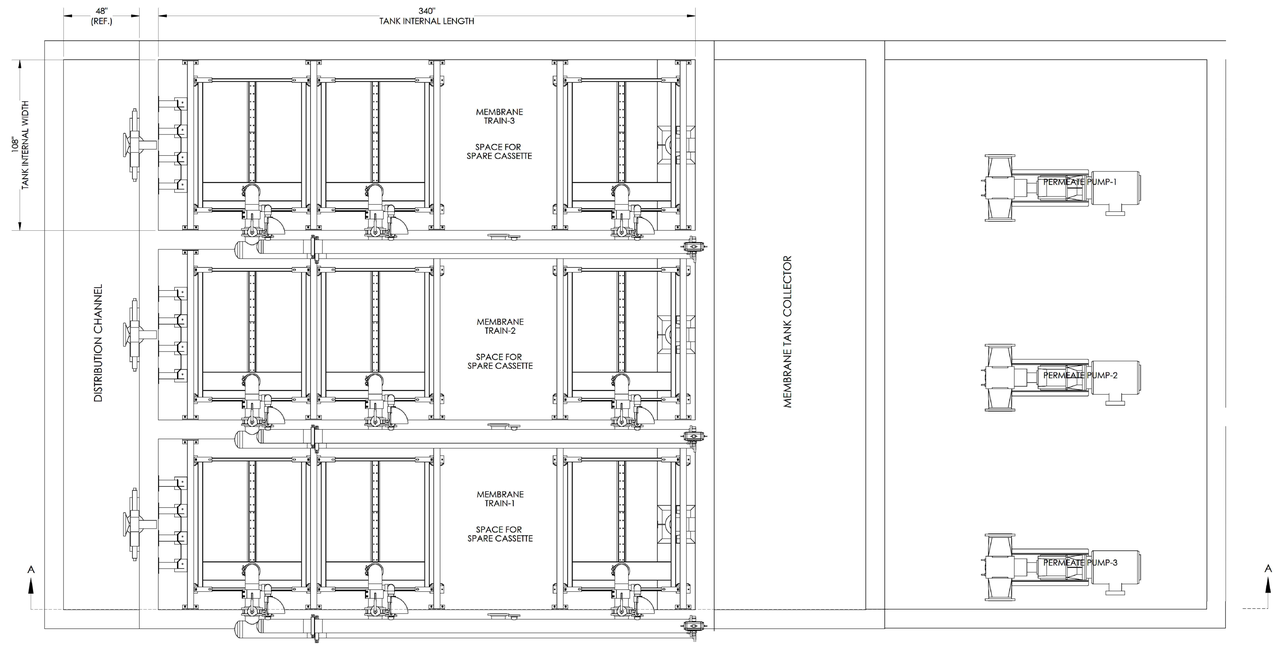
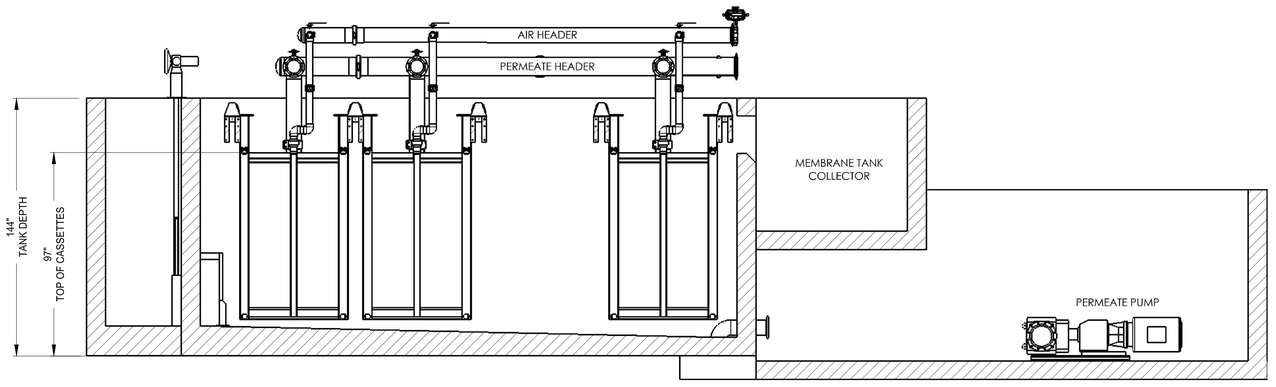


PLAN

SCALE: 1"=4'



SECTION A-A

SCALE: 1"=4'

1"=4' 4' 2' 0 4' 8'

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Date:	OCTOBER 2024
Scale:	AS NOTED

DISCIPLINE

PROCESS

SHEET TITLE

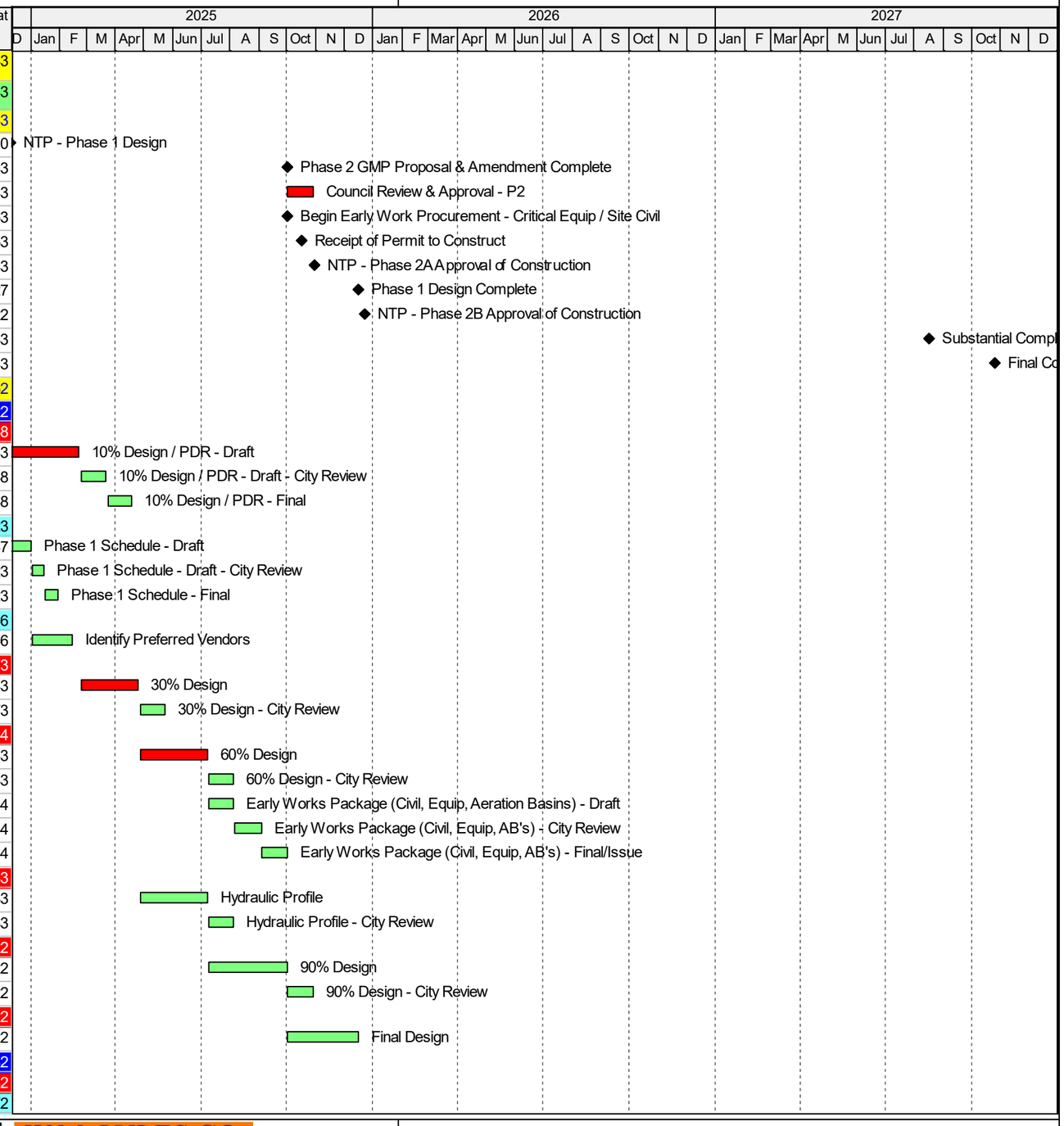
MBR
PLAN AND SECTION

SHEET NUMBER

00 D-102

PATH/FILENAME: Z:\CHELMSFORD-USCHL1\DCS\PROJECTS\WTR\04191988_BANNING_WWTP\800_CAD_GIS\910_CAD\00-SHEETS\D\00 D-102.DWG
LAST UPDATE: Monday, October 7, 2024 2:41:31 PM
PLOT DATE: Tuesday, October 8, 2024 2:02:18 PM

Activity ID	Activity Name	Planned Duration	Start	Finish	Total Float
City of Banning - Wastewater Treatment Plant & Recycled W		724	10-Dec-24	26-Oct-27	43
Design & Construction Project		724	10-Dec-24	26-Oct-27	43
Key Milestones & Dates		724	10-Dec-24	26-Oct-27	43
ADM.10	NTP - Phase 1 Design	0	10-Dec-24*		0
ADM.20	Phase 2 GMP Proposal & Amendment Complete	0		01-Oct-25	43
ADM.30	Council Review & Approval - P2	20	02-Oct-25	29-Oct-25	43
ADM.50	Begin Early Work Procurement - Critical Equip / Site Civil	0	02-Oct-25		63
ADM.45	Receipt of Permit to Construct	0	16-Oct-25		53
ADM.40	NTP - Phase 2A Approval of Construction	0	30-Oct-25		43
ADM.60	Phase 1 Design Complete	0		15-Dec-25	127
ADM.70	NTP - Phase 2B Approval of Construction	0	23-Dec-25		122
ADM.80	Substantial Completion - Phase 2 Construction	0		16-Aug-27	83
ADM.90	Final Completion & Accept - Anticipated (Reqd End Q4 2(	0		26-Oct-27	43
Tasks		716	10-Dec-24	14-Oct-27	52
Design		255	10-Dec-24	15-Dec-25	122
Task 1.1: Preliminary Design Report (PDR) / 10% Design		90	10-Dec-24	18-Apr-25	68
P1D.1000	10% Design / PDR - Draft	50	10-Dec-24	21-Feb-25	43
P1D.1010	10% Design / PDR - Draft - City Review	20	24-Feb-25	21-Mar-25	48
P1D.1020	10% Design / PDR - Final	20	24-Mar-25	18-Apr-25	48
Phase 1 Schedule		35	10-Dec-24	30-Jan-25	123
P1D.1040	Phase 1 Schedule - Draft	15	10-Dec-24	31-Dec-24	47
P1D.1050	Phase 1 Schedule - Draft - City Review	10	02-Jan-25	15-Jan-25	123
P1D.1060	Phase 1 Schedule - Final	10	16-Jan-25	30-Jan-25	123
Preferred Vendor Identification		30	02-Jan-25	14-Feb-25	46
P1D.1030	Identify Preferred Vendors	30	02-Jan-25	14-Feb-25	46
Task 1.2: 30% Design Phase		65	24-Feb-25	23-May-25	73
P1D.1070	30% Design	45	24-Feb-25	25-Apr-25	43
P1D.1080	30% Design - City Review	20	28-Apr-25	23-May-25	73
Task 1.3: 60% Design Phase		110	28-Apr-25	01-Oct-25	44
P1D.1090	60% Design	50	28-Apr-25	08-Jul-25	43
P1D.1100	60% Design - City Review	20	09-Jul-25	05-Aug-25	83
P1D.1810	Early Works Package (Civil, Equip, Aeration Basins) - Dr	20	09-Jul-25	05-Aug-25	44
P1D.1820	Early Works Package (Civil, Equip, AB's) - City Review	20	06-Aug-25	03-Sep-25	44
P1D.1830	Early Works Package (Civil, Equip, AB's) - Final/Issue	20	04-Sep-25	01-Oct-25	44
Task 1.4: Hydraulic Profile Modeling		70	28-Apr-25	05-Aug-25	83
P1D.1110	Hydraulic Profile	50	28-Apr-25	08-Jul-25	83
P1D.1120	Hydraulic Profile - City Review	20	09-Jul-25	05-Aug-25	83
Task 1.5: 90% Design Phase		80	09-Jul-25	29-Oct-25	122
P1D.1130	90% Design	60	09-Jul-25	01-Oct-25	122
P1D.1140	90% Design - City Review	20	02-Oct-25	29-Oct-25	122
Task 1.6: Final Design Phase		50	02-Oct-25	15-Dec-25	122
P1D.1150	Final Design	50	02-Oct-25	15-Dec-25	122
Task 2.0: Cost Estimating		179	04-Mar-25	13-Nov-25	142
Task 2.1: Initial Baseline Cost Model & Updates		179	04-Mar-25	13-Nov-25	142
Initial Baseline Cost Estimate		30	04-Mar-25	14-Apr-25	72

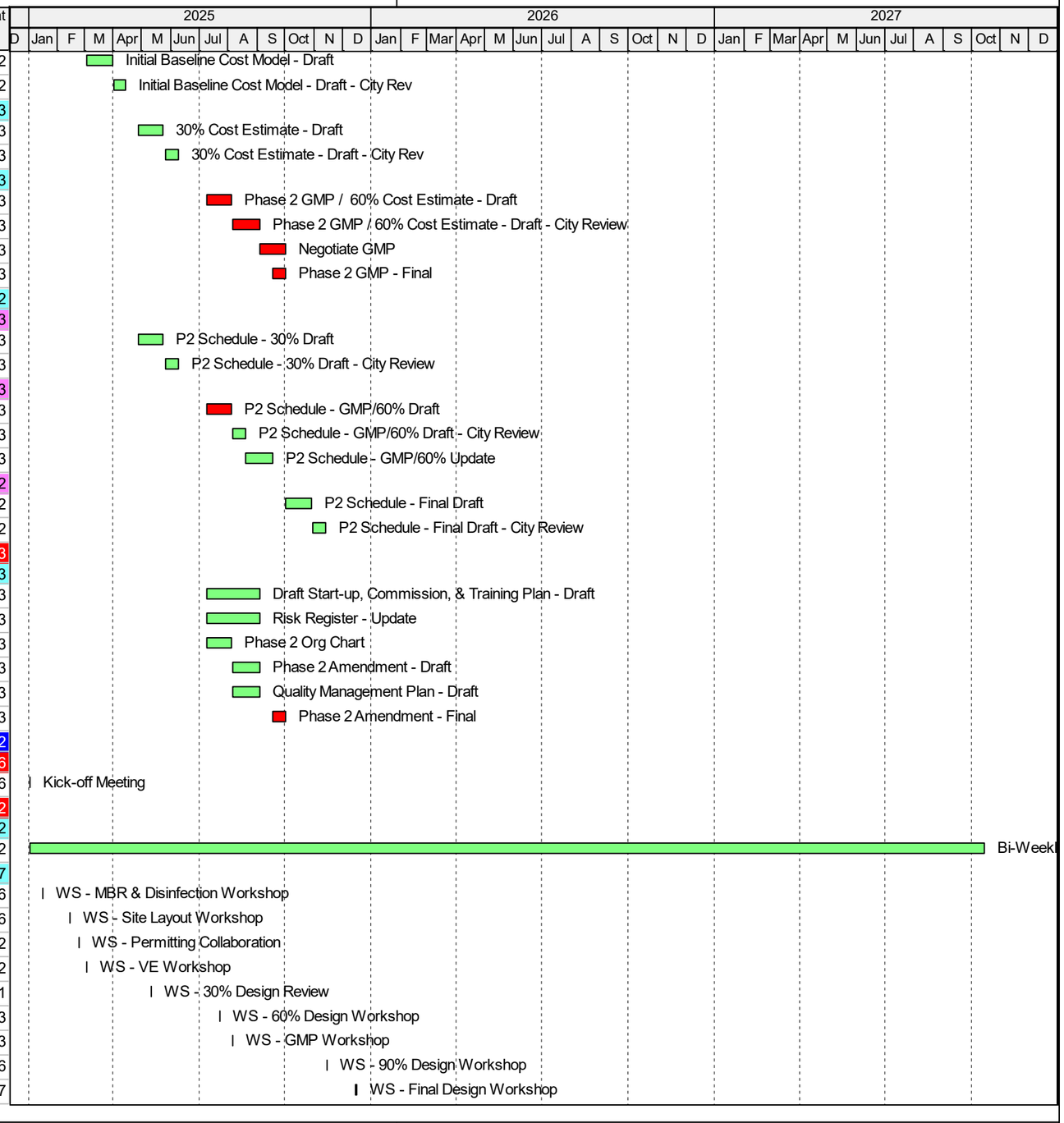


Actual Level of Effort | Actual Work | Remaining Work | Critical Remaining Work | Milestone

AECOM W.M. LYLES CO. a joint venture

TASK filter: All Activities

Activity ID	Activity Name	Planned Duration	Start	Finish	Total Float
P1D.1160	Initial Baseline Cost Model - Draft	20	04-Mar-25	31-Mar-25	72
P1D.1170	Initial Baseline Cost Model - Draft - City Rev	10	01-Apr-25	14-Apr-25	72
30% Cost Estimate / Cost Update #1		30	28-Apr-25	09-Jun-25	63
P1D.1180	30% Cost Estimate - Draft	20	28-Apr-25	23-May-25	63
P1D.1190	30% Cost Estimate - Draft - City Rev	10	27-May-25	09-Jun-25	63
GMP / 60% Cost Estimate		60	09-Jul-25	01-Oct-25	43
P1D.1280	Phase 2 GMP / 60% Cost Estimate - Draft	20	09-Jul-25	05-Aug-25	43
P1D.1290	Phase 2 GMP / 60% Cost Estimate - Draft - City Review	20	06-Aug-25	03-Sep-25	43
P1D.1310	Negotiate GMP	20	04-Sep-25	01-Oct-25	43
P1D.1320	Phase 2 GMP - Final	10	18-Sep-25	01-Oct-25	43
Phase 2 CPM Schedules		140	28-Apr-25	13-Nov-25	142
Initial Phase 2 Schedule - 30%		30	28-Apr-25	09-Jun-25	63
P1D.1200	P2 Schedule - 30% Draft	20	28-Apr-25	23-May-25	63
P1D.1210	P2 Schedule - 30% Draft - City Review	10	27-May-25	09-Jun-25	63
Draft Baseline Phase 2 Schedule		50	09-Jul-25	17-Sep-25	53
P1D.1340	P2 Schedule - GMP/60% Draft	20	09-Jul-25	05-Aug-25	43
P1D.1350	P2 Schedule - GMP/60% Draft - City Review	10	06-Aug-25	19-Aug-25	53
P1D.1360	P2 Schedule - GMP/60% Update	20	20-Aug-25	17-Sep-25	53
Final Baseline Phase 2 Schedule		30	02-Oct-25	13-Nov-25	142
P1D.1260	P2 Schedule - Final Draft	20	02-Oct-25	29-Oct-25	142
P1D.1270	P2 Schedule - Final Draft - City Review	10	30-Oct-25	13-Nov-25	142
Task 2.2: GMP Development		60	09-Jul-25	01-Oct-25	43
Phase 2 GMP / Proposal Documents		60	09-Jul-25	01-Oct-25	43
P1D.1850	Draft Start-up, Commission, & Training Plan - Draft	40	09-Jul-25	03-Sep-25	53
P1D.1860	Risk Register - Update	40	09-Jul-25	03-Sep-25	53
P1D.1870	Phase 2 Org Chart	20	09-Jul-25	05-Aug-25	53
P1D.1300	Phase 2 Amendment - Draft	20	06-Aug-25	03-Sep-25	53
P1D.1840	Quality Management Plan - Draft	20	06-Aug-25	03-Sep-25	53
P1D.1330	Phase 2 Amendment - Final	10	18-Sep-25	01-Oct-25	43
Task 3.0: Meeting & Reports		701	02-Jan-25	14-Oct-27	52
Task 3.1: Kick-off Meeting/Workshop		1	02-Jan-25	02-Jan-25	46
P1D.1370	Kick-off Meeting	1	02-Jan-25	02-Jan-25	46
Task 3.2: Progress Meetings & Reports		700	02-Jan-25	14-Oct-27	52
Progress Meetings		700	02-Jan-25	14-Oct-27	52
P1D.1460	Bi-Weekly Progress Meetings	700	02-Jan-25	14-Oct-27	52
Technical Collaborations / Workshops		230	16-Jan-25	15-Dec-25	127
P1D.1380	WS - MBR & Disinfection Workshop	1	16-Jan-25	16-Jan-25	66
P1D.1390	WS - Site Layout Workshop	1	14-Feb-25	14-Feb-25	46
P1D.1400	WS - Permitting Collaboration	1	24-Feb-25	24-Feb-25	72
P1D.1410	WS - VE Workshop	1	03-Mar-25	03-Mar-25	72
P1D.1420	WS - 30% Design Review	1	12-May-25	12-May-25	61
P1D.1430	WS - 60% Design Workshop	1	23-Jul-25	23-Jul-25	93
P1D.1440	WS - GMP Workshop	1	06-Aug-25	06-Aug-25	83
P1D.1450	WS - 90% Design Workshop	1	14-Nov-25	14-Nov-25	146
P1D.1880	WS - Final Design Workshop	1	15-Dec-25	15-Dec-25	127



Activity ID	Activity Name	Planned Duration	Start	Finish	Total Float
Task 3.3: Project Status Reports & Monthly Invoicing		700	02-Jan-25	14-Oct-27	52
P1D.1470	Monthly PSRs & Invoicing	700	02-Jan-25	14-Oct-27	52
Task 3.4: Risk Management Workshop		21	28-Apr-25	27-May-25	56
P1D.1890	Risk Register - Draft	20	28-Apr-25	23-May-25	56
P1D.1480	WS - Risk Management Workshop	1	27-May-25	27-May-25	56
Task 3.5: Constructability Review Workshops		36	03-Jun-25	23-Jul-25	92
P1D.1490	WS - Constructability Workshop #1	1	03-Jun-25	03-Jun-25	56
P1D.1500	WS - Constructability Workshop #2	1	23-Jul-25	23-Jul-25	92
Task 3.6: SCADA Development & Scoping Workshops		120	18-Feb-25	06-Aug-25	161
P1D.1510	WS - SCADA Workshop #1	1	18-Feb-25	18-Feb-25	46
P1D.1520	WS - SCADA Workshop #2	1	24-Mar-25	24-Mar-25	67
P1D.1530	WS - SCADA Workshop #3	1	18-Jun-25	18-Jun-25	56
P1D.1540	WS - SCADA Workshop #4	1	06-Aug-25	06-Aug-25	161
Task 4.0: Preliminary Investigations & Support		360	02-Jan-25	08-Jun-26	322
Task 4.1: Potholing & Cultural Monitoring		35	16-Jan-25	10-Mar-25	78
P1D.1550	Potholing	5	16-Jan-25	24-Jan-25	78
P1D.1560	Potholing Report	30	24-Jan-25	10-Mar-25	78
Task 4.2: Topographic Survey (Aerial, Title Report, Boundary Summary)		40	16-Jan-25	17-Mar-25	73
P1D.1570	Survey	20	16-Jan-25	14-Feb-25	73
P1D.1580	Survey Report	20	14-Feb-25	17-Mar-25	73
Task 4.3: Environmental Support (IS-MND)		30	02-Jan-25	14-Feb-25	48
P1D.1590	Environmental Support	30	02-Jan-25	14-Feb-25	48
Task 4.4: Geotechnical Investigation		65	16-Jan-25	18-Apr-25	48
P1D.1600	Geotechnical Report - Draft	30	16-Jan-25	03-Mar-25	53
P1D.1610	Geotechnical Report -Draft-City Rev	10	03-Mar-25	17-Mar-25	53
P1D.1620	Geotechnical Report - Final	20	24-Mar-25	18-Apr-25	48
Task 4.5: Permitting Support		280	28-Apr-25	08-Jun-26	322
City of Banning		80	09-Jul-25	29-Oct-25	157
P1D.1750	County Traffic Control Permit	40	09-Jul-25	03-Sep-25	83
P1D.1760	Community Development	30	09-Jul-25	19-Aug-25	152
P1D.1770	Building Permit	60	06-Aug-25	29-Oct-25	157
P1D.1780	Public Works Coordination	20	06-Aug-25	03-Sep-25	142
P1D.1790	Encroachment Permit Coordination	20	06-Aug-25	03-Sep-25	83
County of Riverside		150	09-Jul-25	12-Feb-26	397
P1D.1630	Health Dept. - Solid Waste Facility Reqs	20	09-Jul-25	05-Aug-25	162
P1D.1640	Flood Control & Water Conservation District	40	09-Jul-25	03-Sep-25	142
P1D.1650	Transport. & Land Management Agency & Planning	30	06-Aug-25	17-Sep-25	132
P1D.1660	Fire Dept. - Hazardous Material Business Plan	40	16-Dec-25	12-Feb-26	397
CA State Waterboard R7: Colorado River		90	24-Jun-25	29-Oct-25	152
Stormwater		50	24-Jun-25	03-Sep-25	142
P1D.1670	Industrial User Waste Discharge Permits	50	24-Jun-25	03-Sep-25	142
P1D.1680	Construction General Permit	40	09-Jul-25	03-Sep-25	83
P1D.1690	SWPPP Plan Development	40	09-Jul-25	03-Sep-25	83
P1D.1700	SWPPP Updates assoc. w/Industrial Activities	30	23-Jul-25	03-Sep-25	142
Recycled Water		60	06-Aug-25	29-Oct-25	152
P1D.1710	Title 22 Eng. Report for Prod., Dist. & Use of Rec. Water	60	06-Aug-25	29-Oct-25	152



Actual Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

AECOM W.M. LYLES CO. a joint venture

TASK filter: All Activities

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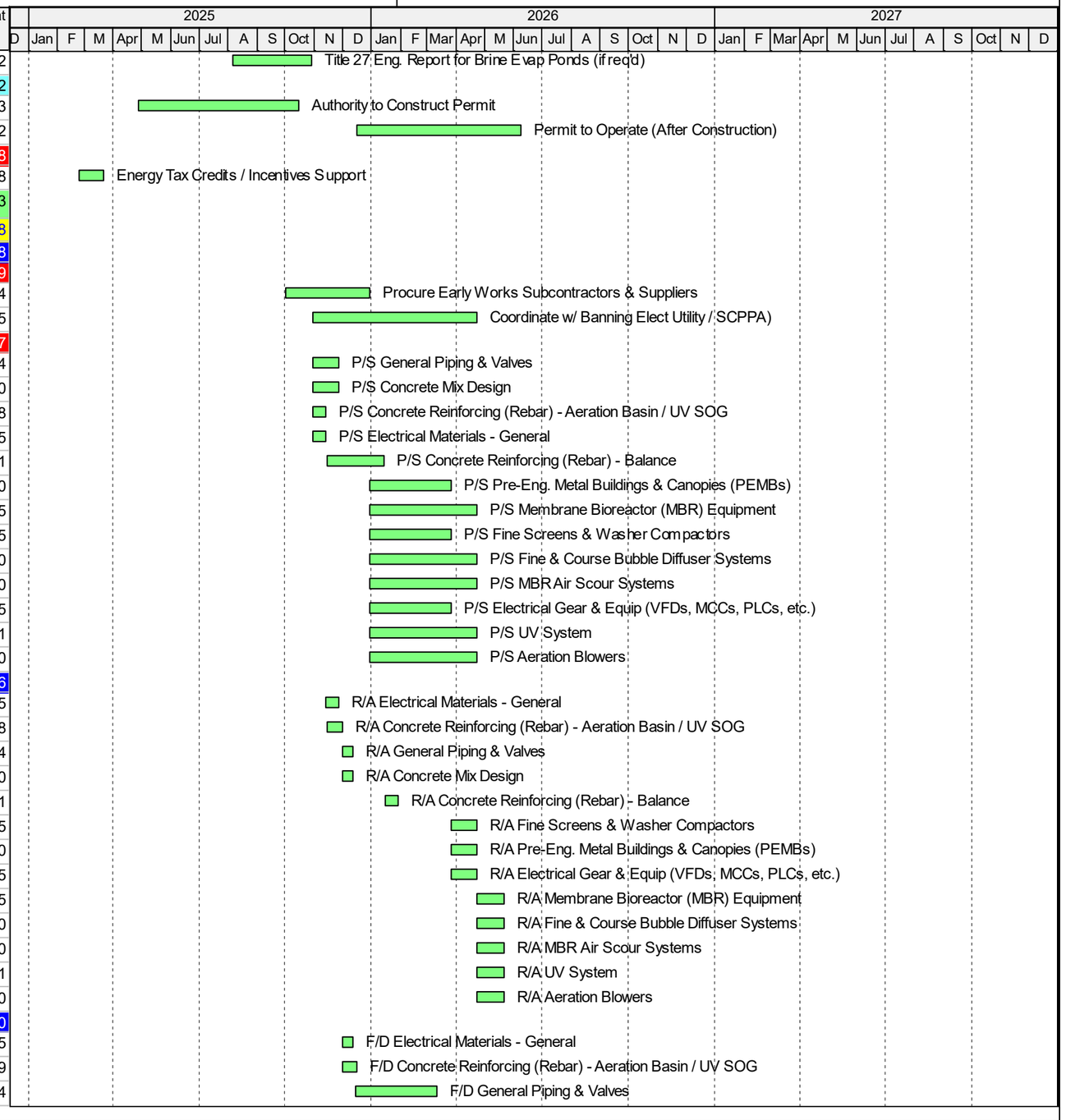
Activity ID	Activity Name	Planned Duration	Start	Finish	Total Float
P1D.1720	Title 27 Eng. Report for Brine Evap Ponds (if req'd)	60	06-Aug-25	29-Oct-25	152
South Coast Air Quality Management District (AQMD)		280	28-Apr-25	08-Jun-26	322
P1D.1730	Authority to Construct Permit	120	28-Apr-25	15-Oct-25	53
P1D.1740	Permit to Operate (After Construction)	120	16-Dec-25	08-Jun-26	322
Energy Tax Credits / Incentives		20	24-Feb-25	21-Mar-25	48
P1D.1800	Energy Tax Credits / Incentives Support	20	24-Feb-25	21-Mar-25	48
CONSTRUCTION		519	02-Oct-25	26-Oct-27	43
Construction Phase 2A - Early Work		395	02-Oct-25	30-Apr-27	68
Early Procurement		139	02-Oct-25	23-Apr-26	308
Early Administative Tasks		138	02-Oct-25	22-Apr-26	309
C2A.1000	Procure Early Works Subcontractors & Suppliers	60	02-Oct-25	30-Dec-25	44
C2A.1010	Coordinate w/ Banning Elect Utility / SCPPA)	120	30-Oct-25	22-Apr-26	315
Prepare Early Submittals & Submit		119	30-Oct-25	23-Apr-26	187
C2A.1030	P/S General Piping & Valves	20	30-Oct-25	26-Nov-25	114
C2A.1040	P/S Concrete Mix Design	20	30-Oct-25	26-Nov-25	50
C2A.1020	P/S Concrete Reinforcing (Rebar) - Aeration Basin / UV S	10	30-Oct-25	13-Nov-25	48
C2A.1050	P/S Electrical Materials - General	10	30-Oct-25	12-Nov-25	45
C2A.1060	P/S Concrete Reinforcing (Rebar) - Balance	40	14-Nov-25	14-Jan-26	191
C2A.1070	P/S Pre-Eng. Metal Buildings & Canopies (PEMBs)	60	30-Dec-25	26-Mar-26	190
C2A.1080	P/S Membrane Bioreactor (MBR) Equipment	80	30-Dec-25	23-Apr-26	105
C2A.1100	P/S Fine Screens & Washer Compactors	60	30-Dec-25	26-Mar-26	205
C2A.1110	P/S Fine & Course Bubble Diffuser Systems	80	30-Dec-25	23-Apr-26	70
C2A.1120	P/S MBR Air Scour Systems	80	30-Dec-25	23-Apr-26	190
C2A.1130	P/S Electrical Gear & Equip (VFDs, MCCs, PLCs, etc.)	60	30-Dec-25	26-Mar-26	45
C2A.1170	P/S UV System	80	30-Dec-25	23-Apr-26	161
C2A.1180	P/S Aeration Blowers	80	30-Dec-25	23-Apr-26	70
Early Submittal Review & Approval		130	13-Nov-25	21-May-26	186
C2A.1470	R/A Electrical Materials - General	10	13-Nov-25	26-Nov-25	45
C2A.1440	R/A Concrete Reinforcing (Rebar) - Aeration Basin / UV S	10	14-Nov-25	01-Dec-25	48
C2A.1450	R/A General Piping & Valves	10	01-Dec-25	12-Dec-25	114
C2A.1460	R/A Concrete Mix Design	10	01-Dec-25	12-Dec-25	50
C2A.1480	R/A Concrete Reinforcing (Rebar) - Balance	10	15-Jan-26	29-Jan-26	191
C2A.1490	R/A Fine Screens & Washer Compactors	20	26-Mar-26	23-Apr-26	205
C2A.1500	R/A Pre-Eng. Metal Buildings & Canopies (PEMBs)	20	26-Mar-26	23-Apr-26	190
C2A.1510	R/A Electrical Gear & Equip (VFDs, MCCs, PLCs, etc.)	20	26-Mar-26	23-Apr-26	45
C2A.1560	R/A Membrane Bioreactor (MBR) Equipment	20	23-Apr-26	21-May-26	105
C2A.1580	R/A Fine & Course Bubble Diffuser Systems	20	23-Apr-26	21-May-26	70
C2A.1590	R/A MBR Air Scour Systems	20	23-Apr-26	21-May-26	190
C2A.1600	R/A UV System	20	23-Apr-26	21-May-26	161
C2A.1610	R/A Aeration Blowers	20	23-Apr-26	21-May-26	70
Early Fabrication & Delivery Release		361	01-Dec-25	30-Apr-27	70
C2A.1220	F/D Electrical Materials - General	10	01-Dec-25	12-Dec-25	45
C2A.1200	F/D Concrete Reinforcing (Rebar) - Aeration Basin / UV S	10	01-Dec-25	15-Dec-25	49
C2A.1210	F/D General Piping & Valves	60	15-Dec-25	11-Mar-26	114



Actual Level of Effort | Actual Work | Remaining Work | Critical Remaining Work | Milestone

AECOM W.M. LYLES CO. a joint venture

TASK filter: All Activities

Activity ID	Activity Name	Planned Duration	Start	Finish	Total Float
C2A.1230	F/D Concrete Reinforcing (Rebar) - Balance	20	29-Jan-26	27-Feb-26	191
C2A.1250	F/D Electrical Gear & Equip (VFDs, MCCs, PLCs, etc.)	260	23-Apr-26	30-Apr-27	45
C2A.1260	F/D Fine Screens & Washer Compactors	120	23-Apr-26	13-Oct-26	205
C2A.1270	F/D Pre-Eng. Metal Buildings & Canopies (PEMBs)	60	23-Apr-26	20-Jul-26	190
C2A.1300	F/D Membrane Bioreactor (MBR) Equipment	200	21-May-26	05-Mar-27	105
C2A.1320	F/D UV Sytem	120	21-May-26	10-Nov-26	161
C2A.1330	F/D MBR Air Scour Systems	120	21-May-26	10-Nov-26	190
C2A.1340	F/D Fine & Course Bubble Diffuser Systems	200	21-May-26	05-Mar-27	70
C2A.1350	F/D Aeration Blowers	240	21-May-26	30-Apr-27	70
Mobilization		6	30-Oct-25	06-Nov-25	43
C2A.1370	Mobilization	5	30-Oct-25	05-Nov-25	44
C2A.1380	Set-up Traffic Control	1	30-Oct-25	30-Oct-25	43
C2A.1400	Install Temp Facilities (Trailers, Toilets, Parking, etc.)	5	30-Oct-25	06-Nov-25	44
C2A.1390	Install SWPPP BMPs	3	30-Oct-25	04-Nov-25	44
Early Civil Site Work		30	06-Nov-25	22-Dec-25	163
C2A.1410	Clear & Grub @ Site	5	06-Nov-25	13-Nov-25	44
C2A.1420	Mass EXC @ Aeration Basins (elev 2109')	15	13-Nov-25	08-Dec-25	44
C2A.1430	Mass EXC @ UV Basin (elev 2120')	10	08-Dec-25	22-Dec-25	163
Early Aeration Basins / Reactors 1-3 Work		160	08-Dec-25	27-Jul-26	44
C2A.1620	Cut & Grade - Aeration Basins 1-3	5	08-Dec-25	15-Dec-25	44
C2A.1630	Install BG Utility Piping	5	15-Dec-25	22-Dec-25	44
C2A.1640	ELEC - Install BG / In-slab Conduit	15	15-Dec-25	07-Jan-26	44
C2A.1650	F/R/P - SOG, Walls, Deck - Aeration Basin 1-3	150	22-Dec-25	27-Jul-26	44
Construction Phase 2B		464	23-Dec-25	26-Oct-27	43
Procurement		239	23-Dec-25	04-Dec-26	193
Administrative Tasks		40	23-Dec-25	20-Feb-26	149
C2B.2350	Design - Issue For Construction Docs	10	23-Dec-25	07-Jan-26	122
C2B.2360	Procure Misc Subcontractors & Suppliers	40	23-Dec-25	20-Feb-26	149
Prepare Submittals & Submit		60	20-Feb-26	15-May-26	235
C2A.1140	P/S Digester Heat Exchangers	60	20-Feb-26	15-May-26	208
C2A.1150	P/S MBR Chemical Feed Systems - Citric Acid/Hypo	60	20-Feb-26	15-May-26	169
C2A.1190	P/S Rotary Drum Thickener (RDT) Equipment	60	20-Feb-26	15-May-26	239
C2B.2280	P/S RAS Pumps	60	20-Feb-26	15-May-26	209
C2B.2290	P/S Permeate Backwash Pumps	60	20-Feb-26	15-May-26	186
C2B.2300	P/S Permeate Tanks (Bolted Steel)	40	20-Feb-26	17-Apr-26	249
C2B.2310	P/S Plant Water Pumps	60	20-Feb-26	15-May-26	155
C2B.2320	P/S Polymer Feed Pumps	60	20-Feb-26	15-May-26	179
C2B.2330	P/S Chemical Feed Tanks	40	20-Feb-26	17-Apr-26	259
C2B.2340	P/S WAS Pumps	60	20-Feb-26	15-May-26	179
C2A.1160	P/S Grit / Cyclone Unit	60	23-Feb-26	15-May-26	149
C2A.1670	P/S Digester Hot Water Boiler	40	23-Feb-26	17-Apr-26	223
C2A.1700	P/S Primary Clarifier Equipment	60	23-Feb-26	15-May-26	194
C2A.1730	P/S Grit Pumps	60	23-Feb-26	15-May-26	209
Review & Approve Submittals		40	17-Apr-26	15-Jun-26	225
C2B.2230	R/A Permeate Tanks	10	17-Apr-26	01-May-26	249



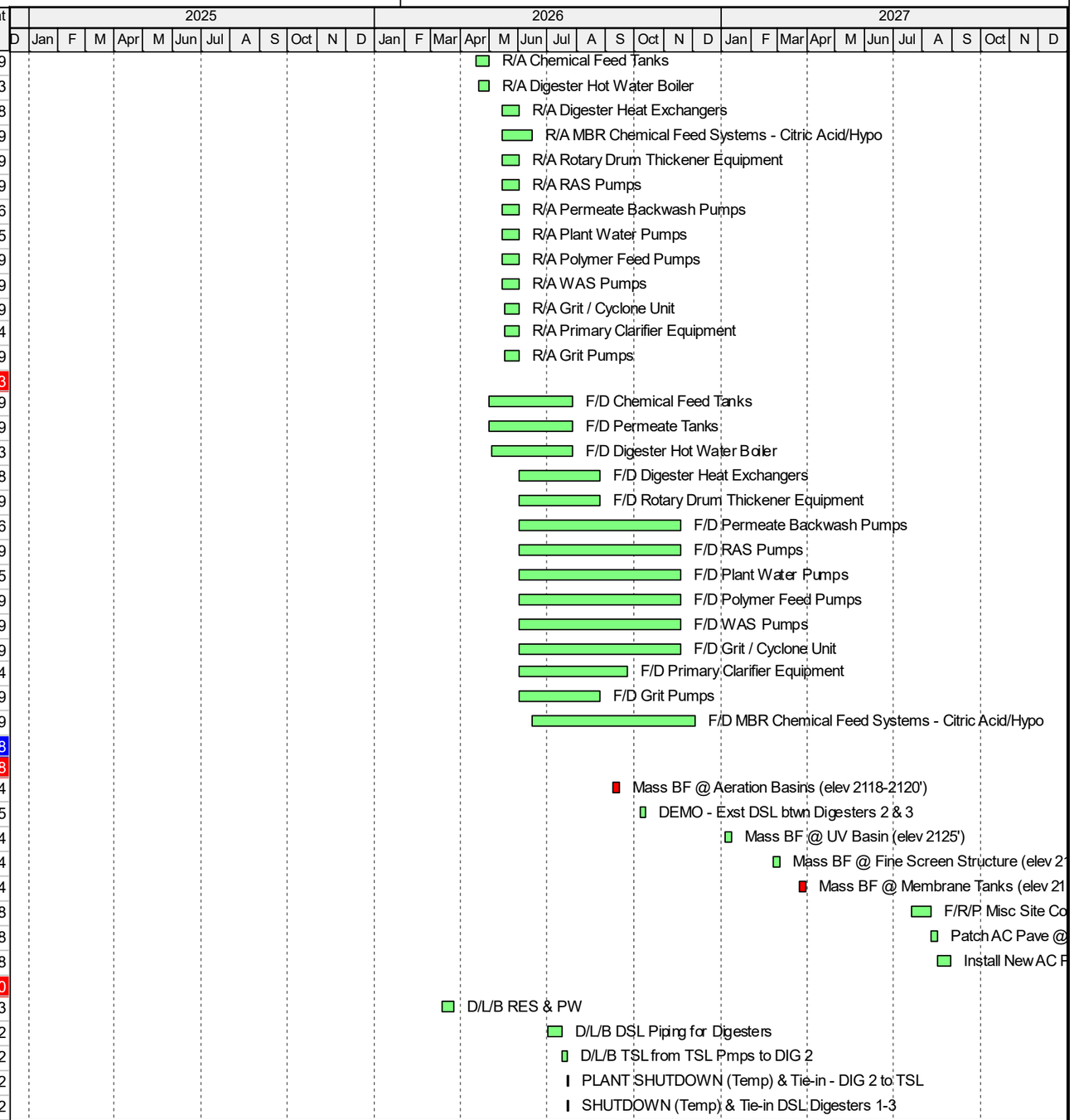
Actual Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

AECOM W.M. LYLES CO. a joint venture

TASK filter: All Activities

1997

Activity ID	Activity Name	Planned Duration	Start	Finish	Total Float
C2B.2260	R/A Chemical Feed Tanks	10	17-Apr-26	01-May-26	259
C2A.1680	R/A Digester Hot Water Boiler	10	20-Apr-26	01-May-26	223
C2A.1520	R/A Digester Heat Exchangers	10	15-May-26	01-Jun-26	208
C2A.1530	R/A MBR Chemical Feed Systems - Citric Acid/Hypo	20	15-May-26	15-Jun-26	169
C2A.1550	R/A Rotary Drum Thickener Equipment	10	15-May-26	01-Jun-26	239
C2B.2210	R/A RAS Pumps	10	15-May-26	01-Jun-26	209
C2B.2220	R/A Permeate Backwash Pumps	10	15-May-26	01-Jun-26	186
C2B.2240	R/A Plant Water Pumps	10	15-May-26	01-Jun-26	155
C2B.2250	R/A Polymer Feed Pumps	10	15-May-26	01-Jun-26	179
C2B.2270	R/A WAS Pumps	10	15-May-26	01-Jun-26	179
C2A.1290	R/A Grit / Cyclone Unit	10	18-May-26	01-Jun-26	149
C2A.1710	R/A Primary Clarifier Equipment	10	18-May-26	01-Jun-26	194
C2A.1740	R/A Grit Pumps	10	18-May-26	01-Jun-26	209
Fabrication & Delivery		149	01-May-26	04-Dec-26	193
C2B.2180	F/D Chemical Feed Tanks	60	01-May-26	28-Jul-26	259
C2B.2200	F/D Permeate Tanks	60	01-May-26	28-Jul-26	249
C2A.1690	F/D Digester Hot Water Boiler	60	04-May-26	28-Jul-26	223
C2A.1240	F/D Digester Heat Exchangers	60	01-Jun-26	25-Aug-26	208
C2A.1360	F/D Rotary Drum Thickener Equipment	60	01-Jun-26	25-Aug-26	239
C2B.2140	F/D Permeate Backwash Pumps	120	01-Jun-26	18-Nov-26	186
C2B.2150	F/D RAS Pumps	120	01-Jun-26	18-Nov-26	209
C2B.2160	F/D Plant Water Pumps	120	01-Jun-26	18-Nov-26	155
C2B.2170	F/D Polymer Feed Pumps	120	01-Jun-26	18-Nov-26	179
C2B.2190	F/D WAS Pumps	120	01-Jun-26	18-Nov-26	179
C2A.1660	F/D Grit / Cyclone Unit	120	02-Jun-26	19-Nov-26	149
C2A.1720	F/D Primary Clarifier Equipment	80	02-Jun-26	23-Sep-26	194
C2A.1750	F/D Grit Pumps	60	02-Jun-26	25-Aug-26	209
C2A.1280	F/D MBR Chemical Feed Systems - Citric Acid/Hypo	120	15-Jun-26	04-Dec-26	169
Civil Site Work		421	07-Jan-26	30-Aug-27	88
Misc Site Work		251	08-Sep-26	30-Aug-27	88
C2B.2370	Mass BF @ Aeration Basins (elev 2118-2120')	5	08-Sep-26	15-Sep-26	44
C2B.2380	DEMO - Exst DSL btwn Digesters 2 & 3	3	07-Oct-26	12-Oct-26	315
C2B.2390	Mass BF @ UV Basin (elev 2125')	5	05-Jan-27	11-Jan-27	114
C2B.2400	Mass BF @ Fine Screen Structure (elev 2125')	5	24-Feb-27	03-Mar-27	54
C2B.2410	Mass BF @ Membrane Tanks (elev 2125')	5	24-Mar-27	31-Mar-27	44
C2B.2420	F/R/P Misc Site Concrete @ MBR Facilities	15	20-Jul-27	09-Aug-27	88
C2B.2440	Patch AC Pave @ Existing Plant	5	10-Aug-27	16-Aug-27	88
C2B.2430	Install New AC Paving @ MBR Facilities	10	17-Aug-27	30-Aug-27	88
Below Grade Pipe Installation		305	12-Mar-26	20-May-27	160
C2B.2450	D/L/B RES & PW	10	12-Mar-26	25-Mar-26	343
C2B.2490	D/L/B DSL Piping for Digesters	10	02-Jul-26	17-Jul-26	292
C2B.2500	D/L/B TSL from TSL Pmps to DIG 2	3	17-Jul-26	22-Jul-26	292
C2B.2510	PLANT SHUTDOWN (Temp) & Tie-in - DIG 2 to TSL	1	22-Jul-26	23-Jul-26	292
C2B.2520	SHUTDOWN (Temp) & Tie-in DSL Digesters 1-3	1	22-Jul-26	23-Jul-26	292



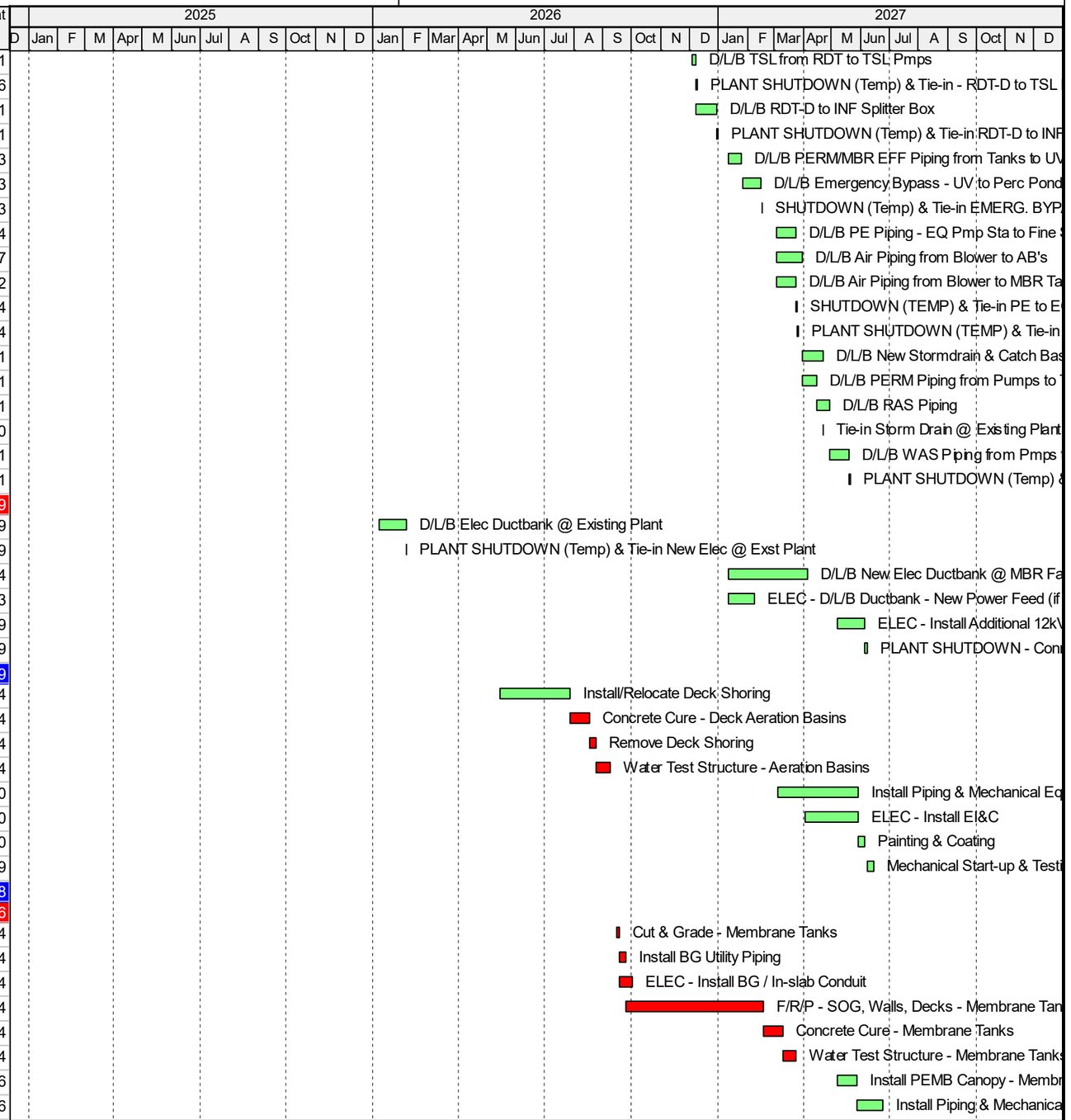
Actual Level of Effort | Actual Work | Remaining Work | Critical Remaining Work | Milestone

AECOM W.M. LYLES CO. a joint venture

TASK filter: All Activities

1998

Activity ID	Activity Name	Planned Duration	Start	Finish	Total Float
C2B.2530	D/L/B TSL from RDT to TSL Pmps	2	04-Dec-26	08-Dec-26	181
C2B.2540	PLANT SHUTDOWN (Temp) & Tie-in - RDT-D to TSL P	1	08-Dec-26	09-Dec-26	196
C2B.2550	D/L/B RDT-D to INF Splitter Box	15	08-Dec-26	30-Dec-26	181
C2B.2560	PLANT SHUTDOWN (Temp) & Tie-in RDT-D to INF Spli	1	30-Dec-26	31-Dec-26	181
C2B.2570	D/L/B PERM/MBR EFF Piping from Tanks to UV	10	12-Jan-27	25-Jan-27	153
C2B.2580	D/L/B Emergency Bypass - UV to Perc Ponds	15	26-Jan-27	15-Feb-27	153
C2B.2590	SHUTDOWN (Temp) & Tie-in EMERG. BYPASS to PEF	1	16-Feb-27	16-Feb-27	153
C2B.2460	D/L/B PE Piping - EQ Pmp Sta to Fine Screen	15	03-Mar-27	24-Mar-27	104
C2B.2600	D/L/B Air Piping from Blower to AB's	20	03-Mar-27	31-Mar-27	117
C2B.2610	D/L/B Air Piping from Blower to MBR Tanks	15	03-Mar-27	24-Mar-27	122
C2B.2470	SHUTDOWN (TEMP) & Tie-in PE to EQ Pmp Sta	1	24-Mar-27	25-Mar-27	104
C2B.2480	PLANT SHUTDOWN (TEMP) & Tie-in PE to TRIK Filter	1	25-Mar-27	26-Mar-27	104
C2B.2620	D/L/B New Stormdrain & Catch Basins	15	31-Mar-27	21-Apr-27	151
C2B.2630	D/L/B PERM Piping from Pumps to Tanks	10	31-Mar-27	14-Apr-27	81
C2B.2640	D/L/B RAS Piping	10	14-Apr-27	28-Apr-27	81
C2B.2650	Tie-in Storm Drain @ Existing Plant	1	21-Apr-27	22-Apr-27	180
C2B.2660	D/L/B WAS Piping from Pmps to Digesters	15	28-Apr-27	19-May-27	81
C2B.2670	PLANT SHUTDOWN (Temp) & Tie-in - RSL/WAS at DIC	1	19-May-27	20-May-27	81
Site Electrical		361	07-Jan-26	07-Jun-27	69
C2B.2680	D/L/B Elec Ductbank @ Existing Plant	20	07-Jan-26	04-Feb-26	409
C2B.2690	PLANT SHUTDOWN (Temp) & Tie-in New Elec @ Exst	1	04-Feb-26	05-Feb-26	409
C2B.2700	D/L/B New Elec Ductbank @ MBR Facilities	60	12-Jan-27	05-Apr-27	114
C2B.2710	ELEC - D/L/B Ductbank - New Power Feed (if needed)	20	12-Jan-27	08-Feb-27	133
C2B.2720	ELEC - Install Additional 12kV Power Feed (if needed)	20	07-May-27	04-Jun-27	69
C2B.2730	PLANT SHUTDOWN - Connect New Addtl Power Feed	1	04-Jun-27	07-Jun-27	69
Aeration Basins / Reactors 1-3		276	14-May-26	14-Jun-27	69
C2B.1390	Install/Relocate Deck Shoring	50	14-May-26	27-Jul-26	64
C2B.1400	Concrete Cure - Deck Aeration Basins	15	27-Jul-26	17-Aug-26	44
C2B.1410	Remove Deck Shoring	5	17-Aug-26	24-Aug-26	44
C2B.1420	Water Test Structure - Aeration Basins	10	24-Aug-26	08-Sep-26	44
C2B.1430	Install Piping & Mechanical Equipment	60	05-Mar-27	28-May-27	70
C2B.1440	ELEC - Install EI&C	40	02-Apr-27	28-May-27	70
C2B.1450	Painting & Coating	5	28-May-27	04-Jun-27	70
C2B.1460	Mechanical Start-up & Testing - Aeration Basins	5	07-Jun-27	14-Jun-27	69
Membrane Facilities		215	15-Sep-26	26-Jul-27	48
Membrane Tanks		214	15-Sep-26	15-Jul-27	46
C2B.1740	Cut & Grade - Membrane Tanks	3	15-Sep-26	18-Sep-26	44
C2B.1750	Install BG Utility Piping	5	18-Sep-26	25-Sep-26	44
C2B.1760	ELEC - Install BG / In-slab Conduit	10	18-Sep-26	02-Oct-26	44
C2B.1770	F/R/P - SOG, Walls, Decks - Membrane Tanks	100	25-Sep-26	17-Feb-27	44
C2B.1780	Concrete Cure - Membrane Tanks	15	17-Feb-27	10-Mar-27	44
C2B.1790	Water Test Structure - Membrane Tanks	10	10-Mar-27	24-Mar-27	44
C2B.1800	Install PEMB Canopy - Membrane / Permeate Pumps	15	06-May-27	27-May-27	46
C2B.1810	Install Piping & Mechanical Equipment	20	27-May-27	24-Jun-27	46



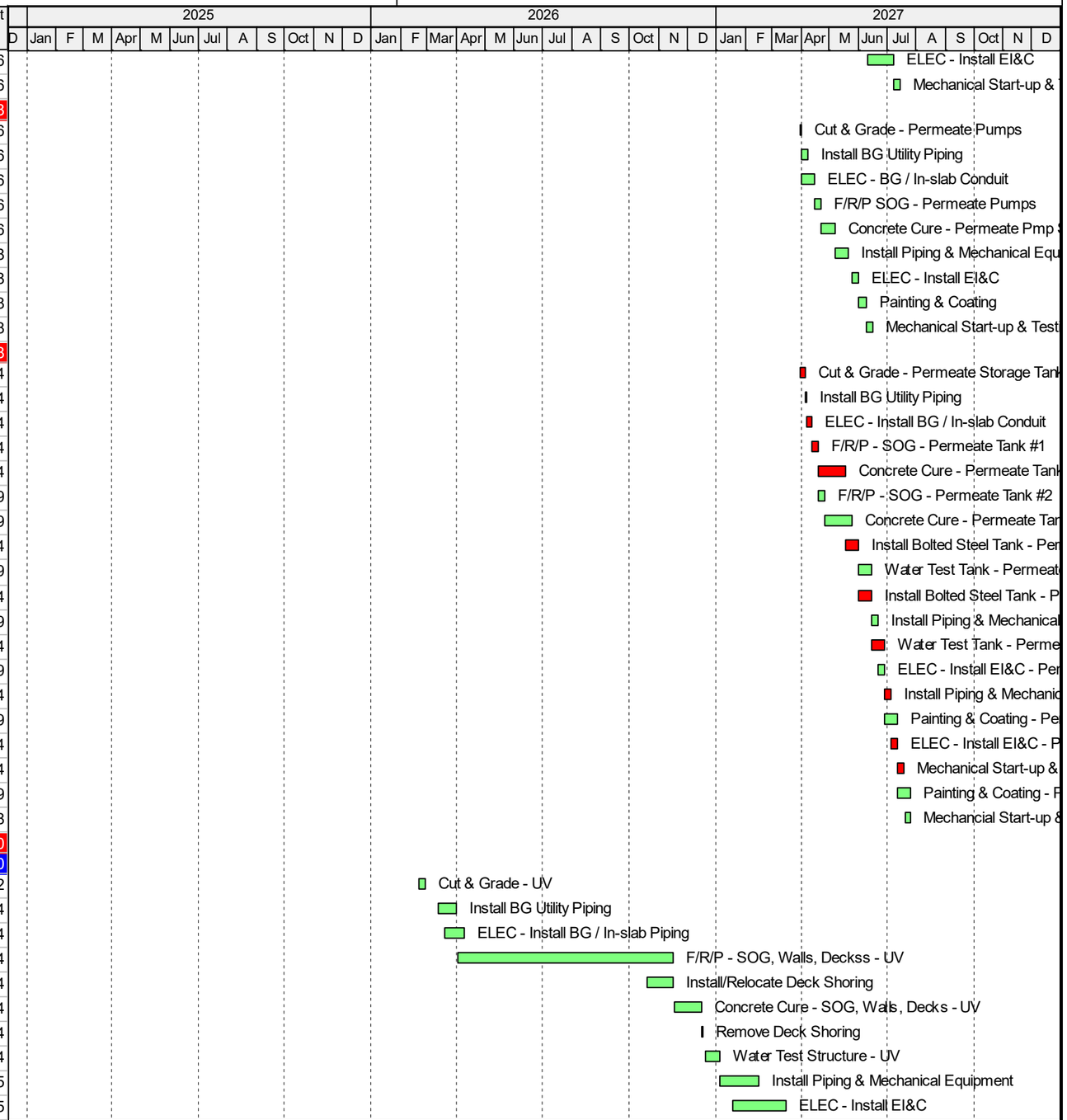
Actual Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work

AECOM W.M. LYLES CO. a joint venture

TASK filter: All Activities

1999

Activity ID	Activity Name	Planned Duration	Start	Finish	Total Float
C2B.1820	ELEC - Install EI&C	20	10-Jun-27	08-Jul-27	46
C2B.1830	Mechanical Start-up & Testing - Membrane Tanks	5	08-Jul-27	15-Jul-27	46
Permeate Pumps		54	31-Mar-27	15-Jun-27	68
C2B.1840	Cut & Grade - Permeate Pumps	1	31-Mar-27	01-Apr-27	46
C2B.1850	Install BG Utility Piping	5	01-Apr-27	08-Apr-27	46
C2B.1860	ELEC - BG / In-slab Conduit	10	01-Apr-27	15-Apr-27	46
C2B.1870	F/R/P SOG - Permeate Pumps	5	15-Apr-27	22-Apr-27	46
C2B.1880	Concrete Cure - Permeate Pmp SOG	10	22-Apr-27	06-May-27	46
C2B.1890	Install Piping & Mechanical Equipment	10	06-May-27	20-May-27	68
C2B.1900	ELEC - Install EI&C	5	25-May-27	01-Jun-27	68
C2B.1920	Painting & Coating	5	01-Jun-27	08-Jun-27	68
C2B.1910	Mechanical Start-up & Testing - Permeate Pumps	5	08-Jun-27	15-Jun-27	68
Permeate Tanks		81	31-Mar-27	26-Jul-27	48
C2B.1930	Cut & Grade - Permeate Storage Tanks	3	31-Mar-27	05-Apr-27	44
C2B.1940	Install BG Utility Piping	2	05-Apr-27	07-Apr-27	44
C2B.1950	ELEC - Install BG / In-slab Conduit	3	07-Apr-27	12-Apr-27	44
C2B.1960	F/R/P - SOG - Permeate Tank #1	5	12-Apr-27	19-Apr-27	44
C2B.1970	Concrete Cure - Permeate Tank #1	20	19-Apr-27	17-May-27	44
C2B.1980	F/R/P - SOG - Permeate Tank #2	5	19-Apr-27	26-Apr-27	49
C2B.1990	Concrete Cure - Permeate Tank #2	20	26-Apr-27	24-May-27	49
C2B.2000	Install Bolted Steel Tank - Permeate Tank #1	10	17-May-27	31-May-27	44
C2B.2010	Water Test Tank - Permeate Tank #1	10	31-May-27	14-Jun-27	49
C2B.2020	Install Bolted Steel Tank - Permeate Tank #2	10	31-May-27	14-Jun-27	44
C2B.2030	Install Piping & Mechanical Equipment - Permeate Tank #	5	14-Jun-27	21-Jun-27	49
C2B.2040	Water Test Tank - Permeate Tank #2	10	14-Jun-27	28-Jun-27	44
C2B.2050	ELEC - Install EI&C - Permeate Tank #1	5	21-Jun-27	28-Jun-27	49
C2B.2060	Install Piping & Mechanical - Permeate Tank #2	5	28-Jun-27	05-Jul-27	44
C2B.2090	Painting & Coating - Permeate Tank #1	10	28-Jun-27	12-Jul-27	49
C2B.2070	ELEC - Install EI&C - Permeate Tank #2	5	05-Jul-27	12-Jul-27	44
C2B.2080	Mechanical Start-up & Testing - Permeate Tank #1	5	12-Jul-27	19-Jul-27	44
C2B.2100	Painting & Coating - Permeate Tank #2	10	12-Jul-27	26-Jul-27	49
C2B.2870	Mechancial Start-up & Testing - Permeate Tank #2	5	20-Jul-27	26-Jul-27	48
MBR Chemical Facilities		0			0
UV Dinsinfection Facility		334	20-Feb-26	11-Jun-27	70
C2B.2740	Cut & Grade - UV	5	20-Feb-26	27-Feb-26	122
C2B.2750	Install BG Utility Piping	15	12-Mar-26	01-Apr-26	114
C2B.2760	ELEC - Install BG / In-slab Piping	15	19-Mar-26	08-Apr-26	114
C2B.2770	F/R/P - SOG, Walls, Deckss - UV	160	02-Apr-26	16-Nov-26	114
C2B.2780	Install/Relocate Deck Shoring	20	20-Oct-26	16-Nov-26	114
C2B.2790	Concrete Cure - SOG, Walls, Decks - UV	20	17-Nov-26	16-Dec-26	114
C2B.2800	Remove Deck Shoring	2	17-Dec-26	18-Dec-26	114
C2B.2810	Water Test Structure - UV	10	21-Dec-26	04-Jan-27	114
C2B.2820	Install Piping & Mechanical Equipment	30	05-Jan-27	15-Feb-27	125
C2B.2830	ELEC - Install EI&C	40	19-Jan-27	15-Mar-27	125



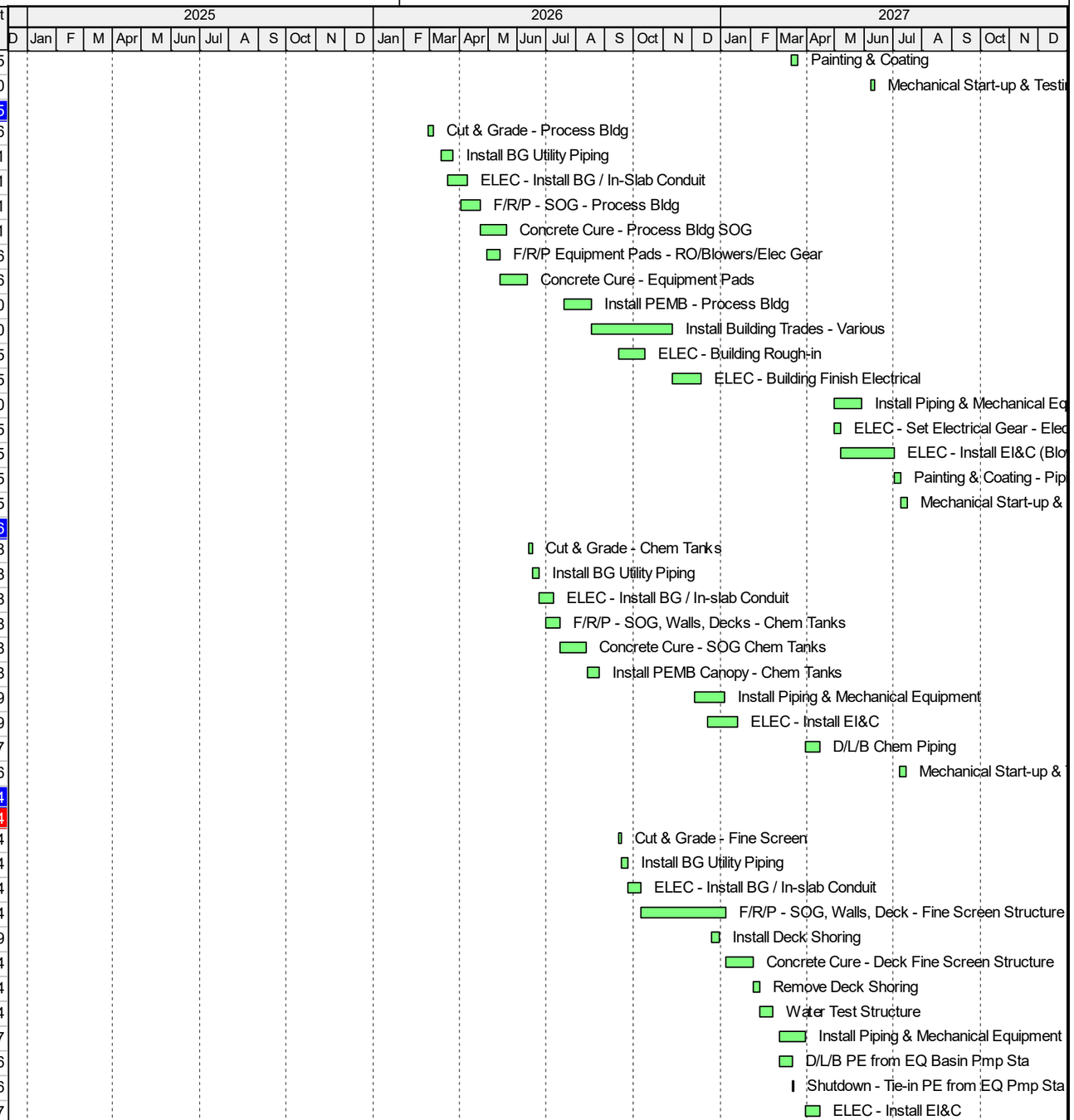
Actual Level of Effort | Actual Work | Remaining Work | Critical Remaining Work | Milestone

AECOM W.M. LYLES CO. a joint venture

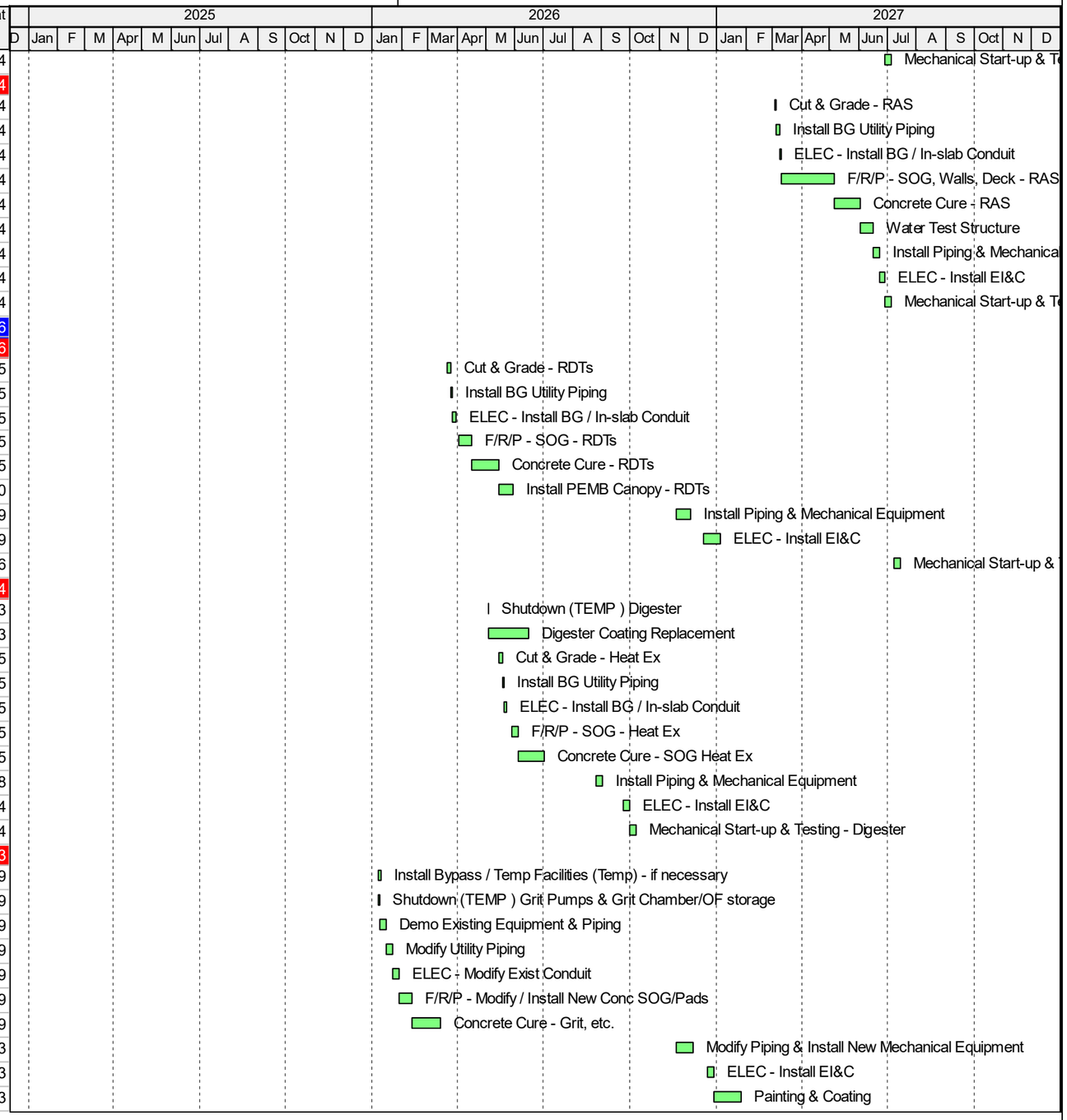
TASK filter: All Activities

2000

Activity ID	Activity Name	Planned Duration	Start	Finish	Total Float
C2B.2840	Painting & Coating	5	16-Mar-27	22-Mar-27	125
C2B.2850	Mechanical Start-up & Testing - UV	4	07-Jun-27	11-Jun-27	70
Process Bldg (Blower, Elec, Lab/Officel)		354	27-Feb-26	16-Jul-27	45
C2B.1580	Cut & Grade - Process Bldg	3	27-Feb-26	04-Mar-26	236
C2B.1590	Install BG Utility Piping	10	12-Mar-26	25-Mar-26	231
C2B.1600	ELEC - Install BG / In-Slab Conduit	15	19-Mar-26	08-Apr-26	231
C2B.1610	F/R/P - SOG - Process Bldg	15	02-Apr-26	22-Apr-26	231
C2B.1620	Concrete Cure - Process Bldg SOG	20	23-Apr-26	20-May-26	231
C2B.1630	F/R/P Equipment Pads - RO/Blowers/Elec Gear	10	30-Apr-26	13-May-26	236
C2B.1640	Concrete Cure - Equipment Pads	20	14-May-26	11-Jun-26	236
C2B.1650	Install PEMB - Process Bldg	20	20-Jul-26	17-Aug-26	190
C2B.1660	Install Building Trades - Various	60	17-Aug-26	10-Nov-26	190
C2B.1670	ELEC - Building Rough-in	20	15-Sep-26	13-Oct-26	215
C2B.1680	ELEC - Building Finish Electrical	20	10-Nov-26	10-Dec-26	195
C2B.1690	Install Piping & Mechanical Equipment - (Blowers, etc.)	20	30-Apr-27	28-May-27	70
C2B.1700	ELEC - Set Electrical Gear - Elec Rm	5	30-Apr-27	07-May-27	45
C2B.1710	ELEC - Install EI&C (Blowers, etc.)	40	07-May-27	02-Jul-27	45
C2B.1720	Painting & Coating - Piping	5	02-Jul-27	09-Jul-27	45
C2B.1730	Mechanical Start-up & Testing - Blowers	5	09-Jul-27	16-Jul-27	45
Chemical Storage Areas		280	12-Jun-26	15-Jul-27	46
C2B.1480	Cut & Grade - Chem Tanks	3	12-Jun-26	16-Jun-26	238
C2B.1490	Install BG Utility Piping	5	17-Jun-26	23-Jun-26	238
C2B.1500	ELEC - Install BG / In-slab Conduit	10	24-Jun-26	08-Jul-26	238
C2B.1510	F/R/P - SOG, Walls, Decks - Chem Tanks	10	01-Jul-26	15-Jul-26	238
C2B.1520	Concrete Cure - SOG Chem Tanks	20	16-Jul-26	12-Aug-26	238
C2B.1530	Install PEMB Canopy - Chem Tanks	10	13-Aug-26	26-Aug-26	238
C2B.1540	Install Piping & Mechanical Equipment	20	04-Dec-26	04-Jan-27	169
C2B.1550	ELEC - Install EI&C	20	18-Dec-26	18-Jan-27	169
C2B.1560	D/L/B Chem Piping	10	31-Mar-27	14-Apr-27	107
C2B.1570	Mechanical Start-up & Testing - Chem Tanks	5	08-Jul-27	15-Jul-27	46
Fine Screen Facility / RAS Mixing		206	15-Sep-26	05-Jul-27	54
Fine Screen Facility		206	15-Sep-26	05-Jul-27	54
C2B.1170	Cut & Grade - Fine Screen	3	15-Sep-26	18-Sep-26	54
C2B.1180	Install BG Utility Piping	5	18-Sep-26	25-Sep-26	54
C2B.1190	ELEC - Install BG / In-slab Conduit	10	25-Sep-26	09-Oct-26	54
C2B.1200	F/R/P - SOG, Walls, Deck - Fine Screen Structure	60	09-Oct-26	06-Jan-27	54
C2B.1210	Install Deck Shoring	5	22-Dec-26	30-Dec-26	79
C2B.1220	Concrete Cure - Deck Fine Screen Structure	20	06-Jan-27	03-Feb-27	54
C2B.1230	Remove Deck Shoring	5	03-Feb-27	10-Feb-27	54
C2B.1240	Water Test Structure	10	10-Feb-27	24-Feb-27	54
C2B.1250	Install Piping & Mechanical Equipment	20	03-Mar-27	31-Mar-27	107
C2B.1260	D/L/B PE from EQ Basin Pmp Sta	10	03-Mar-27	17-Mar-27	126
C2B.1270	Shutdown - Tie-in PE from EQ Pmp Sta PE to Fine Scre	1	17-Mar-27	18-Mar-27	126
C2B.1280	ELEC - Install EI&C	10	31-Mar-27	14-Apr-27	107



Activity ID	Activity Name	Planned Duration	Start	Finish	Total Float
C2B.1290	Mechanical Start-up & Testing - Fine Screens Struct	5	28-Jun-27	05-Jul-27	54
RAS / Flow Mix Structure		88	03-Mar-27	05-Jul-27	54
C2B.1300	Cut & Grade - RAS	1	03-Mar-27	04-Mar-27	54
C2B.1310	Install BG Utility Piping	2	04-Mar-27	08-Mar-27	54
C2B.1320	ELEC - Install BG / In-slab Conduit	2	08-Mar-27	10-Mar-27	54
C2B.1330	F/R/P - SOG, Walls, Deck - RAS	40	10-Mar-27	05-May-27	54
C2B.1340	Concrete Cure - RAS	20	05-May-27	02-Jun-27	54
C2B.1350	Water Test Structure	10	02-Jun-27	16-Jun-27	54
C2B.1360	Install Piping & Mechanical Equipment	5	16-Jun-27	23-Jun-27	54
C2B.1370	ELEC - Install EI&C	3	23-Jun-27	28-Jun-27	54
C2B.1380	Mechanical Start-up & Testing - RAS	5	28-Jun-27	05-Jul-27	54
Modifcations with Existing Plant Facilities		389	07-Jan-26	15-Jul-27	46
Rotary Drum Thickeners (RDTs)		338	20-Mar-26	15-Jul-27	46
C2B.1080	Cut & Grade - RDTs	2	20-Mar-26	24-Mar-26	245
C2B.1090	Install BG Utility Piping	2	24-Mar-26	26-Mar-26	245
C2B.1100	ELEC - Install BG / In-slab Conduit	2	26-Mar-26	30-Mar-26	245
C2B.1110	F/R/P - SOG - RDTs	10	02-Apr-26	16-Apr-26	245
C2B.1120	Concrete Cure - RDTs	20	16-Apr-26	14-May-26	245
C2B.1130	Install PEMB Canopy - RDTs	10	14-May-26	29-May-26	300
C2B.1140	Install Piping & Mechanical Equipment	10	18-Nov-26	04-Dec-26	179
C2B.1150	ELEC - Install EI&C	10	18-Dec-26	04-Jan-27	179
C2B.1160	Mechanical Start-up & Testing - RDTs	5	08-Jul-27	15-Jul-27	46
Digester		110	04-May-26	07-Oct-26	244
C2B.10009	Shutdown (TEMP) Digester	1	04-May-26	04-May-26	253
C2B.10119	Digester Coating Replacement	30	04-May-26*	15-Jun-26	253
C2B.1000	Cut & Grade - Heat Ex	2	14-May-26	18-May-26	245
C2B.1010	Install BG Utility Piping	2	18-May-26	20-May-26	245
C2B.1020	ELEC - Install BG / In-slab Conduit	2	20-May-26	22-May-26	245
C2B.1030	F/R/P - SOG - Heat Ex	5	28-May-26	04-Jun-26	245
C2B.1040	Concrete Cure - SOG Heat Ex	20	04-Jun-26	02-Jul-26	245
C2B.1050	Install Piping & Mechanical Equipment	5	25-Aug-26	01-Sep-26	208
C2B.1060	ELEC - Install EI&C	5	23-Sep-26	30-Sep-26	244
C2B.1070	Mechanical Start-up & Testing - Digester	5	30-Sep-26	07-Oct-26	244
Grit Facilities		282	07-Jan-26	16-Feb-27	153
C2B.10089	Install Bypass / Temp Facilities (Temp) - if necessary	2	07-Jan-26	09-Jan-26	329
C2B.10129	Shutdown (TEMP) Grit Pumps & Grit Chamber/OF stor	1	07-Jan-26	08-Jan-26	329
C2B.10019	Demo Existing Equipment & Piping	5	08-Jan-26	15-Jan-26	329
C2B.10099	Modify Utility Piping	5	15-Jan-26	22-Jan-26	329
C2B.10029	ELEC - Modify Exist Conduit	5	22-Jan-26	29-Jan-26	329
C2B.10039	F/R/P - Modify / Install New Conc SOG/Pads	10	29-Jan-26	12-Feb-26	329
C2B.10049	Concrete Cure - Grit, etc.	20	12-Feb-26	13-Mar-26	329
C2B.10059	Modify Piping & Install New Mechanical Equipment	10	19-Nov-26	07-Dec-26	153
C2B.10069	ELEC - Install EI&C	5	21-Dec-26	29-Dec-26	153
C2B.10109	Painting & Coating	20	29-Dec-26	26-Jan-27	153



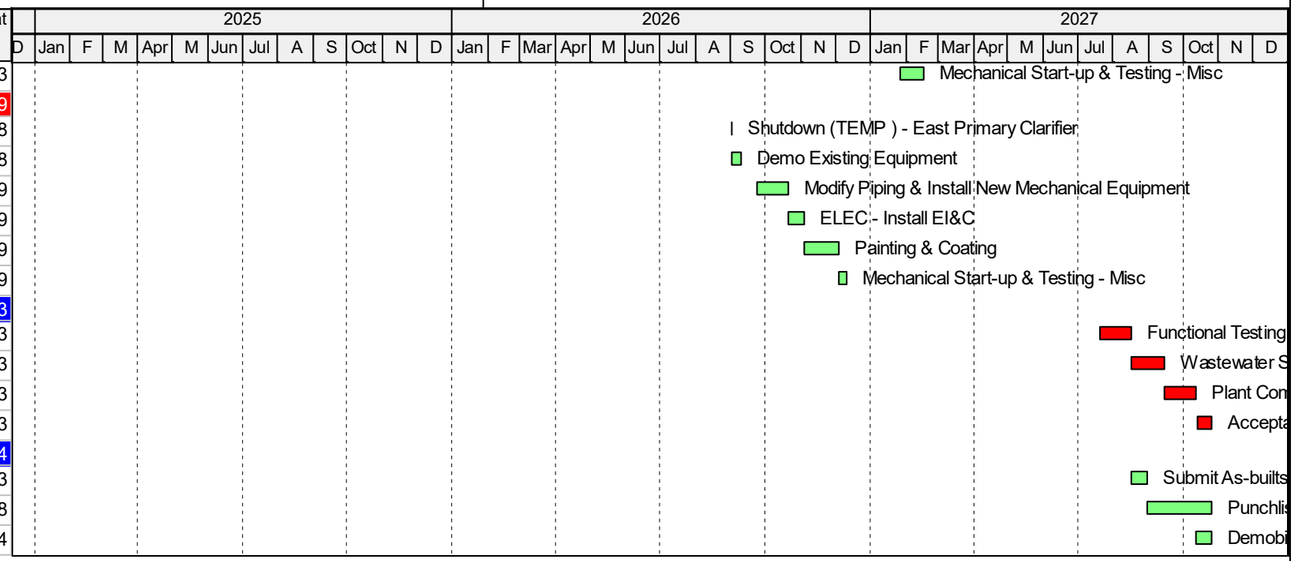
Actual Level of Effort | Actual Work | Remaining Work | Critical Remaining Work | ◆ Milestone

AECOM W.M. LYLES CO. a joint venture

TASK filter: All Activities

2002

Activity ID	Activity Name	Planned Duration	Start	Finish	Total Float
C2B.10079	Mechanical Start-up & Testing - Misc	15	26-Jan-27	16-Feb-27	153
East Primary Clarifier		70	01-Sep-26	11-Dec-26	199
C2B.10149	Shutdown (TEMP) - East Primary Clarifier	1	01-Sep-26	02-Sep-26	208
C2B.10159	Demo Existing Equipment	5	02-Sep-26	10-Sep-26	208
C2B.10209	Modify Piping & Install New Mechanical Equipment	20	23-Sep-26	21-Oct-26	199
C2B.10219	ELEC - Install EI&C	10	21-Oct-26	04-Nov-26	199
C2B.10229	Painting & Coating	20	04-Nov-26	04-Dec-26	199
C2B.10239	Mechanical Start-up & Testing - Misc	5	04-Dec-26	11-Dec-26	199
Commissioning		70	20-Jul-27	26-Oct-27	43
C2B.1470	Functional Testing (30 cal Days)	20	20-Jul-27	16-Aug-27	43
C2B.2880	Wastewater Start-up (30 cal Days)	20	17-Aug-27	14-Sep-27	43
C2B.9999	Plant Commissiong & Acceptance 30 cal Days)	20	15-Sep-27	12-Oct-27	43
C2B.2860	Acceptance Testing Report	10	13-Oct-27	26-Oct-27	43
Project Close-out		49	17-Aug-27	25-Oct-27	44
C2B.2120	Submit As-builts	10	17-Aug-27	30-Aug-27	83
C2B.2110	Punchlist	40	30-Aug-27	25-Oct-27	48
C2B.2130	Demobilization	10	12-Oct-27	25-Oct-27	44



Actual Level of Effort | Actual Work | Remaining Work | Critical Remaining Work | Milestone

AECOM W.M. LYLES CO. a joint venture

TASK filter: All Activities

2003

APPENDIX

B

Resumes



Joe Lawrence

Project Manager



Joe is a Senior Vice President at W. M. Lyles and Collaborative Delivery Manager with over 22 years of experience in managing and delivering large-scale water and wastewater treatment projects. He has a proven track record in pre-construction planning, cost controls, and project execution. He has extensive experience with progressive design-build and design-bid-build delivery methods, overseeing advanced water purification, wastewater treatment plant expansions, and SCADA upgrades. Joe is committed to delivering high-quality infrastructure while leading teams and managing complex project requirements.

Firm
W. M. Lyles. Co

Education/Academic Qualifications
BBS, Construction Management
California State University Fresno, 2001

Professional Registrations
Contractor's License – Class A
General Engineering – State of Hawaii

Community Involvement
ACE Mentoring Program of Central California

Tenure with AECOM: 22
Total Years in Industry: 22

Why Joe?

- ✓ Extensive background in advanced water purification systems and recycled water projects, such as the ECAWP
- ✓ Advanced understanding of various delivery methods, including PDB and DBB
- ✓ Deep technical expertise, particularly in SCADA upgrades, biological treatment, tertiary filtration, and disinfection processes

Owner/Client References

① East County Advanced Water Purification (ECAWP) Packages 1 and 3, Progressive Design-Build, Santee, CA

Client: ECAWP/Padre Dam Municipal Water District
Alfred Pedroza, PE
AWP Engineer (Owner's Project Manager)
T: 619.540.9313 | E: apedroza@padre.org

Role: Pre-Construction and cost controls/budgeting.

To reduce the East County Water District's reliance on water from outside sources, the East County Advanced Purification Project (ECAWP) will treat East County's wastewater locally for potable reuse. Joe managed pre-construction, cost control and budgeting for Package 1, which involves design and construction of a water recycling facility, advanced water purification facility, visitor center, product water pump station, solids handling facility, and system integration across Packages 1-4 of the ECAWP.

② Stockton Regional Wastewater Control Facility, Progressive Design-Build Modifications, Stockton, CA

Client: City of Stockton
Art O'Brien
T: 209.937.8787 | E: aobrien@robertson-bryan.com

Role: Construction Manager.

Joe was the primary lead for this progressive design-build project that involved the construction of new influent pumping, screening, and grit removal systems; new secondary biological treatment systems; new tertiary filtration and disinfection systems; and new solids handling facilities to replace an existing oxidation pond and overland flow treatment system. Major process equipment included large vertical turbine solids handling pumps, perforated fine screens, conical tray grit removal systems, primary and secondary clarifier mechanisms, aeration blowers and diffusers, submersible mixers, tertiary disc filters, UV disinfection system, sludge centrifuge, and associated electrical, control, and SCADA upgrades.

Joe Lawrence

Project Manager

③ Davis - WWTP Secondary and Tertiary Improvements, Design-Build, Davis, CA

Client: City of Davis
Michael Lindquist
T: 530.747.8287 | E: lindquist4water@gmail.com

Role: Role: Construction Manager.

Design-Build construction of new secondary biological treatment systems, new tertiary filtration and disinfection systems, and new solids handling facilities to replace an existing oxidation pond and overland flow treatment system. The secondary treatment processes consist of four new extended aeration basins and four new 85' diameter secondary clarifiers. Tertiary filtration and disinfection facilities consist of four new 6 MGD disc filters, two new chlorine contact tanks, and a new sodium hypochlorite and sodium bisulfite storage and pumping facility. Sludge handling facilities consist of two new rotary drum thickeners, two new screw presses, chemical storage facilities, and a 48,000 SF sludge storage facility. Also included were a new cogeneration plant, a new emergency power generator, and numerous other electrical, control, and SCADA upgrades.

Additional Experience

Graham Hill Water Treatment Plant Upgrades, Progressive Design-Build, Santa Cruz, CA. Pre-Construction Manager. The WTP was built in 1960s and had not been significantly upgraded since the 1980s. The City recognized that in order to secure their water future, significant upgrades to the WTP had to be undertaken. Joe is the vital link between the design, project owner, and construction teams, ensuring that the project is well-planned, cost-effective, and set up for successful execution once construction begins. The project scope includes: high-rate clarification through the use of space-efficient plate settlers, ozone system, granular activated carbon (GAC), reclaimed water clarifiers, provisions for future UV disinfection, and new chemical feed systems; new administration and maintenance buildings, and new ozone building; upgraded operations building and upgraded filter gallery building; electrical upgrades; demolition of some existing buildings and site improvements including landscaping and vehicular access improvements. Construction is anticipated to begin in late 2024, and substantial completion is expected by Spring 2028.

Wastewater Treatment Plant Upgrade & Expansion, Design Bid Build, Linda County Water District, Marysville CA. Executive Sponsor for construction of a new 5 MGD wastewater treatment plant on a 27 acre site adjacent to an existing treatment plant. New facilities include a headworks, two primary clarifiers, four activated sludge basins, two secondary clarifiers, filter pump station, six effluent filters, sludge thickening system, sludge drying beds, sludge lagoons, site grading, and associated piping, electrical, and instrumentation systems. Upgrades to the existing plant include the demolition of existing facilities and modifications to the existing effluent pump station.

WWTP Tertiary Filtration, UV Disinfection and Biosolids Improvements, City of Galt, CA. Project Manager for expansion of 3 MGD wastewater treatment system to 6 MGD, including tertiary filtration and ultraviolet disinfection capabilities, biosolids dewatering facility, biosolids storage and transfer facilities, operations and electrical building, pump stations, backup power generation, and additional infrastructure. Expedited delivery: 12 month contract time. **American Public Works Association (APWA) Project of the Year 2010.**

5 MGD WWTP Expansion and Upgrade, Design Bid Build, City of Reedley, CA. Project Manager/Estimator for expansion and upgrade to 5 MGD, including influent pump station, headworks, anoxic basin recycle pump station, oxidation ditch, RAS pump station, sludge storage facility, effluent pump station, and secondary clarifiers. Construction also included structural concrete, equipment delivery and installation, underground utilities, above-ground piping, and total project administration.

Copper River Wastewater Reclamation, Design-Build, Copper River Development Co. Project Manager/Estimator for 0.75 MGD wastewater reclamation facility, including SBR structure, chlorine contact structure, effluent distribution structure and pump station, metal buildings, administration/laboratory building, associated equipment, and process piping.

Fresno County Juvenile Justice Facility Wastewater Treatment Plant, Fresno County, CA. Project Engineer/Estimator for 0.12 MGD wastewater treatment plant to service the new Fresno County Juvenile Facility, including new concrete structures, lined storage ponds, yard piping (26' deep), associated equipment, and process piping.

Gabriel Perigault, PHD, PE

Engineering Manager



Gabriel brings experience on more than 25 water/wastewater treatment plants, including process selection, piloting, detailed design, construction, start-up and commissioning, and performance validation and optimization. He will lead the design, working closely with our Project Manager Joe Lawrence and Process Technical Lead Alex Franchi and specialty design disciplines similar to our other PDB projects in California. Gabriel has a project first and client centric mindset. He is an organized, responsive and committed multi-discipline design manager with extensive experience overseeing complex water and wastewater projects. He is an excellent communicator and is fluent in all the major disciplines with special focus on process mechanical and instrumentation.

Firm
AECOM

Education/Academic Qualifications
PhD, Environmental Engineering, Stanford University, 2001

MS, Environmental Engineering, Stanford University, 1995

BS, Mechanical Engineering, University of Chile, 1990

Professional Registrations
Professional Engineer, Civil, CA #68471

Tenure with AECOM: 8
Total Years in Industry: 25

Why Gabriel?

- ✓ Will lead our multi-discipline design team through lessons learned from collaboration on recent and current design-build projects with AECOM/ Lyles JV – East County AWP, Davis, Stockton, Rialto plus many other design-build utility projects in California
- ✓ Extensive experience managing the design of MBR and RO facilities

Owner/Client References

① Stockton Regional Wastewater Control Facility Progressive Design-Build Modifications, Stockton, CA

Client: City of Stockton
Art O'Brien, Project Manager
T: 916-790-0218 | E: aobrien@robertson-bryan.com

Role: As Design Manager, led the design of multiple improvements to treat 40 mgd (average dry weather flow, 105 mgd peak) and meet more stringent nitrogen limits, reduce effluent salinity, and improve overall energy efficiency and operational reliability using a progressive design-build delivery approach.

Design is complete and construction is due to be complete in 2024. Improvements include: new influent pumping station and headworks; replacing the existing biotowers, facultative ponds and wetlands with new activated sludge secondary treatment process with nitrogen removal; replacing the existing nitrifying biotowers, DAF thickeners, gravity filters, and chlorine contact canal with new tertiary disk filters and UV disinfection; providing new dewatering facilities using centrifuge technology; new buildings for administration, engineering, laboratory, safety, operations and maintenance functions; and optimizing overall plant hydraulics to reduce the multiple pumping steps (currently 7) across the plant to only two pumping steps and rely on gravity flow for most conveyance through the treatment train.

② East County Advanced Water Purification (ECAWP) Packages 1 and 3 Progressive Design-Build, Santee, CA

Client: ECAWP/Padre Dam Municipal Water District
Alfred Pedroza, PE
AWP Engineer (Owner's Project Manager)
T: 619.540.9313 | E: apedroza@padre.org

Role: As Design Manager for Package 3 and Engineering Advisor for Package 1, Gabe has been involved throughout the project.

Gabriel Perigault, PHD, PE

Engineering Manager

The AECOM/Lyles JV is providing PDB services for the heart of the program, which includes the design and construction of a water reclamation facility and an advanced water purification facility (Package 1), and conveyance infrastructure (Package 3).

- **Package 1** involves the design and construction of a 16-mgd WRF, 13.5-mgd wastewater and advanced water purification facility, visitor center, product water pump station, and solids handling facility. Gabe is working closely with the treatment systems design team in a technical advisory role.
- **Package 3** includes the rehabilitation and upgrading of the Influent Pump Station and the East Mission Gorge Pump Station (new pumps, odor control systems, ferric feed system, several metering and flow control vaults, backup power), new WRF force main (14,000 ft open cut, 3,500 ft horizontal directional drilling), and new residuals bypass system (pumping station and conveyance system). Gabe served as the overall design manager as well as the AECOM project manager for the entire package.

③ Santa Cruz WTP Progressive Design-Build, Santa Cruz CA

Client: City of Santa Cruz
Matt Zeman, Engineering Associate
T: 629.540.9313 | E: apedroza@padre.org

Role: Design Manager.

The AECOM/Lyles JV is providing PDB services for $100M+ upgrade to the Graham Hill WTP. The WTP was built in 1960s and had not been significantly upgraded since the 1980s. The City recognized that in order to secure their water future, significant upgrades to the WTP had to be undertaken. Joe is the vital link between the design, project owner, and construction teams, ensuring that the project is well-planned, cost-effective, and set up for successful execution once construction begins. The project scope includes: high-rate clarification through the use of space-efficient plate settlers, ozone system, granular activated carbon (GAC), reclaimed water clarifiers, provisions for future UV disinfection, and new chemical feed systems; new administration and maintenance buildings, and new ozone building; upgraded operations building and upgraded filter gallery building; electrical upgrades; demolition of some existing buildings and site improvements including landscaping and vehicular access improvements.

Additional Experience

Wastewater Treatment Plant Progressive Design-Build Improvements, City of Rialto, CA. Design Manager. Led the production of the Basis of Design Report, including 50 percent design drawings, and GMP for expanded headworks and secondary treatment facilities, new disk filters and UV system, as well as several retrofits to the existing thickening and solids handling facilities to provide treatment capacity for 12 mgd average annual flow. This was the first phase of the progressive design-build delivery approach selected to procure this project. Cost $26M. (2020)

Wastewater Treatment Plant Secondary and Tertiary Improvement Design-Build, City of Davis, CA. Served as the Engineer-of-Record for the performance acceptance report, which included the following process: modified Ludzack-Ettinger Nitrogen Removal Process, tertiary filtration with disk filters, chlorine disinfection, WAS thickening with rotatory drum thickeners, sludge dewatering with screw presses, and miscellaneous pumping, storage and conveyance facilities within the existing WWTP. Cost: $72M. (2018)

Montevina Water Treatment Plant Progressive Design-Build, Los Gatos, San Jose Water Company, CA. As Design Lead, coordinated design activities at project's design center and served as process and mechanical designer for solids handling facilities. Project included upgrading 43-year-old plant to convert the existing 30 mgd direct filtration process to a 30 mgd membrane filtration process. This plant is the primary supplier of drinking water for the Town of Los Gatos and surrounding west Silicon Valley communities. Specific duties for this progressive design-build project included coordination of design duties for the overall design effort and detail design of thickening and dewatering facilities and associated ancillary facilities (miscellaneous pumping and polymer storage and feed systems). Thickening and dewatering included two gravity thickeners and two screw presses, respectively. Cost: $58M (2015)

Sun City Tehama Water Reclamation Facility – Pulte Homes, Tehama, CA. Prepared a facility plan, a Title 22 engineering report, and regulatory compliance studies and reports to secure Waste Discharge Requirements to permit effluent disposal for agricultural irrigation for a new community in Tehama County. ***Conducted 30 percent design for a package MBR treatment plant*** and chlorine disinfection system as well as aerated solids stabilization pond. $300,000 (2006)

Alessandro (Alex) Franchi, PHD, PE

Process Technical Lead



Alex's technical experience encompasses conventional and advanced processes in wastewater, water reuse and potable treatment including oxidation, chemical and ultraviolet disinfection (UV), membrane technologies, advanced oxidation, activated sludge, membrane biological reactors, media filtration, coagulation, headworks, and pump stations. Alex will lead the process design team in preparing deliverables and recommending technology solutions. His most recent MBR design was for the Inland Empire Utilities Agency Regional Plant 5, where he developed the layout, preliminary design, and final design of the fine screens facilities. Alex was intimately involved with the design of two additional MBR in Southern California. Alex is currently providing services for the East County Advanced Water Purification (PDB project which includes a 4-stage bardenpho, MF, RO, and UV/AOP.

Firm
AECOM

Education/Academic Qualifications
PhD, Environmental Engineering, Johns Hopkins University, 2000

MS, Environmental Engineering, Johns Hopkins University, 1995

BS, Civil/Chemical Engineering, University of Maryland - College Park, 1992

Professional Registrations
Professional Engineer, Civil, CA #75225

Tenure with AECOM: 6
Total Years in Industry: 30

Why Alex?

- ✓ MBR and RO design
- ✓ Led successful designs of Title 22 projects across California
- ✓ Lead designer for large (>$150M) progressive design-build projects
- ✓ Wastewater, drinking water and water reuse facilities process design

Owner/Client References

① Silicon Valley Clean Water, RESCU Front of Plant Progressive Design-Build Project, Redwood, CA

Client: Silicon Valley Clean Water
Teresa Herrera, P.E. – Manager
T: 650.591.7121 | E: therrera@svcw.org

Role: As Design Lead, Alex completed design to construction package level.

Progressive design-build project involving the design and construction of a new 80-mgd front of the plant facilities, including deep-lift pump station (90 feet), new headworks with screenings, grit removal, solids loadout, chemicals storage, electrical room, and connection pipeline to existing plant.

② East County Advanced Water Purification Program (ECAWP) Package 1 Progressive Design-Build, Santee, CA

Client: ECAWP JPA/Padre Dam Municipal Water District
Seval Sen, PE - AWP Engineering Manager
T: 619.258.4631 | E: ssen@padre.org

Role: Lead Process Engineer for 11.5 advanced treatment facility including MF, RO and UV/AOP.

This progressive design-build project is one of the first in the country for the augmentation of a surface water supply with treated wastewater for potable reuse. Components of Package 1 include: a 16-mgd Water Recycling Facility, an 11.5-mgd Advanced Water Purification Facility including MF, RO and UV/AOP, a solids handling facility, a product water pump station and a new visitor's center.

③ PFAS treatment System at Well OPA-1

Client: Orange County Water District
Ryan Bouley, Principal Engineer
(714) 378-8207 Email: rbouley@ocwd.com

Role: Project Manager and Lead Process Engineer for OPA-1 PFAS removal system.

Alessandro (Alex) Franchi, PHD, PE

Process Technical Lead

Preliminary design, final design services, bid phase, and engineering during construction services for a PFAS treatment system at Well OPA-1. The treatment system includes lead/lag ion exchange treatment system capable of treating a flow rate of approximately 3 mgd, including appurtenant facilities. The design incorporates provisions to accommodate intermittent operations of the well. The ion exchange vessels are located in a depressed structural concrete pit to minimize the visual impact of the vessels on the adjacent residential community.

Additional Experience

Regional Wastewater Control Facility Progressive Design- Build Modifications, City of Stockton Municipal Utilities, Stockton, CA. Senior reviewer of UV facilities and leading the design of multiple improvements to treat 40-mgd (average dry weather flow, 105-mgd peak hour flow) and meet more stringent nitrogen limits, reduce effluent salinity, and improve overall energy efficiency and operational reliability using a progressive design- build delivery approach. Improvements include: new influent pumping station and headworks; new activated sludge secondary treatment for biological nutrient removal, including aeration system (nitrification/denitrification); new tertiary disk filters and UV disinfection; new dewatering facilities with centrifuges; new buildings for administration, engineering, laboratory, safety, operations and maintenance; new lime system; and optimizing overall plant hydraulics. $194M (2024)

RP5 and RP1 Upgrades, Advanced Treatment, UV/ Chlorine Disinfection, and Cost Estimates, Inland Empire Utility Agency, Chino, CA. Task lead for a multi-phase project involved the design and economic analysis for expansion and upgrades at four water recycling facilities ranging between 10 and 60 mgd. Tasks included general site planning, design, and economic analysis of wastewater treatment processes to produce California Title 22 water. The RP-5 upgrade included the preliminary design of a 45-mgd UV facility. The groundwater injection component of the project included the predesign of a 3-mgd facility with MBR, microfiltration, reverse osmosis (RO), UV, AOP, and stabilization. Cost $11M (2019)

Regional Water Reclamation Facility Expansion and Upgrade, Elsinore Valley Municipal Water District, Lake Elsinore, CA. UV disinfection and hydraulics task Lead for the rehabilitation and expansion from 16- up to 26-mgd of an existing wastewater treatment plant, including headworks upgrades, the addition of a new 8-mgd MBR treatment train, new UV system, equalization basin for secondary effluent, off-spec water management, and upgrades of solids processing facility. The plant effluent is discharged into Lake Elsinore and must meet strict standards for low phosphorous and California Title 22 reclaimed water for recreational uses. The project included a new aeration basin and membrane bioreactor for the expansion. Worked extensively with EVWMD staff to evaluate and select blower and diffuser equipment to meet the needs and preferences of the staff. Cost $8.7M (2019)

South Coast Water Reclamation, Barbados Water Authority, Barbados. The Barbados Water Authority (BWA) evaluated the feasibility of upgrading its South Coast Sewage Treatment Plant to a tertiary/advanced treatment plant capable of producing water suitable for groundwater recharge in a potable aquifer and/or a non-potable aquifer, or suitable for edible food crop irrigation. The goals of the Project include: augmenting existing groundwater water supplies, mitigating climate change effects, addressing seawater intrusion and sea level rise, diversifying potable water sources, enhancing water supply resiliency, and reducing the impact of treated effluent on marine life and the environment. Alex led the conceptual design of a 1.6 MGD advanced water treatment facility including disk filters, UV disinfection, ultrafiltration (UF), reverse osmosis (RO), stabilization of pH and alkalinity control, and final disinfection. Cost $140,000 (2022)

Airport Satellite Water Reclamation Plant Feasibility Study, City of Fresno, CA. Advanced treatment process lead for a feasibility study for a 5-mgd water reclamation facility that included MBR, RO, UV, and AOP and industrial source treatment. Water from this facility will be used for groundwater injection to recharge a depleted aquifer and public or agricultural irrigation. The intake points from the sewer system, located near a winery, discharge 800,000 gallons per day to 2.7-mgd of partially treated wastewater to the sewer system. The feasibility study evaluated the possibility of converting partially treated discharge into high-quality recycled water using membrane bioreactor treatment, followed by UV light disinfection; and using the recycled water for irrigation of the airport golf course, groundwater recharge, and industrial uses. Alex conducted a senior review of the membrane bioreactor system and the advanced treatment facility. Cost $0.5M (2019)

Marcos Reyes

Construction Manager



Marcos is a dynamic professional with a strong foundation in engineering principles, he has progressively advanced within the wastewater treatment plant construction industry, starting as a Superintendent in 2009 and transitioning through roles as Project Engineer/ Assistant Project Manager before assuming his current position as Project Manager. Through his career journey, he has demonstrated adeptness in project management, engineering, and leadership, consistently delivering successful outcomes on various projects. His background includes experience working alongside AECOM on the ECAWP Advanced Water Purification Project and Rialto WWTP Improvements project. He brings a combination of technical expertise and managerial skills to drive projects to completion efficiently and effectively.

Firm
W. M. Lyles Co.

Education/Academic Qualifications
BS, Civil Engineering,
San Diego State University, 2008

Tenure with Lyles: 7
Total Years in Industry: 15

Why Marcos?

- ✓ Worked with AECOM staff on design-build projects including East County Advanced Water Purification $260M joint venture project
- ✓ Worked with AECOM staff on design-build projects including Rialto $25M WWTP improvements project including site upgrades and piping
- ✓ San Diego County experience includes pipeline project consisting of upgrading of 27,000 feet of existing 72- and 75-inch pipe
- ✓ Extensive underground utility and pump station experience

Owner/Client References

① East County Advanced Water Purification Program (ECAWP) Package 1 Progressive Design-Build, Santee, CA

Client: ECAWP/Padre Dam Municipal Water District
Kyle Swanson
T: 619.528.4766 | E: kswanson@padre.org

Role: Marcos is the Sr. Construction Manger for the East County Advanced Purification Project (ECAWP)

This progressive design-build project is one of the first in the country for the augmentation of a surface water supply with treated wastewater for potable reuse. Components of Package 1 include: a 16-mgd Water Recycling Facility, an 11.5-mgd Advanced Water Purification Facility including MF, RO and UV/AOP, a solids handling facility, a product water pump station and a new visitor's center.

② Inland Empire Utilities Agency – Regional WRP No. 5 Liquids Expansion to 22.5 MGD, DDB, Chino, CA

Client: Inland Empire Utilities Agency
Jason Marseilles
T: 909.993.1600 | E: jmarseilles@ieua.org

Role: As Construction Manager, Marcos worked on the construction of the upgrade and expansion of the Agency's existing RP-5 plant from a conventional activated sludge wastewater treatment plant to a 22.5 MGD water recycling treatment plant, and with the capability of being further expanded to 30 MGD in the future. The major items of work to be performed include the liquids treatment processes, solids treatment processes, common facilities, and off-site facilities. Construction Cost $329M.

Marcos Reyes

Construction Manager

③ Rialto Wastewater Treatment Plant Improvements, Design-Build, Rialto, CA

Client: City of Rialto
Thomas Crowley, Utilities Manager
T: 909.421.7210 | E: tcrowley@rialtoca.gov

Role: As the Construction Manger, Macros worked on the $25M Design-Build expansion project, is a Joint Venture between W. M. Lyles Co. and AECOM.

Construction activities include the expansion to an existing conventional WWTP, increasing the treatment capacity from 7.3 MGD current average to 11.7 MGD future average. Work also includes headwork's expansion with new bar screens, washer compacter, one primary clarifiers, equalization basin improvements, one secondary clarifier, cloth disc tertiary filters, chlorine contact basin, RAS Pump Station, electrical buildings and associated site electrical upgrades, instrumentation, piping, paving, and fencing. Construction Cost $25M.

Additional Experience

Headworks and Primary Clarifier Upgrade, DBB, City of Palm Springs, CA. Project Manager. Construction of a new headworks facility, including new barscreens equipment, washer compacter, grit classifiers, two 100' diameter primary clarifiers, two scum pump stations, one sludge degritting facility, a prefabricated electrical building and an odor control system. The new upgrades to the existing wastewater treatment plant will increase the treatment capacity from 10.9 MGD to 21.8 MGD. Cost $20M. (2018)

Western Riverside County Regional WW Authority 14 MGD Plant Expansion, DBB, Riverside, CA. Project Engineer. Construction of a 6.0 MGD expansion to an existing conventional WWTP that increases the treatment capacity up to 14.0 MGD. Construction activities include headwork's expansion with new bar screens, washer compacter, grit classifier, two primary clarifiers, equalization basin, bioreactor, bio filter, secondary clarifier, cloth disc tertiary filters, chlorine contact basin, recycle water pump station, masonry digester building, solar drying beds and odor control system, five electrical buildings and associated site electrical, instrumentation, piping, paving, and fencing. Upgrades to the existing plant include new centrifuges, fixed steel digester covers, odor control facilities, masonry thickener building and chemical building upgrades. Cost $26M. (2016)

What Marcos' Clients Say

"Marcos Reyes served as the on-site construction managerfor the $25M Rialto Progressive Design Build WWTP with AECOM. ***His project first mentality, coupled with extensive construction knowledge, expertise and experience provided the project with numerous well reasoned, cost effective and workable solutions to overcome the interface challenges on a retrofit project.*** *Timely and cost effective solutions to tie-ins, resolving conflicts with existing utilities, and working out design issues associated with an upgrade while maintaining continuous operation of the existing plant were invaluable."*

Bill Hanley, PE, Veolia North America

Nob Hill Improvements Project for SDCWA, DBB, San Diego, CA. Project Engineer. Construction of approximately 900ft of two sections of existing pipelines with one pipeline at a lower elevation. The new pipelines were constructed by tunneling and excavation. This allowed the water authority the ability to operate and maintain its pipelines and structures, eliminating the likelihood of future uncontrolled release of water in the area. The project added a new access road to Nob Hill, and as a result, SDCWA vehicles will no longer need to use the private roads for access to SDCWA facilities. Cost $10M. (2017)

Pipeline 3 Desal Relining San Marcos to Twin Oaks Project for SDCWA, DBB, San Diego, CA. Project Engineer. The Pipeline 3 Desalination Relining project included upgrading 27,000 feet of existing 72- and 75-inch diameter pipe with new welded steel liners; fabricating and installing 494 feet of 69-inch outside diameter welded steel pipe at seven access portals; fabricating and installing 448 feet of 67 ¾-inch outside diameter welded steel pipe at eight access portals; and replacing 47 feet of 72-inch steel pipe with new 67 ¾-inch outside diameter welded steel pipe. As a result of this project, this accommodated pressurized flows from the new Carlsbad 50MG Seawater Desalination RO Treatment Plant. Cost $25M. (2015)

I-405 Sepulveda Pass Widening, DB, Los Angeles, CA. Superintendent. This $721 million design-build project involved constructing one 10-mile high-occupancy vehicle (HOV) lane northbound on Interstate 405 from Interstate 10 to U.S.-101. The project realigned existing on and off ramps, reconstruct or modify 23 bridge and ramp structures, build approximately 18 miles of retaining walls, and perform road improvements on the adjacent city streets. Cost $721M. (2014)

Vince Guillama

Preconstruction Services Manager



Vince brings more than 20 years of experience in the water / wastewater industry. During this time, he has overseen and provided preconstruction services for numerous design-build projects, including the $200M Stockton RWCF project, a joint venture with AECOM. His focus on communication and collaboration encourages innovation to create cost savings and gain schedule. Vince brings a unique perspective having managed design-build projects from pre-construction through completion.

Firm
W. M. Lyles Co.

Education/Academic Qualifications
MS, Construction Management, Arizona State University, 2006

BS, Civil Engineering, University of California Davis, 2004

Professional Registrations
Engineer-in-Training, CA #117946

Tenure with Lyles: 16
Total Years in Industry: 20

Why Vince?

- ✓ Current and previous experience working on AECOM/Lyles JV design-build projects including Stockton Regional Wastewater Control Facility Modifications
- ✓ Experienced in innovative preconstruction to save time and money
- ✓ Proven Value Engineering results
- ✓ Preconstruction and construction phase oversight for multiple water and wastewater treatment facilities throughout California

Owner/Client References

① East County Advanced Water Purification Program (ECAWP) Package 1 Progressive Design-Build, Santee, CA

Client: ECAWP/Padre Dam Municipal Water District
Kyle Swanson
T: 619.528.4766 | E: kswanson@padre.org

Role: Vince was the Pre-construction Manger providing first-hand constructability through the design process.

This progressive design-build project is one of the first in the country for the augmentation of a surface water supply with treated wastewater for potable reuse. **Components of Package 1 include**: a 16-mgd Water Recycling Facility, an 11.5-mgd Advanced Water Purification Facility including MF, RO and UV/AOP, a solids handling facility, a product water pump station and a new visitor's center.

② Stockton Regional Wastewater Control Facility Modifications, Progressive Design-Build, Stockton, CA

Client: City of Stockton
Deedee Antypas, Deputy Director of Wastewater Operations
T: 209.937.7425 | E: deedee.antypas@stocktonca.gov

Role: As the Pre-Construction Manager, Vince led the development of the GMP, capitalizing on his background in construction to provide first-hand constructability consulting throughout the design process.

Progressive design-build of new influent pumping, screening, and grit removal systems; new secondary biological treatment systems; tertiary filtration and disinfection systems; and solids handling facilities to replace an existing oxidation pond and overland flow treatment system. Includes installation of major process equipment such as vertical turbine pumps, perforated fine screens, conical tray grit removal systems, circular and rectangular primary and secondary clarifier mechanisms, aeration blowers and diffusers, submersible mixers, tertiary disc filters, UV disinfection system, sludge centrifuge, and associated electrical, control, and SCADA upgrades. Construction Cost $209M.

Vince Guillama

Preconstruction Services Manager

③ Graham Hill Water Treatment Plant Upgrades, Progressive Design-Build, Santa Cruz, CA

Client: City of Santa Cruz
Matt Zeman, Project Manager
T: 858.610.7478 | mzeman@cityofsantacruz.com

Role: In the role of Pre-Construction Manager, Vince is leading the development of the GMP, capitalizing on his background in construction to provide first hand constructability constulting throughout the design process.

The WTP was built in 1960s and had not been significantly upgraded since the 1980s. **The City recognized that in order to secure their water future, significant upgrades to the WTP had to be undertaken. Vince is leading the AECOM/Lyles construction team, worked closely with the client and its advisor through many iterations of layouts and process trains to arrive at the right solution for the City. Over 20 workshops were held on a wide range of topics that cover unit processes and constructability, among many others. The project scope includes**: high-rate clarification through the use of space-efficient plate settlers, ozone system, granular activated carbon (GAC), reclaimed water clarifiers, provisions for future UV disinfection, and new chemical feed systems; new administration and maintenance buildings, and new ozone building; upgraded operations building and upgraded filter gallery building; electrical upgrades; demolition of some existing buildings and site improvements including landscaping and vehicular access improvements. Construction is anticipated to begin in late 2024, and substantial completion is expected by Spring 2028.

Additional Experience

WWTP Secondary and Tertiary Improvements Design-Build, City of Davis, CA. Estimator/Project Manager. Design-build construction of new secondary biological treatment systems, new tertiary filtration and disinfection systems, and new solids handling facilities to replace an existing oxidation pond and overland flow treatment system. The secondary treatment processes consist of four new extended aeration basins and four new 85' diameter secondary clarifiers. Tertiary filtration and disinfection facilities consist of four new 6 MGD disc filters, two new chlorine contact tanks, and new a sodium hypochlorite and sodium bisulfite storage and pumping facility. Sludge handling facilities consist of two new rotary drum thickeners, two new screw presses, chemical storage facilities, and a 48,000 square foot sludge storage facility. Also included are a new cogeneration plant, a new emergency power generator, and numerous other electrical, control, and SCADA upgrades. Project Cost: $71M. (2018)

Orange County Sanitation District – P1-101 Sludge Dewatering and Odor Control Project, Orange County, CA. Project Manager - Mechanical. Construction of a new 32,000 SF thickening and dewatering structure on CIDH piles, including equipment, odor control, mechanical, fire, plumbing, electrical and instrumentation and control systems. Addition of two new concrete pipe tunnels along with a 1200 LF precast screen wall and fabricated above grade pipe rack, modifications to existing tunnel piping, rehabilitation of exiting silos and Truck Load Out Facility, as well as new underground piping, paving, demolition, and all other site improvements required to replace the existing sludge handling systems. Construction Cost: $127M. (2019)

Regional Water Reclamation Plant Upgrade, City of Moreno Valley, CA. Upgrade of existing 15.8 MGD water reclamation plant to 18.5 MGD, including yard structures, headworks, influent pump station, grit basins, power and blower buildings, chemical scrubber odor control facility, secondary effluent pump station, tertiary effluent/utility water pump station, tertiary effluent meter vault, acid-phase digester and fare, methane-phase digester, digested sludge storage tanks, low pressure digester gas holder, 15 kW generator, boiler facility, electrical buildings, and related appurtenances. Construction Cost: $29.7M. (2012)

Water Treatment Facility Improvements, City of El Centro, CA. Expansion of existing 10.5 MGD facility to 21 MGD, including clarifier units, gravity filters, waste wash-water recovery basin, raw water structure, operations and chemical buildings, dividing berm and connecting piping of two 25 MG earthen storage reservoirs, clearwell and backwash recovery pump stations, and site improvements including site piping, grading, paving, electrical instrumentation, and controls. Construction Cost: $26.6M. (2009)

Staffing Availability for Banning



2015

Staffing Availability

Prior to selection of specific staff for our team, we examined the existing and projected workload of each person and confirmed their availability for this assignment. We have determined they have no obligations, either current or projected, that would prevent them from performing with excellence to meet the requirements and schedule for this project.

Staff/Role	Availabity	Responsibilities	Benefit to Banning
Joe Lawrence **Design-Build Project Manager**	Phase 1 - 75% Phase 2 - 100%	Single point of responsibility	Successful track record in DB project management, including multiple projects with AECOM (ECAWP, Stockton, Santa Cruz)
Gabriel Perigault, PhD, PE **Design Manager**	Phase 1 - 60% Phase 2 - 30%	Manage design development	Led the design of 25 water and wastewater treatment plants; proven track record delivering successful DB projects with Lyles (ECAWP, Santa Cruz)
Marcos Reyes **Construction Manager**	Phase 1 - 25% Phase 2 - 100%	Onsite construction management	Lives within 25 miles of the project; proven track record delivering successful DBs with AECOM (Rialto, ECAWP)
Vince Guillama **Preconstruction Manager**	Phase 1 - 100% Phase 2 - 20%	Manage early works packages, ensures budget adherence during design	Lessons-learned managing early works packages; proven track record delivering successful DB projects with AECOM (Stockton, ECAWP, Davis, Santa Cruz)
Alex Franchi, PhD, PE **Treatment Process Lead**	Phase 1 - 60% Phase 2 - 25%	Treatment technology selection/design	Led successful designs of Title 22 projects across California; Proven track record delivering successful DB projects with Lyles (ECAWP)
Rosaida Harris **QA/QCLead**	Phase 1 - 40% Phase 2 - 40%	QA/QC management and discipline coordination	Extensive experience in QC for both design and construction on DB projects
Anthony Pilato **Superintendent**	Phase 1 - 5% Phase 2 - 100%	Manage onsite activities during construction	Seasoned superintendent with extensive experience coordinating multiple trades and managing large-scale projects, such as the $57M City of Beaumont
Matt Cain **Estimator/Cost Controls**	Phase 1 - 80% Phase 2 - 15%	Budget control and management	Design-to-budget experience from Beaumont and Rialto projects, backed by a successful track record with AECOM on the Rialto and ECAWP projects
Ryan Priestman **Lead Scheduler**	Phase 1 - 40% Phase 2 - 40%	Project Scheduling	Proven ability to work with AECOM to solve scheduling hurdles on the ECAWP DB project
Vijay Kumar **Commissioning Lead**	Phase 1 - 20% Phase 2 - 60%	Startup and commissioning plans and coordination	Proven ability to work with AECOM on commissioning and startup activities
Tyler Payne, SMS, CHST, CIT, STS, CUSP - Safety Director	Phase 1 - 15% Phase 2 -80%	Safety Management	Proven ability to provide Safety Management on successful local DB projects with AECOM (ECAWP)
T.J. Catalano, PE **Structural**	Phase 1 - 50% Phase 2 - 20%	Structural engineering lead	Brings experience upgrading WWTPs all aspects of structural engineering design and construction services on DBP projects such as ECAWP.
Steven Fitzwilliam, PE **Geotechnical/Civil**	Phase 1 - 50% Phase 2 - 20%	Geotechnical and Site/Civil Engineering	28 years of geotechnical experience, including design-build treatment plant projects
Barbara Bartholomae **Permitting Lead**	Phase 1 - 50% Phase 2 - 30%	Permit Management	Proven track record delivering permitting services on successful DB projects with Lyles (ECAWP, Santa Cruz)
William Goryl, RA **Architectural**	Phase 1 - 50% Phase 2 - 20%	Architectural design	30 years of architectural experience, including Design-build WWTPs such as Davis, CA and Rialto,A
Yasser Rizk, PE **Electrical/I&C**	Phase 1 - 50% Phase 2 - 20%	Electrical and SCADA/I&C Design	Extensive DB experience, highly skilled in electrical design, coordination of HVAC, mechanical process, and control systems for innovative, effective design
Karen Bettencourt, PE **Mechanical**	Phase 1 - 50% Phase 2 - 20%	Mechanical Process Design	20+ years of treatment plant mechnical process engineering, including the Stockton WWTP DB
Executive Management Board			
Grant Gourley **Executive Management Board**	Phase 1 - 10% Phase 2 - 10%	Executive Oversight	Decades of lessons-learned providing executive oversight on DB projects throughout CA and with AECOM (ECAWP, Stockton, Santa Cruz, Davis
Brian Daly, PE **Executive Management Board**	Phase 1 - 10% Phase 2 - 10%	Executive Oversight	National DB Leader with 30 years of DB experience, serves on all AECOM/Lyles JV Management Boards

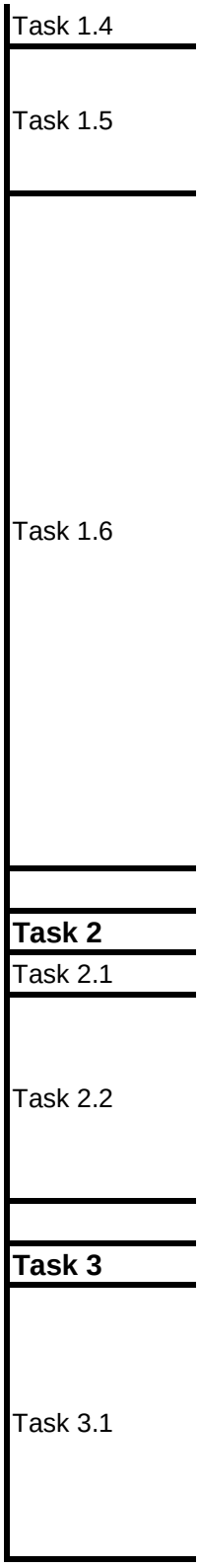
Single Point of Contact for the AECOM/Lyles JV:
Joe Lawrence
Design-Build Project Manager
26501 Madison Avenue
Murrieta, CA 92562
916.375.1833
jlawrence@wmlylesco.com



AECOM W.M. LYLES CO.
a joint venture

2017

Line Item
Task 1
Task 1 ADDER
Task 1.1
Task 1.2
Task 1.3


Task 1.4
Task 1.5
Task 1.6
Task 2
Task 2.1
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Task 3
Task 3.1

Task 3.2

Task 3.3

Task 3.4

Task 3.5

Task 3.6

Task 4

Task 4.1

Task 4.2

Task 4.3

Task 4.4

Task 4.5

Task 4.6

Description	Total Cost
Design	
Adder for RO System and Evaporation Ponds	$0
Preliminary Design Report (PDR)	$320,453
30% Preliminary Design	$717,339
60% Design Phase	$961,349

Hydraulic Analysis/ Hydraulic Profile	$54,452
90% Design Phase	$707,110
Final Design Phase	$408,878
	$3,169,581
Cost Estimating	
Initial Baseline Cost Model and Updates (5)	$162,787
GMP Development	$117,602
	$280,389
Meetings & Reports	
Kick-off Meeting/Workshop (1)	$56,968

Progress Meetings and Reports (16)	$156,553
Project Status Reports (Monthly with Invoice)	$113,807
Risk Management Workshop (1)	$20,305
Constructability Review Workshops (2)	$51,971
SCADA Development and Scoping Workshops (4)	$63,985
	$463,589
Investigation / Support	
Potholing and Cutlrural Monitoring	$25,397
Topographic Survey	$30,635
Environmental Support ($30,000 allowance)	$30,381
Geotechnical Investigation	$123,055
Permitting Support and Title 22 and Title 27 (if needed) Eng Reports	$98,520
Energy Tax Credits / Incentives	$25,395
	$333,383
	$4,246,942

Potential Scope Reduction	Revised Cost	Cost Reduction
$0	$309,000	($309,000)
	$320,453	$0
$250,000	$615,074	$102,265
$250,000	$818,598	$142,751

	$54,452	$0
$50,000	$0	$707,110
$150,000	$950,539	($541,661)
$700,000	**$2,759,117**	**$410,464**
	$162,598	$189
$50,000	$105,754	$11,848
$50,000	**$268,352**	**$12,037**
$25,000	$42,934	$14,034

$75,000	$123,563	$32,990
$100,000	$47,709	$66,098
$10,000	$18,766	$1,539
	$47,591	$4,380
	$55,966	$8,019
$210,000	**$336,529**	**$127,060**
	$24,577	$820
	$29,954	$681
	$27,444	$2,937
	$121,809	$1,246
	$96,836	$1,684
	$25,009	$386
$0	**$325,629**	**$7,754**
$960,000	**$3,998,627**	**$248,315**

Owners Rep. Comments	AECOM RESPONSE
Assuming that RO design and evaporation ponds are not included in the costs listed in Column D. Please include cost of RO/Evap Design as separate line item.	The design cost for the RO system, including supporting systems (additional chems, etc.) as well as 15-20 acres of evaporation ponds with mechanical aerators is estimated at $309k. The total amount of engineering hours to produce this design is estimated at 1,742 for all disciplines. This includes 53 addional drawings and 4 additional specs, as well as modification to other drawings and specs.The revised list of drawings and specs with the new drawings and specs is enclosed and changes highlighted in yellow. This also include the BODR adder and production of all the reports associated with the permitting of the evaporation ponds per Title 27.
After all decisions have been made in the BDR, moving the design to 30 percent should not take this much effort. Given that the RO and brine management facilities are not included will result in further savings, this effort may be reduced. A minimum saving is indicated.	Reduced to the extent possible. There is a major effort for the mechanical and instrumentation disciplines for this submittal.
Moving the design to 60 percent given the simple treatment train should not take this much effort. A minimum saving is indicated.	Reduced to the extent possible. This effort also includes the scope for replacement in kind for: •Digester Coating •Replace Piping in Grit Chamber •Replace East Primary Clarifier Center Drive •Replace Existing PVC Digester Gas Piping •Replace Digester Hot Water Boiler •Replace Grit/Cyclone Unit •Replace Two Old Grit Pumps

Moving the design to 90 percent given the simple treatment train should not take this much effort. A minimum saving is indicated.	We are proposing to eliminate the 90% Submittal to streamline the desing process and save cost.
The level of effort on a design including mainly packaged treatment systems seems high. A minimum saving is indicated.	The cost of this submittal increased because the 90% submittal was eliminated. The complete design will include sealed and signed drawings and this is last opportunity for thorough QC and reducing the possibility of conflicts/issues for Phase 2. This effort also includes the scope for replacement in kind for: •Digester Coating •Replace Piping in Grit Chamber •Replace East Primary Clarifier Center Drive •Replace Existing PVC Digester Gas Piping •Replace Digester Hot Water Boiler •Replace Grit/Cyclone Unit •Replace Two Old Grit Pumps
There seems to be a duplication of effort here with the initial baseline cost model. A minimum saving is indicated.	Reduced to the extent possible. However, baseline cost model is only one component of the GMP. We need to adjust contract, front end specs, Commissioning Plan, QMP for construction, etc.
We assume a virtual meeting. Minimum saving is indicated	Cost has been reduced but not to the extent requested. Cost has been reduced. However, this task includes preparing a Project Quality Plan and Project Execution Plan (a requirement of the RFP and included in our scope) for discussion in the kick-off meeting. This

These meeting are to discuss progress and plan activities. Simple reporting to document action items and design decisions is envisioned. 12 hours total can be assumed per meeting. Added contingency for addional 6 other meetings. These meeting are all virtual. A minimum saving is indicated.	Cost has been reduced but not to the extent requested. These are not only status meetings (see scope for this task). The second part of all the meetings is technical discussions of technical choices as well as review/discussion of comments/responses to deliverables. This is a very essential component of progressive DB. Please refer to scope provided.
Assumed 12 reports/invoices. A minimum saving is indicated.	Reduced to the extent possible. This effort not only includes invoicing on behalf of AECOM/WML but all project controls activities as requested in the RFP. In addition to invoicing and progress reports, writing contracts and managing payments to subs, schedule
We assume a virtual meeting. Minimum saving is indicated	Reduced to the extent possible. This not only includes the workshop but the preparation and maintenance of a risk register that will be essential to determine the necesssary contingency to carry in the GMP.
Although higher than other proposals, we left this effort intact.	

Standard Form of General Conditions of Contract Between Owner and Design-Builder

Document No. 535
Third Edition, 2022

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Washington, D.C.

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Article 1

General

1.1 Mutual Obligations.

1.1.1 *Owner and Design-Builder* commit at all times to cooperate fully with each other and proceed on the basis of trust and good faith, to permit each party to realize the benefits afforded under the Contract Documents.

1.2 Basic Definitions.

1.2.1 ***Agreement* or *Contract*** refers to the executed contract between Owner and Design-Builder and includes DBIA Document No. 535, *Standard Form of General Conditions of Contract Between Owner and Design-Builder* (2022 Edition) and DBIA Document No. 545, *Design-Build Agreement for Water and Wastewater Projects* (2024 Edition), and all Exhibits and documents incorporated therein.

1.2.2 ***Basis of Design Documents*** are as follows: DBIA Document No. 535, *Standard Form of General Conditions of Contract Between Owner and Design-Builder* (2022 Edition) and DBIA Document No. 545, *Design-Build Agreement for Water and Wastewater Projects* (2024 Edition), Exhibit A "Design Criteria Report and Preliminary Design Drawings*",* and those documents specifically listed in, as applicable, in Exhibit D "*List of Reference Documents"*.

1.2.3 ***Change Directive*** is a directive issued by the Owner, at the Owner's sole discretion, to the Design-Builder to recognize that there is a potential Change Order to the Contract and provide the Design-Builder with direction on a path forward on the potential changed work.

1.2.4 ***Change Order*** is a contractually binding amendment to the Contract, which shall comply with the Change Order provisions of the Contract Documents.

1.2.5 ***Construction Documents*** are the documents, consisting of Drawings and Specifications, to be prepared or assembled by Design-Builder consistent with the the Design-Builder's accepted proposal and the Basis of Design Documents unless a deviation from the Basis of Design Documents is specifically set forth in a Change Order executed by both Owner and Design-Builder, as part of the design review process contemplated by Section 2.4 of these General Conditions of Contract.

1.2.6 ***Construction Services*** include construction, testing, commissioning, and acceptance for the Project, and all other work as needed to complete the Work as provided for in the Construction Documents.

1.2.7 ***Contract Documents*** are those documents identified in the DBIA Document No. 545.

1.2.8 ***Contract Price or Design-Build Price*** refers to the amounts set forth in the DBIA Document No. 545.

1.2.9 ***Contract Time*** refers to the time periods set forth in Article 5 of the DBIA Document No. 545.

1.2.10 ***Contractor's Construction Schedule*** is the Design-Builder's schedule for the Construction Services scope of work that complies with the scheduling requirements of the Contract Documents and clearly identifies the Critical Path of the Work.

1.2.11 ***Date of Commencement*** – As defined in the DBIA Document No. 545.

1.2.12 ***Day*** **or** ***Days*** shall mean calendar days unless otherwise specifically noted in the Contract Documents.

1.2.13 ***Design-Builder*** is the party to the Contract that is responsible for design, construction, commissioning and acceptance testing, and training and other services as defined by the Contract Documents. Any and all references to Contractor and Contractor's obligations are applicable to the Design-Builder.

1.2.14 ***Design-Build Team*** is comprised of Design-Builder, Design Consultant, and key Subcontractors identified by Design-Builder.

1.2.15 ***Design Consultant*** is a qualified, licensed design professional who is not an employee of Design-Builder, but is retained by Design-Builder, or employed or retained by anyone under contract with Design-Builder, to furnish design services required under the Contract Documents. A Design Sub-Consultant is a qualified, licensed design professional who is not an employee of Design Consultant but is retained by Design Consultant or employed or retained by anyone under contract to Design Consultant, to furnish design services required under the Contract Documents.

1.2.16 ***Design Services*** are those services as defined in Article 2 of the General Conditions and in the Contract Documents.

1.2.17 ***Design Submission*** means any and all documents, packaged treatment submittals, electronic information, including computer programs and computer generated materials, data, plans, drawings, sketches, illustrations, specifications, descriptions, models, and other information developed, prepared, furnished, delivered or required to be delivered by, or for, Design-Builder.

1.2.18 ***Engineer of Record*** is the qualified licensed in the State of California design professional responsible for the Design Services.

1.2.19 ***Final Acceptance*** occurs once all requirements of Final Completion have occurred and the Owner issues a Letter of Final Acceptance.

1.2.20 ***Final Application for Payment*** is the Design-Builder's request for final payment after Final Acceptance has occurred and a Letter of Final Acceptance has been issued by the Owner.

1.2.21 ***Final Completion*** is the date on which all Work is complete in accordance with the Contract Documents, including but not limited to, any items identified in the punch list prepared under Section 6.6.1.

1.2.22 ***Force Majeure Events*** are those events that are beyond the control of both Design-Builder and Owner, including the events of war, floods, labor disputes, earthquakes, epidemics, adverse weather conditions not reasonably anticipated, and other acts of God. Listed more fully in Section 8.3.

1.2.23 ***General Conditions of Contract*** refer to this DBIA Document No. 535, *Standard Form of General Conditions of Contract Between Owner and Design-Builder* (2022 Edition).

1.2.24 *GMP Proposal* or *Proposal* means that proposal developed by Design-Builder*, Cost Plus Fee With an Option for a Guaranteed Maximum* Price, *Progressive Design-Build Agreement,* or DBIA Document No. 545, *Progressive Design-Build Agreement for Water and Wastewater Projects.* The GMP will become the basis for the Contract Price.

1.2.25 ***Hazardous Conditions*** are any materials, wastes, substances and chemicals deemed to be hazardous under applicable Legal Requirements, or the handling, storage, remediation, or disposal of which are regulated by applicable Legal Requirements.

1.2.26 ***Holiday(s)*** - The day upon which the Owner is closed during normal business hours in observance of one of its holidays. City's observed holidays are:

a. New Year's Day,
b. President's Day,
c. Memorial Day,
d. Independence Day,
e. Labor Day,
f. Thanksgiving Day & Day after and
g. Christmas Day and Day after

In addition, the Design-Builder shall not perform any work during a period starting December 24th and ending January 1st. Design-Builder shall return to perform work on January 2nd. The days between December 24th and ending January 1 shall not be working days for City.

1.2.27 ***Legal Requirements*** are all applicable federal, state and local laws, codes, ordinances, rules, regulations, orders and decrees of any government or quasi-government entity having jurisdiction over the Project or Site, the practices involved in the Project or Site, or any Work.

1.2.28 ***Notice to Proceed*** is the written notice from the Owner to the Design-Builder establishing the dates for Design Services and/or Construction Services, and which authorizes the Design-Builder to commence with Design Services

and/or Construction Services. The effective date of the Notice to Proceed shall be no later than the date the Kick-Off meeting is held.

1.2.29 ***Other Contractors*** shall mean any contractors, service providers, suppliers or vendors performing construction, maintenance, operations, or repairs in and around the Project Site.

1.2.30 ***Owner (or City)*** shall mean the City of Banning, acting through its City Council. Owner may include Owner's Representative, where appropriate delegation has occurred.

1.2.31 ***Owner's Project Criteria or Design Criteria*** are developed by or for Owner to describe Owner's program requirements and objectives for the Project, including use, space, price, time, site and expandability requirements, as well as submittal requirements and other requirements governing Design-Builder's performance of the Work. Owner's Project Criteria may include conceptual documents, design criteria, design performance specifications, design specifications, and LEED® or other sustainable design criteria and other Project-specific technical materials and requirements.

1.2.32 ***Owner's Representative*** shall mean person, persons, or entity to whom the Owner may delegate responsibilities to, to fulfill the duties of Owner as identified in Contract Documents.

1.2.33 ***Project*** shall mean the City of Banning Wastewater Treatment Plant and Recycled Water Upgrades Project, and includes the total design, construction, and testing and commissioning of the Work under the Contract and all other work, labor, equipment, and materials necessary to accomplish the Project.

1.2.34 ***Proposal*** is the Design-Builder's submittal in response to the Owner's Request for Proposal, which includes the Design-Builder's progressive design submittal and upon which the Design-Builder based its Design-Build Price.

1.2.35 ***Site*** **or** ***Project Site*** is the land or premises on which the Project is located, and includes all areas designated for staging, storage, parking and temporary offices as indicated in the Contract Documents.

1.2.36 ***Subcontractor*** is any person or entity retained by Design-Builder as an independent contractor to perform a portion of the Work and shall include materialmen and suppliers.

1.2.37 ***Sub-Subcontractor*** is any person or entity retained by a Subcontractor as an independent contractor to perform any portion of a Subcontractor's Work and shall include materialmen and suppliers.

1.2.38 ***Substantial Completion*** **or** ***Substantially Complete*** means the date on which Design-Builder has satisfied all of the requirements for Substantial Completion under the Contract Documents, and the Work, or an agreed upon portion of the Work, is sufficiently complete in accordance with the Contract

Documents so that Owner can occupy and use the Project for its intended purposes.

1.2.39 ***Work*** is comprised of all Design-Builder's design, construction and other services required by the Contract Documents, including procuring and furnishing all materials, equipment, services and labor reasonably inferable from the Contract Documents.

1.2.40 ***Work Products*** are all works, tangible or not, created under the Contract for the Owner, as defined under Article 4 of the DBIA Document No. 545.

Article 2

Design-Builder's Services and Responsibilities

2.1 General Services.

2.1.1 The Design-Builder will designate in writing a contact person ("Design-Builder's Representative") for coordination and communication with Owner. The Design-Builder's Representative shall have the authority to make decisions for the Design-Builder firm and shall have binding signatory power for changes in work. The Design-Builder's Representative and/or his or her designee shall be on the Project Site at all times during work activity. Design-Builder's Representative shall be reasonably available to Owner and shall have the necessary expertise and experience required to supervise the Work. Design-Builder's Representative shall communicate regularly with Owner and shall be vested with the authority to act on behalf of Design-Builder. Design-Builder's Representative may be replaced only with the mutual agreement of Owner and Design-Builder.

2.1.2 An orderly system for communication between Owner and the Design-Builder is essential to the satisfactory completion of the Work. Owner will transmit, directly or through others, written instructions, responses or other communications to the Design-Builder's Representative or other persons identified in writing by the Design-Builder to receive such communications. The Design-Builder shall, by a letter to Owner, designate (by name) one or more staff members to receive oral and written field communications when the Design-Builder's Representative is away from the Project Site and to act as the designated representative. During the times that the Design-Builder's Representative may be temporarily absent, a staff member shall be authorized to act immediately on orders or instructions issued by Owner. If Owner finds it necessary to communicate with the Design-Builder Personnel authorized to receive such communications and none are available to receive such communications, Owner may suspend all of the Design-Builder's operations at the Project Site until such communications can be accomplished. Formal communications from the Design-Builder to Owner that are necessary for the performance of the Contract, including documents described in the Contract Documents, and any other written communications, will be addressed to Owner, unless otherwise specified in the Contract Documents. All written communications or submittals shall be signed by the Design-Builder's Representative or designee

in serialized format, and Design-Builder shall maintain logs available to Owner for review and reconciliation upon request.

2.1.3 The Design-Builder represents it has the proper business and professional background, knowledge, experience and expertise necessary to provide all Design Services and Construction Services for the Project. Design-Builder further represents that it and all Design-Builder's subcontractors possess all required professional licenses in the State of California to provide all Design Services and Construction Services necessary for the Project. At all times herein, Design-Builder shall possess a California Contractor's license, Class A. Design-Builder's California Contractor's license number is 1133137.

2.1.4 Design-Builder makes certain representations in the Contract Documents, including without limitation, the representations in this clause. Design-Builder is deemed to make these representations by and as a condition of submission of Design-Builder's proposal. Design-Builder agrees that it has single point responsibility for the design and construction of this Project. Following award and execution of the Contract, these representations are deemed republished throughout the performance of the Work of the Contract and shall also be treated as express warranties.

2.1.5 Design-Builder has at the time of Proposal, and will throughout performance, carefully and adequately reviewed the Contract Documents and acknowledges that these Contract Documents establish the scope, level of quality, construction intent and the procedures for the Design-Builder's design and construction of the Work to a state of 100% completion. Design-Builder shall carefully study and compare each of the Contract Documents with the others and with information furnished by Owner, and shall report in writing to Owner any errors, inconsistencies, or omissions in the Contract Documents or inconsistencies with program performance requirements or applicable Code requirements observed by Design-Builder.

2.1.6 Design-Builder has at the time of Proposal, and will throughout performance, carefully examine the Project Site and the adjacent areas, has adequately investigated the nature and location of the Work to be performed and has satisfied itself and will continue to satisfy itself as to the general and local conditions which will be applicable, including but not limited to:

2.1.6.1 Conditions related to Project Site access and topography, and to the transportation, disposal, handling and storage of materials;

2.1.6.2 The availability of labor, water, power and roads;

2.1.6.3 Observable physical conditions at the Project Site and existing Project Site conditions, including seasons and climate;

2.1.6.4 Size, utility capacities and connection options of external utilities;

2.1.6.5 The surface conditions of the ground, including normal and usual soil conditions;

2.1.6.6 The character and availability of the equipment and facilities which will be needed prior to and during the performance of the construction work; and

2.1.6.7 All other conditions which may be material to the Design-Builder's performance of its obligations under this Contract.

2.1.7 Design-Builder has at the time of Proposal, and will throughout performance, have the experience and capability to efficiently and expeditiously accomplish the Work required under this Contract in a timely and satisfactory manner and at the standard of practice of a Design-Builder with substantial experience in the Work of the Contract.

2.1.8 Design-Builder shall supervise, coordinate, and direct the Work using Design-Builder's best skill and attention. Design-Builder shall be solely responsible for, and have control over the entire design effort, construction means, methods, techniques, sequences, procedures, and the coordination of all portions of the Work, including, but without limitation, site work, utilities, and building process systems.

2.1.9 The Design-Builder shall coordinate, sequence, and organize its work so as to minimize the inconvenience and disruption to the general public to the greatest extent reasonable. Such coordination and mitigation shall include dissemination of information and meeting with or notification to the parties who will be affected by the Work, as appropriate, and shall be undertaken in cooperation with Owner, and in accordance with any specific Contract Document provisions or direction from Owner. Prior to commencement of the Work, the Design-Builder shall hold pre-installation coordination meetings and prepare coordination drawings that document the pre-planning of the Work. This process shall ensure the installation of the Work is undertaken in an efficient and professional manner in accordance with the Contract Documents. In the event that the Owner in good faith determines that the Design-Builder has not complied with this provision, or has failed to properly address the inconvenience and/or a disruption to the general public, the Owner shall have the right to change the sequence of the Work by providing the Design-Builder with 48 hours' notice, and the Design-Builder will not be entitled to any additional time or compensation resulting from the change in the sequence of the Work. The Design-Builder's coordination shall include, but not be limited to, the following:

2.1.9.1 Coordinate use of Project space and sequence of installation of equipment or other work that is indicated on the Contract Documents. Utilize space efficiently to eliminate conflicts in the installation of the Work and to maximize accessibility for maintenance and repairs.

2.1.9.2 When necessary, prepare memoranda for distribution to each party involved in the Work outlining special procedures required for

coordination and construction. Include such items as required notices, reports, construction restraints and attendance at meetings.

2.1.9.3 Coordinate schedule and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the Work.

2.1.9.4 The Design-Builder shall obtain the approval of Owner and notify all other affected persons or "Other Contractors" at least forty-eight (48) hours before starting work which may block access or otherwise cause undue difficulty to occupants or users of property affected, and shall restore such access to a usable condition or, with Owner's permission, provide replacement access as soon as possible.

2.1.9.5 The Design-Builder shall obtain necessary information and identify equipment locations and other layouts, as available, to avoid interface conflicts and shall be familiar with applicable codes and requirements and perform its work in compliance therewith.

2.1.9.6 Coordinate execution of the Work with those public utilities, governmental bodies, private utilities and Other Contractors performing work on and adjacent to the worksites. Eliminate or minimize delays in the Work and conflicts with those utilities, bodies and Other Contractors.

2.1.10 Design-Builder shall be responsible for inspection of all portions of the Work, including those portions already performed under this Contract, to determine that such portions conform to the requirements of the Contract Documents and are ready to receive subsequent Work.

2.1.11 The Design-Builder shall be solely responsible for any and all design errors including, but without limitation, errors, inconsistencies or omissions in the Construction Documents. Design-Builder shall take field measurements, verify field conditions, and carefully compare with the Contract Documents such field measurements, conditions, and other information known to Design-Builder before commencing the Work. Errors, inconsistencies, or omissions discovered at any time shall be promptly reported in writing to Owner.

2.1.12 Design-Builder further represents and warrants it will continuously furnish the necessary personnel to complete the Project on a timely basis as required in this Contract and that such personnel have the experience and expertise levels to adequately perform the work. Design-Builder’s representations and warranties stated herein, shall also apply to Design-Builder’s subcontractors.

2.1.13 The Design-Builder shall provide Owner with a monthly status report detailing the progress of the Work, including (i) whether the Work is proceeding according to schedule; (ii) whether discrepancies, conflicts, or ambiguities exist in the Contract Documents that require resolution; (iii) whether health and safety issues exist in connection with the Work; (iv) status of the contingency account to the extent provided for in the DBIA Document No. 545, *Progressive Design-Build*

Agreement for Water and Wastewater Projects; and (v) other items that require resolution so as not to jeopardize Design-Builder's ability to complete the Work for the Contract Price and within the Contract Time(s). Status reports shall be submitted with Design-Builder's draft Payment Applications as a pre-requisite to payment.

2.1.14 Prior to commencement of the Work, Design-Builder shall prepare and submit a schedule in compliance with the scheduling requirements contained in Article 2 of the General Conditions. The schedule shall be revised as required by conditions and progress of the Work, but such revisions shall not relieve Design-Builder of its obligations to complete the Work within the Contract Time(s), as such dates may be adjusted in accordance with the Contract Documents. Owner's review of, and response to, the schedule shall not be construed as relieving Design-Builder of its complete and exclusive control over the means, methods, sequences and techniques for executing the Work.

2.1.15 The Design-Builder is required to meet with the Owner within seven (7) days after execution of the Agreement to discuss issues affecting the administration of the Work and to implement the necessary procedures, including those relating to schedule, submittals and payment, to facilitate the ability of the parties to perform their obligations under the Contract Documents.

2.1.16 The Design-Builder shall conduct progress meetings in compliance with the Contract Documents, unless otherwise agreed in writing. The Design-Builder shall schedule a Preconstruction Conference following receipt of the Notice to Proceed for Construction Services to discuss the Design-Builder's construction and scheduling requirements in Section 2.12 of the General Conditions. For all meetings, the Design-Builder shall make arrangements for meetings and prepare agendas with copies for participants. For meetings between Owner and the Design-Builder, Owner will record minutes and distribute. The Design-Builder shall be advised of and shall attend Contract meetings as deemed necessary by Owner and at no additional cost. The Design-Builder shall inform Owner at least forty-eight (48) hours in advance of any Project-related meeting(s) where Design-Builder intends to have a lawyer present.

2.2 Design Professional Services.

2.2.1 Design-Builder shall, consistent with applicable state licensing laws, provide through qualified, licensed design professionals employed by Design-Builder, or procured from qualified, independent licensed Design Consultants, the necessary design services, including architectural, engineering and other design professional services, for the preparation of the required drawings, specifications and other design submittals to permit Design-Builder to complete the Work consistent with the Contract Documents. Nothing in the Contract Documents is intended or deemed to create any legal or contractual relationship between Owner and any Design Consultant.

2.2.2 Design-Builder shall employ only Design Consultants and/or Design Subconsultants who are duly licensed and qualified to perform the Work consistent

with the Contract Documents. Prior to the date that Design Consultants and/or Design Subconsultants perform Work on the Project, Design-Builder shall identify in writing to Owner all Design Consultants and Design Subconsultants. To the extent that Design-Builder has not selected a Design Consultant or Design Subconsultant prior to performing the Work, Design-Builder shall provide Owner in writing a list of any subsequently added Design Consultants and/or Design Subconsultants and their scope of Work prior to their performing Work on the Project. Owner may reasonably object to Design-Builder's selection of any Design Consultant or Design Subconsultant, provided that the Contract Price and/or Contract Time(s) shall be adjusted to the extent that Owner's decision impacts Design-Builder's cost and/or time of performance. Design-Builder shall not substitute a listed Design Consultant or Subconsultant without obtaining Owner's prior written consent; such consent shall not be unreasonably withheld. Nothing in the Contract Documents is intended or deemed to create any legal or contractual relationship between Owner and any Design Consultant or Design Subconsultant, including but not limited to any third-party beneficiary rights.

2.3 Standard of Care for Design Professional Services.

2.3.1 All work performed in connection with this Contract shall be performed in a manner consistent with the standard of care ordinarily exercised by those who provide architectural, engineering, planning and design services for projects of similar size, scope and complexity for water treatment facilities in the United States, and consistent with the standard of care ordinarily exercised by those who specialize in such specialty services. In addition, all work is to be performed within the standard of care for California architects, engineers, planners and designers. Neither review nor approval of Design-Builder's work by Owner, any employee, any agent/consultant of Owner, or any other person shall in any way relieve Design-Builder from its duty to utilize this standard of care in the performance of its duties. Design-Builder agrees to provide its professional services in a manner that is in the Owner's economic and governmental best interests, consistent with this standard of care and the Design-Builder's professional obligations. 2.4 Design Development Services.

2.4.1 Upon receipt of the Notice to Proceed for Design Services, the Design-Builder shall commence the design and the preparation of the Construction Documents per the terms of the Contract and as provided in Exhibit B "Scope of Work." The Construction Documents shall provide information customarily necessary in documents for projects of similar size, complexity, and quality. The Construction Documents shall include all information required to complete the construction of the Project, other than such details customarily developed by others during construction.

2.4.2 Contract Schedule shall indicate the times for Owner to review the completion of each such portion of the Construction Documents and a reasonable time for review of same. The Schedule shall indicate a minimum of 21 calendar days for review by Owner. Design-Builder and Owner shall, consistent with any applicable provision of the Contract Documents, agree upon any interim Design Submissions that Owner may wish to review, which interim Design Submissions

may include design criteria, drawings, diagrams and specifications setting forth the Project requirements.

2.4.2.1 Design Submissions shall be consistent with the Owner's Project Criteria as well as the Basis of Design Documents, as the Basis of Design Documents may have been changed or supplemented through the design process set forth in this Section. By submitting Design Submissions, Design-Builder represents to the Owner that the Work depicted and otherwise shown, contained, or reflected in Design Submissions may be constructed in compliance with the then current Contract Price and Contract Time. Notwithstanding the above, Design-Builder may propose Design Submissions that may alter the Basis of Design Documents, the Contract Price and/or Contract Time; however, Design-Builder must provide notice thereof in accordance with Article 9 of the General Conditions and obtain a Change Order before such proposed Design Submissions are incorporated into the Construction Documents.

2.4.2.2 On or about the time of the Design Submissions, Design-Builder and Owner shall meet and confer about the Design Submissions, with Design-Builder identifying during such meetings, among other things, the evolution of the design and any changes to the Basis of Design Documents, or, if applicable, previously submitted Design Submissions. Changes to the Basis of Design Documents, including those that are deemed minor changes under Section 9.3.1, shall be processed in accordance with Article 9. Minutes of the meetings, including a full listing of all changes, will be maintained by Design-Builder and provided to all attendees for review. Following the design review meeting, Owner shall review and approve the interim Design Submissions and meeting minutes in a time that is consistent with the turnaround times set forth in Design-Builder's schedule.

2.4.2.3 Owner shall review and respond to Design Submissions, providing any comments and/or concerns about the Design Submissions. Owner shall provide all comments on the Design Submissions within the time provided by the Contract Documents. Design-Builder shall revise the Design Submissions (and any other deliverables) in response to Owner's comments and incorporate said responses into the next submission of Design Submissions.

2.4.2.4 If incorporation of Owner's comments results in a design that is inconsistent with or otherwise gives rise to a change in Owner's Project Criteria, the Basis of Design Documents, the Contract Price and/or the Contract Time, Design-Builder shall provide notice thereof in accordance with Articles 9 and 10 of the General Conditions. Changes to the Basis of Design Documents, the Contract Price and/or the Contract Time, including those that are deemed minor changes, shall be processed in accordance with Article 9 of the General Conditions.

2.4.3 Design-Builder shall submit Construction Documents to Owner setting forth in detail drawings and specifications describing the requirements for construction of the Work. The Construction Documents shall be consistent with the latest set of interim Design Submissions, as such submissions may have been modified in a design review meeting and recorded in the meeting minutes. The parties shall have a design review meeting to discuss, and Owner shall review and approve, the Construction Documents in accordance with the procedures set forth in Section 2.4.1 above. Design-Builder shall proceed with construction in accordance with the approved Construction Documents and shall submit one set of approved Construction Documents to Owner prior to commencement of construction.

2.4.4 Owner's review and approval of interim Design Submissions, meeting minutes, and the Construction Documents is for the purpose of mutually establishing a conformed set of Contract Documents compatible with the requirements of the Work. Neither Owner's review nor approval of any interim Design Submissions, meeting minutes, and Construction Documents shall be deemed to transfer any design liability from Design-Builder to Owner, nor shall it relieve the Design-Builder from its duty to utilize this standard of care in the performance of its duties. Design-Builder shall provide Owner with sufficient time in the Project Schedule to review and approve the Design Submissions.

2.4.5 To the extent not prohibited by the Contract Documents or Legal Requirements, Design-Builder may prepare interim Design Submissions and Construction Documents for a portion of the Work to permit construction to proceed on that portion of the Work prior to completion of the Construction Documents for the entire Work. Interim design submissions shall be consistent with the Basis of Design Documents, as the Basis of Design Documents may have been changed through the design process set forth in this Section. On or about the time of the scheduled submissions, Design-Builder and Owner shall meet and confer about the submissions, with Design-Builder identifying during such meetings, among other things, the evolution of the design and any changes to the Basis of Design Documents, or, if applicable, previously submitted design submissions. Following the design review meeting, Owner shall review and approve the interim design submissions and meeting minutes in a time that is consistent with the turnaround times set forth in Design-Builder's schedule.

2.5 Legal Requirements.

2.5.1 Design-Builder shall perform the Work in accordance with all Legal Requirements and shall provide all notices applicable to the Work as required by the Legal Requirements.

2.5.2 Subject to notice and scheduling provisions, where revisions are required to be made to the Construction Documents resulting in a change in the construction because of changes in Legal Requirements, the Contract Price and/or Contract Time(s) may be adjusted to compensate Design-Builder for the effects of any changes in the Legal Requirements enacted after the date of the Agreement. This Article 2.5.2 shall not apply where there is a Force Majeure event resulting in changes to the Legal Requirements, in which case, Section 8.3 will apply.

2.5.3 California Air Resources Board (CARB): The Design-Builder shall comply with the all California Air Resources Board (CARB) In-Use Off-Road Diesel-Fueled Fleet Regulation [Title 13 CCR, Division 3, Chapter 9, Article 4.8, as amended, effective 10/1/23] and is responsible for maintaining compliance with said regulations for the duration of Project and for verifying compliance certificates for any subcontractors used throughout the contract term.. The Design-Builder shall acknowledge these requirements and provide compliance certificates with their Proposal.

1. The Design-Builder must obtain copies of the valid Certificates of Reported Compliance for the fleet selected for the contract and their listed subcontractors, if applicable, prior to entering into a new or renewed contract with that fleet.
2. The Design-Builder shall not enter into a contract with a fleet for which it does not have a valid Certificates of Reported Compliance for the fleet and its listed subcontractors, if applicable, prior to entering into a new or renewed contract with that fleet.
3. The Design-Builder shall collect new valid Certificates of Reported Compliance for the current compliance year, between March 1 and June 1 of each year, from all fleets that have an ongoing contract with the Design-Builder as of March 1 of that year.

2.5.4 ASSET MANAGEMENT

Asset Management Data: The Contractor shall provide all Asset Management Data services per Design Criteria Report.

2.6 Government Approvals and Permits.

2.6.1 Design-Builder shall obtain and pay for all necessary permits, approvals, licenses, government charges and inspection fees required for the prosecution of the Work by any government or quasi-government entity having jurisdiction over the Project as identified in Exhibit F to the Agreement, (*Permits and Approvals*), .

2.6.2 Design-Builder shall provide reasonable assistance to Owner in obtaining those permits, approvals and licenses that are Owner's responsibility.

2.7 Design-Builder's Construction Services.

2.7.1 Unless otherwise provided in the Contract Documents to be the responsibility of Owner or a separate contractor, Design-Builder shall provide through itself or Subcontractors the necessary supervision, labor, inspection, testing, start-up, material, equipment, machinery, temporary utilities and other temporary facilities to permit Design-Builder to complete construction of the Project consistent with the Contract Documents.

2.7.2 Design-Builder shall perform all construction activities efficiently and with the requisite expertise, skill and competence to satisfy the requirements of the Contract Documents. Design-Builder shall at all times exercise complete and exclusive control over the means, methods, sequences and techniques of

construction.

2.7.3 Design-Builder shall employ only Subcontractors who are responsible, duly licensed and qualified to perform the Work consistent with the Contract Documents. Design-Builder shall at all times comply with the requirements of Public Contract Code Section 22166 regarding the use of Subcontractors. Prior to the date that Subcontractors perform Work on the Project, Design-Builder shall identify in writing to Owner all Subcontractors. To the extent that Design-Builder has not selected a Subcontractor prior to performing the Work, Design-Builder shall provide Owner in writing a list of any subsequently added Subcontractors prior to their performing Work on the Project. Owner may reasonably object to Design-Builder's selection of any Subcontractor. Design-Builder may not substitute listed Subcontractors without Owner's prior written consent; such consent shall not be unreasonably withheld. The Design-Builder shall select or replace the subcontractor in compliance with the Contract requirement, at no cost or time impact to the Owner.

2.7.4 Design-Builder assumes responsibility to Owner for the proper performance of the Work of Subcontractors and any acts and omissions in connection with such performance. Nothing in the Contract Documents is intended or deemed to create any legal or contractual relationship between Owner and any Subcontractor or Sub-Subcontractor, including but not limited to any third-party beneficiary rights.

2.7.5 Design-Builder shall coordinate the activities of all Subcontractors. If Owner performs other work on the Project or at the Site with separate contractors under Owner's control, Design-Builder agrees to reasonably cooperate and coordinate its activities with those of such separate contractors so that the Project can be completed in an orderly and coordinated manner without unreasonable disruption.

2.7.6 Design-Builder shall keep the Site reasonably free from debris, trash and construction wastes to permit Design-Builder to perform its construction services efficiently, safely and without interfering with the use of adjacent land areas. Upon Substantial Completion of the Work, or a portion of the Work, Design-Builder shall remove all debris, trash, construction wastes, materials, equipment, machinery and tools arising from the Work or applicable portions thereof to permit Owner to occupy the Project or a portion of the Project for its intended use.

2.8 Design-Builder Subcontracts

2.8.1 Design-Builder shall use only Responsible (as defined by Public Contract Code section 1103) and qualified Subcontractors and material suppliers. Unless previously identified in Design-Builder's Proposal, before making an award to a Subcontractor or material supplier, the Design-Builder shall identify in writing to the Owner the name, qualifications, experience, contact and licensing information, and scope of work for each proposed Subcontractor or material supplier. The Design-Builder shall provide the Owner with a letter which provides all necessary information demonstrating that the proposed subcontractor or material supplier satisfies the Contract requirements, including but not limited to, insurance provisions. If requested, Design-Builder will promptly provide additional

information requested by Owner pending concurrence from Owner. The Owner reserves the right, which shall be exercised in good faith, to reasonably deny or remove a Subcontractor, Sub-subcontractor, or material supplier in the event the Owner determines that the Subcontractor, Sub-subcontractor, or material supplier is not Responsible, or that the subcontractor or material supplier fails to satisfy or violates the requirements under the Contract Documents. Nothing herein shall be construed to relieve the Design-Builder from its obligations to properly manage, supervise, schedule, or coordinate its Subcontractors and material suppliers.

2.8.2 All subcontracts will be between the Design-Builder and the Subcontractors. Subcontracts shall be in writing to protect Owner from impacts and claims arising from the Work. A copy of every subcontract shall be furnished to Owner upon request. The Design-Builder shall be responsible to Owner for the acts and omissions of its agents and employees, suppliers, Subcontractors, and Sub-subcontractors performing work under a contract with the Design-Builder, and of its lower tier subcontractors, agents or employees. The Design-Builder shall require each Subcontractor to be bound to the Design-Builder by the terms of the Contract Documents, and to assume toward the Design-Builder all applicable obligations and responsibilities which the Design-Builder, by these Contract Documents, assumes toward Owner. Said Contract shall preserve and protect the rights of Owner under the Contract Documents with respect to the Work to be performed by the Subcontractors that the subcontracting thereof will not prejudice such rights. Where appropriate, the Design-Builder shall require each Subcontractor to enter into similar Contracts with the Sub-subcontractors. The Design-Builder shall make available to each proposed Subcontractor, prior to the execution of the subcontract, copies of the Contract Documents and the Contractor's Construction Schedule, to which the Subcontractor shall similarly make copies of such Contract Documents available to their Sub-subcontractors. Each Subcontractor will be bound by this Article. Subcontractors also shall be provided access to all Requests for Information (RFI's), Schedule Updates, and any other information that arises during the performance of the Work. No subcontract or purchase order shall bind or purport to bind Owner. Each subcontract or purchase order shall provide, without requiring the prior consent of the relevant Subcontractor or supplier, for assignment and delegation of such subcontract or purchase order by Design-Builder to Owner in the event of a default by the Design-Builder. If Owner elects to assume by assignment any subcontract or purchase order as described in this Article, then Design-Builder shall enter into reasonable assignment documentation requested by Owner which may be required to effect such assignment.

2.8.3 Subject to Public Contract Code Section 22166, the Design-Builder shall make no substitution for any Subcontractor, person or entity previously selected without the prior written concurrence of Owner which will not be unreasonably withheld.

2.9 Design-Builder's Responsibility for Project Safety.

2.9.1 Design-Builder recognizes the importance of performing the Work in a safe manner so as to prevent damage, injury or loss to (i) all individuals at the Site,

whether working or visiting; (ii) the Work, including materials and equipment incorporated into the Work or stored on-Site or off-Site; and (iii) all other property at the Site or adjacent thereto. Design-Builder assumes responsibility for implementing and monitoring all safety precautions and programs related to the performance of the Work. Design-Builder shall, prior to commencing construction, designate a Safety Representative with the necessary qualifications and experience to supervise the implementation and monitoring of all safety precautions and programs related to the Work. Unless otherwise required by the Contract Documents, Design-Builder's Safety Representative shall be an individual stationed at the Site who may have responsibilities on the Project in addition to safety. The Safety Representative shall make routine daily inspections of the Site and shall hold weekly safety meetings with Design-Builder's personnel, Subcontractors and others as applicable.

2.9.2 Design-Builder and Subcontractors shall comply with all Legal Requirements relating to safety, including but not limited to, all pertinent safety laws and regulations and orders of the State of California, Department of Industrial Relations, Division of Industrial Safety, and U.S. Department of Labor, OSHA, as well as any Owner-specific safety requirements set forth in the Contract Documents, provided that such Owner-specific requirements do not violate any applicable Legal Requirement. Design-Builder will immediately report in writing any safety-related injury, loss, damage or accident arising from the Work to Owner's Representative and, to the extent mandated by Legal Requirements, to all government or quasi-government authorities having jurisdiction over safety-related matters involving the Project or the Work.

2.9.3 Design-Builder's responsibility for safety under this Section is not intended in any way to relieve Subcontractors and Sub-Subcontractors of their own contractual and legal obligations and responsibility for (i) complying with all Legal Requirements, including those related to health and safety matters; and (ii) taking all necessary measures to implement and monitor all safety precautions and programs to guard against injuries, losses, damages or accidents resulting from their performance of the Work.

2.9.4 The Design-Builder shall conduct all operations in a manner that will cause no interference with normal operations of the Owner. In all operations, the Design-Builder shall be governed by the regulations and rules of Owner and shall cooperate fully with Owner. All temporary blockages for the movement of construction materials or equipment shall be coordinated with and approved by Owner at least forty-eight (48) working hours in advance of any closure. The Design-Builder shall provide and maintain temporary and permanent fences, barriers, lights, bridges, and signs and provide such flaggers and guards as necessary to give adequate warning to the public and all individuals on or using the premises.

2.9.5 Within ten (10) Days after the date of the Notice to Proceed and before moving vehicles onto the Project Site, the Design-Builder shall submit to Owner the proposed Plan for vehicular and pedestrian traffic circulation, including the

location and types of signs to be used. Thereafter, and not later than fifteen (15) Days prior to subsequent changes required by Owner for said circulation, sign locations and types, the Design-Builder shall submit revised plans to Owner.

2.9.6 The Design-Builder shall conduct the operations in a manner that avoids injury or damage to adjacent property and improvements. Property such as, but not limited to, buildings, trees, shrubbery, lawns, pole lines, fences, guard rails, guide posts, culvert and Project markers, signs, structures, and other objects on or adjacent to the Project Site, that are not designated for removal, shall be protected from injury or damage. If damaged or removed due to Design-Builder's operations, they shall be restored or replaced in as nearly the original condition and location as is reasonably possible. When ordered by Owner, the Design-Builder shall provide and install suitable safeguards to protect any object from injury or damage.

2.10 Design-Builder's Warranty.

2.10.1 Design-Builder warrants to Owner that the construction, including all materials and equipment furnished as part of the construction, shall be new unless otherwise specified in the Contract Documents, of good quality, in conformance with the Contract Documents and free of defects in materials and workmanship.

2.10.2 All Work shall be warranted by the Design-Builder against defective workmanship and materials for the warranty period specified elsewhere in the Contract or one (1) year after the date of the Final Acceptance of the Work by Owner, whichever is later. Neither Final Acceptance nor the final payment nor any provision in the Contract Documents shall relieve the Design-Builder of responsibility for faulty material or quality of Work. The Design-Builder shall replace or repair any such defective Work in a manner satisfactory to Owner, after notice to do so from Owner and within the time specified in the notice.

2.10.3 Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve Design-Builder of warranty on work that incorporates products. Manufacturer's disclaimers and limitations on product warranties do not relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with Design-Builder.

2.10.4 Related Damages and Losses: When correcting failed or damaged warranted construction, remove and replace construction that has been damaged as a result of such failure or must be removed and replaced to provide access for correction of warranted construction.

2.10.5 Reinstatement of Warranty: When work covered by warranty has failed and been corrected by replacement or rebuilding, reinstate warranty by written endorsement. Reinstated warranty shall be equal to original warranty with equitable adjustment for depreciation.

2.10.6 Replacement Cost: Upon determination that work covered by warranty has failed, replace or rebuild work to acceptable condition complying with requirements

of Contract Documents. Design-Builder is responsible for cost of replacing or rebuilding defective work regardless of whether Owner has benefited from use of work through portion of its anticipated useful service life.

2.10.7 Warranty for labor and materials required by the Contract Documents shall have their warranty period begin on the date of Final Acceptance or beneficial use by Owner for a period of one (1) year or as covered by special warranties, whichever is longer. As to any portion of the Project that has been constructed, or had required equipment installed, "Beneficial use" means that such constructed portion, or installed equipment, is ready for its intended use, even though completion of minor "punch-list" items that do not affect the intended use, may be pending. Design-Builder's performance and payment bonds shall remain in effect throughout the warranty periods set forth in this Article. The Design-Builder shall provide any and all technical support necessary to provide oversight, training and coordination of Owner personnel who perform the maintenance for installations performed under these specifications such that the Warranty durations specified in those sections and elsewhere in the Contract Documents will not begin until Final Acceptance of all work required by the Contract. All arrangements required to be made with any supplier shall be made by the Design-Builder.

2.10.8 The Design-Builder shall replace or repair any such defective work in a manner satisfactory to Owner, after notice to do so from Owner and within the time specified in the notice.

2.10.9 Expressed warranties made to Owner are in addition to implied warranties and shall not limit duties, obligations, rights, and remedies otherwise available under law. Expressed warranty periods shall not be interpreted as limitations on time in which Owner can enforce such other duties, obligations, rights, or remedies.

2.10.10 Expressed warranties made to Owner shall not deprive Owner of other rights Owner may have under other provisions of Contract Documents and are in addition to and run concurrent with other warranties made by Design-Builder under requirements of Contract Documents.

2.10.11 Rejection of Warranties: Owner reserves right to reject warranties and to limit selection to products with warranties not in conflict with requirements of Contract Documents.

2.10.12 Where Contract Documents require special warranty, or similar commitment on work or part of work, Owner reserves right to refuse to accept work, until Design-Builder presents written evidence that entities required to countersign such commitments have done so or are willing to do so.

2.10.13 Warranty Submittals: Submit written warranties to Owner prior to date certified for Substantial Completion.

2.10.14 When a designated portion of work is completed and occupied or used by Owner, by separate agreement with Design-Builder during construction

period, submit properly executed warranties to Owner within fifteen (15) days of completion of that designated portion of work.

2.10.15 When Contract Documents require Design-Builder, or Design-Builder and subcontractor, supplier or manufacturer to execute special warranty, prepare written document that contains appropriate terms and identification, ready for execution by required parties. Submit draft to Owner, for approval prior to final execution.

2.10.16 Form of Submittal: At Final Completion compile two (2) copies of each required warranty properly organized and executed by Design-Builder, or by Design-Builder, subcontractor, supplier, or manufacturer.

2.11 Correction of Defective Work.

2.11.1 Design-Builder agrees to correct any Work that is found to not be in conformance with the Contract Documents, including that part of the Work subject to Section 2.9 hereof, within a period of one year from the date of Final Acceptance of the Work, or within such longer period to the extent required by any specific warranty included in the Contract Documents.

2.11.2 Design-Builder shall, within seven (7) days of receipt of written notice from Owner that the Work is not in conformance with the Contract Documents, take meaningful steps to commence correction of such nonconforming Work, including the correction, removal or replacement of the nonconforming Work and any damage caused to other parts of the Work affected by the nonconforming Work. If Design-Builder fails to commence the necessary steps within such seven (7) day period, Owner, in addition to any other remedies provided under the Contract Documents, may provide Design-Builder with written notice that Owner will commence correction of such nonconforming Work with its own forces. If Owner does perform such corrective Work, Design-Builder shall be responsible for all reasonable costs incurred by Owner in performing such correction. If the nonconforming Work creates an emergency requiring an immediate response, the seven (7) day period identified herein shall be deemed inapplicable.

2.11.3 The one-year period referenced in Section 2.10.1 above applies only to Design-Builder's obligation to correct nonconforming Work and is not intended to constitute a period of limitations for any other rights or remedies Owner may have regarding Design-Builder's other obligations under the Contract Documents.

2.12 Construction Coordination and Schedule

2.12.1 General

A. Administrative and procedural requirements for planning, monitoring, and documenting the progress of construction during performance of the Work, including the following:

1. 60-day startup construction schedule;

2. Contractor's Construction Schedule; and

3. Construction Progress Schedule reports.

2.12.2 Definitions

A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.

1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.

2. Predecessor Activity: An activity that precedes another activity in the network.

3. Successor Activity: An activity that follows another activity in the network.

B. Cost Loading: The allocation of the schedule of values for the completion of an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum unless otherwise accepted by the Owner.

C. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.

D. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.

E. Day: Calendar Day unless specifically noted as Work Day.

F. Event: The starting or ending point of an activity.

G. Float: The measure of leeway in starting and completing an activity.

1. Float time is not for the exclusive use or benefit of either City or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.

2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.

3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.

4. Use of float suppression techniques such as software constraints, preferential sequencing, special lead/lag logic restraints, extended activity times, or imposed dates, other than as required by the Contract, shall be cause for the rejection of any schedule submitted by the Contractor.

H. Resource Loading: The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

2.12.3 Submittals

A. Submittals shall include shop drawings and a schedule for delivery, including fabrication time.

B. Format for Submittals: Submit required submittals in the following format:

1. PDF electronic schedule file.

2. Working electronic copy of schedule file.

3. PDF file of narrative reports.

C. Submit a startup construction schedule within 15 days after receipt of the Owner's Notice to Proceed for Phase 2 Services, submit a preliminary schedule indicating planned operations during first 60 days of Phase 2.

1. Include cost of activities expected to be completed before submission and acceptance of the complete schedule.

2. Acceptance of cost-loaded, construction startup schedule will not constitute acceptance of schedule of values for cost-loaded activities.

3. The startup schedule shall include a schedule for the procurement of materials and equipment and a schedule for Submittals.

D. Submit a complete Contractor’s Construction Schedule (Baseline) in compliance with Section 2.12.6 with a network diagram within 30 days after receipt of the Owner's Notice to Proceed for Phase 2 Services. Show the complete network analysis system with logic ties for all major activities.

1. Size: as required to display entire network for entire construction period.

2. This schedule submittal will be reviewed by the Owner and returned to the Design-Builder within thirty (30) Days after submission. After receipt of review comments, Design-Builder shall resubmit a mutually acceptable system.

E. Submit a working electronic copy Contractor's Construction Schedule using software indicated in this Section, and labeled to comply with requirements for submittals. Provide hard copy in size able to display entire schedule for entire construction period.

F. Submit each of the reports listed following concurrent with CPM schedule. For each activity in reports include activity number, activity description, cost, original duration, remaining duration, early start date, early finish date, late start date, late finish date, and total float in calendar days.

1. Activity Report: List of all activities sorted by activity number and then early start date, or actual start date if known.

2. Logic Report: List of preceding and succeeding activities for all activities, sorted in ascending order by activity number and then early start date, or actual start date if known.

3. Total Float Report: List of all activities sorted in ascending order of total float.

4. Earnings Report: Compilation of Contractor's total earnings from the Notice to Proceed until most recent Application for Payment.

5. Critical path layout and report.

G. Submit a Narrative Report with each schedule submittal describing the following:

1. Project duration and variation from schedule;

2. Schedule status;

3. Milestone summary;

4. Critical Path Analysis;

6. Schedule progress;

7. Started, in-progress, and completed activities;

8. Change Notices and RFI's;

9. Delays and Impacts;

10. Weather conditions;

11. Progress photos.

H. Submit Construction Progress Schedule with each Application for Payment indicating progress on all activities and implications on overall schedule. Construction Progress Schedule (monthly schedule update) is meant to only monitor the actual progress of work relative to the approved Baseline Schedule. It is not a substitute to the approved Baseline Schedule. Any schedule update that changes logic and duration or Contract Completion Date of the approved Baseline Schedule is not acceptable. Approved Baseline Schedule shall only be revised or superseded by a dully executed Revised Baseline Schedule Change Order.

I. Submit Recovery Schedule when periodic update indicates the Work is 21or more calendar days behind the current accepted schedule, indicating means by which Contractor intends to regain compliance with the schedule.

1. The Contractor shall take all necessary measures to make up for such delay either by increasing staff, plant or facilities, or by amending its Work methods, whichever is applicable, with no change to the Contract Price.

2. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and date by which recovery will be accomplished.

2.12.4 Quality Control and Quality Assurance:

A. Comply with the requirements specified in the Contract Documents for Quality Assurance and Quality Control Requirements.

B. Scheduler Qualifications: An experienced scheduler in CPM scheduling and reporting, with capability of producing CPM reports and diagrams within 24 hours of Owner's request.

C. Preconstruction Conference: Refer to Section 2.1.16. Review methods and procedures related to the preliminary construction schedule and Contractor's construction schedule, including the following:

1. Review software limitations and content and format for reports.

2. Verify availability of qualified personnel needed to develop and update schedule.

3. Discuss constraints, including phasing, interim milestones and maintaining WWTP operation.

4. Review delivery dates for City-furnished products.

5. Review schedule for work of City's separate contracts.

6. Review submittal requirements and procedures.

7. Review time required for review of submittals and resubmittals.

8. Review requirements for tests and inspections by independent testing and inspecting agencies.

9. Review time required for Project closeout and City startup and commissioning activities.

10. Review and finalize list of construction activities to be included in schedule.

11. Review procedures for updating schedule.

12. Review site safety, security, site access, operation hours, environmental monitoring, permits and requirements.

2.12.5 Coordination:

A. The Contractor has the obligation and responsibility at all times to plan and monitor all of its activities, anticipating and scheduling its staff, subcontractors at all tiers, materials, plant and Work methods in a manner that is likely to ensure completion of the Work in accordance with the terms and conditions of the Contract.

B. Contractor will coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors. Contractor must notify Owner when equipment of components arrive, or are expected to arrive; their assistance may be needed in uncrating or exposing materials for inspection.

C. Coordinate Contractor's Construction Schedule with the Schedule of Values, submittal schedule, progress reports, payment requests, and other required schedules and reports.

1. Secure time commitments for performing critical elements of the Work from entities involved.

2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

D. The Contractor must have the scheduler onsite regularly or in collaboration with someone onsite. The Project Manager or Project Engineer can serve this role for the Contractor.

2.12.6 Contractor’s Construction Schedule:

A. Time Frame: Extend schedule from date established for Notice to Proceed for Phase 2 to date of Substantial Completion.

1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.

B. Activities: Establish a separate numbered activity for each main element of the Work. Comply with the following:

1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Owner. The durations shall be determined based upon resource planning under contractually-defined on-site work conditions. The Owner may require that the duration of major activities be calculated by the scheduling software based on of the planned rate of daily production. In calculating activity durations, normal inclement weather shall be considered.

2. Critical Path Activities: Include procurement process activities for long lead

items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Critical path cycle activities include, but are not limited to, submittals, acceptance, purchasing, fabrication, and delivery.

3. Submittal Review Time: Include review and resubmittal times indicated in Submittal Requirements, in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule. Contractor must submit all submittals 90 days prior to startup to allow for review and approval by the Owner, unless another time frame is specified elsewhere in the Contract Documents.

4. Startup and Testing Time: Include no fewer than 30 days for startup and testing. Include a pre-commissioning meeting to discuss plan with the Owner 3 to 6 months before startup and testing is scheduled to begin.

5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow no fewer than 30 days for Owner's administrative procedures necessary for certification of Substantial Completion.

6. Punch List and Final Completion: Include not more than 45 days for completion of punch list items and final completion.

C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.

1. Phasing: Arrange list of activities on schedule by phase.

2. Products Ordered in Advance: Include a separate activity for each product, including delivery dates. Delivery dates should stipulate the earliest possible delivery date.

3. Work Restrictions: Show the effect of the following items on the schedule:

    (a) Coordination with existing construction;

    (b) Limitations of continued occupancies;

    (c) Uninterruptible services;

    (d) Partial occupancy before Substantial Completion;

    (e) Use of premises restrictions;

    (f) Provisions for future construction;

    (g) Seasonal variations and inclement weather;

    (h) Environmental control/ permitting;

(i) Specified work sequences and constraints; and

(j) Site access, security, and rights of adjacent neighbors.

4. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:

   (a) Subcontract awards;

   (b) Submittals;

   (c) Purchases;

   (d) Mockups;

   (e) Fabrication;

   (f) Sample testing;

   (g) Deliveries;

   (h) Installation;

   (i) Functional testing;

   (j) Start-up;

   (k) Commissioning;

   (l) Performance testing;

   (m) Training;

   (n) Tests and inspections;

   (o) Adjusting;

   (p) Curing;

   (q) Startup and placement into final use and operation;

   (r) Project closeout and final cleaning; and

   (s) Demobilization.

5. Construction Areas: Identify each major area of construction for each major portion of the Work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:

   (a) Earthworks and excavation;

(b) Structural completion;

(c) Completion of mechanical installation;

(d) Completion of electrical and instrumentation installation;

(e) Completion of SCADA integration;

(f) Functional testing;

(g) Start-up;

(h) Commissioning;

(i) Performance testing;

(j) Training; and

(k) Substantial Completion.

6. Other constraints and Work Restrictions.

D. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, proposed Shutdowns, Substantial Completion, and Final Completion, and the appropriate interim milestones.

E. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules.

7. Use Primavera P6.

8. Settings: The Contractor is required to provide to the Owner all of the software settings it has used in the baseline schedules and updates. Examples of the information required are: Calendar settings, User Preferences, Administrative Preferences, Schedule Settings, etc.

9. Contractor must incorporate separate calendars as appropriate to identify all tasks subject to permits and work restrictions described in the specifications.

F. Contract Modifications:

1. For each proposed contract modification that may impact the overall schedule, prepare a time-impact analysis using a network fragnet to demonstrate the effect of the proposed change on the overall project schedule. Logically connect approved Contract changes into the CPM schedule. Each change will be identified by number and description, and activities/milestones will be added to record the following:

(a) Date the change was identified;

(b) Date the change was priced (if applicable); and

(c) Start and finish dates of the changed Work.

2. Extensions of the Contract Times must be substantiated by a complete schedule demonstration showing the cause and effect of the relevant issue on the then-current critical path.

3. Contract modification proposals must be submitted by the contractor within 5 working days or the next weekly meeting. Contract modification proposals must be submitted in writing and documented via email or letter.

G. Initial Issue of Schedule: Prepare initial network diagram from a sorted activity list indicating straight "early start-total float." Identify critical activities. Prepare tabulated reports showing the following:

1. Contractor or subcontractor and the Work or activity;

2. Description of activity;

3. Main events of activity;

4. Immediately preceding and succeeding activities;

5. Early and late start dates;

6. Early and late finish dates;

7. Activity duration in workdays;

8. Total float or slack time;

9. Average size of workforce; and

10. Dollar value of activity (coordinated with the schedule of pay items).

H. Schedule Updating: The CPM Progress Schedule shall show the projected completion date of the Work based on the progress information inserted into it, without changes to the schedule logic or the original duration of any activity. The Contractor shall use the retained logic option when executing schedule calculation. The Contractor should update the schedule monthly to reflect changes and show accurate timelines. Concurrent with making revisions to schedule, prepare tabulated reports showing the following:

1. Identification of activities that have changed;

2. Changes in early and late start dates;

3. Changes in early and late finish dates;

4. Changes in activity durations in workdays;

5. Changes in the critical path;

6. Changes in total float or slack time; and

7. Changes in the Contract Time.

I. Value Summaries: Prepare two cumulative value lists, sorted by finish dates.

1. In first list, tabulate activity number, early finish date, dollar value, and cumulative dollar value.

2. In second list, tabulate activity number, late finish date, dollar value, and cumulative dollar value.

3. In subsequent issues of both lists, substitute actual finish dates for activities completed as of list date.

4. Prepare list for ease of comparison with payment requests; coordinate timing with progress meetings.

    (a) In both value summary lists, tabulate "actual percent complete" and "cumulative value completed" with total at bottom.

2.12.7 Contractor's Look-Ahead Schedules:

A. Contractor will develop and maintain a detailed look-ahead schedule and follow the following procedures:

1. Contractor shall list all completed, in progress, and upcoming activities for previous week, the current week, and the next two weeks upcoming;

2. Contractor shall show significant activities with actual start and completion dates;

3. Contractor shall present the look-ahead schedule at the weekly progress meetings as described in Project Meetings.

2.12.8 Acceptance of Schedules:

1. Owner review and acceptance of schedules does not waive any contract requirements and does not relieve the Design-Builder of any obligation or responsibility for submitting complete and accurate information.

2. If the Design-Builder fails to submit any of the schedule submittals, or to meet the scheduling requirements, including but not limited to update

requirements, for a period of thirty (30) Days or more beyond the required submittal date, progress payments may be withheld until such time as the Design-Builder submits the required scheduling submittals in compliance with the Contract Documents.

Article 3

Owner's Services and Responsibilities

3.1 Duty to Cooperate.

3.1.1 Owner shall, throughout the performance of the Work, cooperate with Design-Builder and perform its responsibilities, obligations and services in a timely manner to facilitate Design-Builder's timely and efficient performance of the Work and so as not to delay or interfere with Design-Builder's performance of its obligations under the Contract Documents.

3.1.2 Owner shall provide timely reviews and approvals of interim Design Submissions and Construction Documents consistent with the turnaround times set forth in Design-Builder's schedule.

3.1.3 Owner shall give Design-Builder timely notice of any Work that Owner notices to be defective or not in compliance with the Contract Documents.

3.2 Furnishing of Services and Information.

3.2.1 Notwithstanding the provision of certain documents from the Owner, the Design-Builder shall investigate the Project Site to ascertain conditions affecting necessary procedure and sequence of work operations for execution of the Contract, and to ascertain Project Site conditions, character, quality and quantity of surface and subsurface materials that will be encountered. The Design-Builder shall verify all dimensions in the field and shall check field conditions continuously during construction. Owner assumes no responsibility whatsoever in respect to the Design-Builder's interpretation of subsurface investigations. There is no guarantee or warranty, either expressed or implied, that conditions indicated in the Contract Documents, are representative of those existing throughout the Work, or any part of it, or that unexpected developments may not occur.

3.2.2 All soil and test hole data, groundwater elevations, and soil analyses shown on the Plans or included in the Contract Documents apply only at the location of the test holes and to the depths indicated. Soil test reports for test holes which have been drilled are available for inspection at the office of Owner. Additional subsurface exploration may be performed by the Design-Builder at its own expense.

3.2.3 The indicated groundwater elevation is that which existed on the date specified in the data. It is the Design-Builder's responsibility to determine and allow for the groundwater elevation on the date the Work is performed. A difference in

groundwater elevation between what is shown in the soil boring logs and what is actually encountered during construction will not be considered as a basis for extra work.

3.2.4 If discovery is made of items of archaeological or paleontological interest, the Design-Builder shall immediately cease excavation in the area of discovery and shall not continue until ordered by Owner. When resumed, excavation operations within the area of discovery shall be as directed by Owner. Discoveries which may be encountered may include, but not be limited to, dwelling sites, stone implementations or other artifacts, animal bones, human bones, and fossils.

3.2.5 Rights of entry for the Work will be provided by Owner pursuant to the Contract Documents. Unless otherwise provided in the Contract Documents, the Design-Builder shall make arrangements, pay for, and assume all responsibility for acquiring, using, and disposing of additional work areas and facilities that may be temporarily required to perform the Work. The Design-Builder shall indemnify and hold Owner harmless from all claims for damages caused by such actions.

3.3 Financial Information.

3.3.2 Design-Builder shall cooperate with the reasonable requirements of Owner's lenders or other financial sources. Notwithstanding the preceding sentence, after execution of the Agreement Design-Builder shall have no obligation to execute for Owner or Owner's lenders or other financial sources any documents or agreements that require Design-Builder to assume obligations or responsibilities greater than those existing obligations Design-Builder has under the Contract Documents.

3.4 Owner's Representative.

3.4.1 Owner's Representative shall be responsible for providing Owner-supplied information and approvals in a timely manner to permit Design-Builder to fulfill its obligations under the Contract Documents. Owner's Representative shall also provide Design-Builder with prompt notice if it observes any failure on the part of Design-Builder to fulfill its contractual obligations, including any errors, omissions or defects in the performance of the Work. Owner's Representative shall communicate regularly with Design-Builder and shall be vested with the authority to act on behalf of Owner.

3.5 Government Approvals and Permits.

3.5.1 Owner shall obtain and pay for all necessary permits, approvals, licenses, government charges and inspection fees set forth in the *Permits and Approvals,* attached as Exhibit E to the Agreement.

3.5.2 Owner shall provide reasonable assistance to Design-Builder in obtaining those permits, approvals and licenses that are Design-Builder's responsibility.

3.6 Owner's Other Contractors.

3.6.1 Subject to the Design-Builder's coordination responsibilities of Other

Contractors pursuant to Article 2.1.9, Owner is responsible for all work performed on the Project or at the Site by Other Contractors under Owner's control. In addition to Design-Builder's coordination obligations, Owner shall assist the Design-Builder and request that Other Contractors cooperate with, and coordinate their activities so as to enable Design-Builder to timely complete the Work consistent with the Contract Documents.

Article 4

Hazardous Conditions and Differing Site Conditions

4.1 Hazardous Conditions.

4.1.1 Except as otherwise permitted in the Contract Documents, the Design-Builder agrees to accept sole responsibility for full compliance with any and all applicable present and future rules, regulations, restrictions, ordinances, statutes, laws and/or other orders of any governmental entity regarding the use, storage, handling, distribution, processing and/or disposal of hazardous wastes, extremely hazardous wastes, hazardous substances, hazardous materials, hazardous chemicals, toxic chemicals, toxic substances, pollutants, contaminants, or other similarly regulated substances (hereinafter referred to as "hazardous substances") regardless of whether the obligation for such compliance or responsibility is placed on the Owner of the land, on the Owner of any improvements on the premises, on the user of the land, or on the user of the improvements. Said hazardous substances shall include, but shall not be limited to gasoline, diesel and other fuels, lubricating oils and solvents.

4.1.2 Except for claims arising from Owner's sole or active negligence or willful misconduct, the Design-Builder agrees that any damages, penalties or fines levied against Owner and/or the Design-Builder as a result of noncompliance with any of the above shall be the sole responsibility of the Design-Builder and, further, that the Design-Builder shall indemnify and pay and/or reimburse Owner for any damages, penalties or fines that Owner incurs, or pays, as a result of Design-Builder's noncompliance with this General Condition.

4.1.3 In the case of any hazardous substance spill, leak, discharge or improper storage on the premises, or contamination of same, by action or inaction of the Design-Builder, or anyone directly or indirectly employed or under contract to the Design-Builder, the Design-Builder agrees to make, or cause to be made, any necessary repairs or corrective actions, as well as to clean up and remove any leakage, contamination or contaminated ground. In the case of any hazardous substance spill, leak, discharge or contamination caused in whole or part by the Design-Builder, or by any of its subcontractors, employees, or agents, which affects Owner's property, or property (ies) of Owner's tenant(s), the Design-Builder agrees to make, or cause to be made, any necessary repairs, or take corrective actions, to clean-up and remove any such spill, leakage or contamination to the extent required by applicable law or regulation.

4.1.4 If, after reasonable notice, the Design-Builder fails to repair, clean-up, properly dispose of, or take any other corrective action(s) as required by the Contract Documents, Owner may (but shall not be required to) take all steps it deems reasonably necessary to properly repair, clean-up or otherwise correct the condition(s) resulting from the spill, leak or contamination. Any such repair, clean-up or corrective action(s) taken by Owner shall be at Design-Builder's sole cost and expense, including any and all costs (including any administrative costs) which Owner incurs, or pays, as a result of any repair, clean-up or corrective action it takes.

4.1.5 If the Design-Builder installs or uses already installed underground storage tanks, pipelines or other improvements on the specified premises for the storage, distribution, use, treatment or disposal of any hazardous substances, the Design-Builder agrees, upon the expiration and/or termination of this Contract, to remove and/or clean up, at the sole option of Owner, the above-referred to improvements. Said removal and/or clean-up shall be at Design-Builder's sole cost and expense, and shall be undertaken and completed in full compliance with all federal, state and local laws and regulations, as well as in compliance with the reasonable directions of Owner. Design-Builder shall promptly supply Owner with copies of all notices, reports, correspondence and submissions made by the Design-Builder to any governmental entity regarding any hazardous substance spill, leak, discharge or clean-up, including all tests results.

4.1.6 Notwithstanding the foregoing sections of this General Condition:

4.1.6.1 Design-Builder shall not be held responsible for the presence or remediation of asbestos, asbestos-related materials, or any other hazardous substance, in any form whatsoever, as such materials and substances are defined by the Environmental Protection Agency or any other public authority, found on any property or structure that is the subject of services performed by Design-Builder under the Contract.

4.1.6.2 The Design-Builder’s obligation to remediate hazardous substances is limited to the Work identified in the Contract Documents. The Design-Builder has no obligation to identify, abate and/or remediate hazardous substances not directly affected by the Work; however, the Design-Builder will identify, abate and/or remediate hazardous substances not included in the scope of work as directed in writing by Owner.

4.1.6.3 The Design-Builder will be compensated for approved additional costs resulting from changes in regulations, restrictions, ordinances, statutes, laws and/or other orders of any governmental entity regarding the use, storage, handling, distribution, processing and/or disposal of hazardous wastes, extremely hazardous wastes, hazardous substances, hazardous materials, hazardous chemicals, toxic chemicals, toxic substances, pollutants, contaminants, or other similarly regulated substances.

4.1.6.4 Owner will retain title to all pre-existing hazardous substances

removed as part of the Design-Builder's work, and title shall not transfer to the Design-Builder. Owner agrees to sign all manifests as Owner of all such pre-existing hazardous substances. Hazardous substances introduced onto the Project Site by the Design-Builder shall remain titled to the Design-Builder.

4.1.7 This General Condition and the obligation(s) contained therein, shall survive the expiration or earlier termination of this Contract.

4.2 Differing Site Conditions.

4.2.1 Concealed or latent physical conditions or subsurface conditions at the Site that (i) materially differ from the conditions indicated in the Contract Documents or (ii) are of an unknown and unusual nature, differing materially from the conditions ordinarily encountered and generally recognized as inherent in the Work, are collectively referred to herein as "Differing Site Conditions." The Design-Builder shall immediately, and before any of the following conditions are disturbed, notify Owner, first verbally and later within seven (7) days of the verbal notification, with a properly documented notice.

4.2.2 Upon encountering a Differing Site Condition, Design-Builder shall provide prompt written notice to Owner of such condition, which notice shall not be later than 21 calendar days after such condition has been encountered. Design-Builder shall, to the extent reasonably possible, provide such notice before the Differing Site Condition has been substantially disturbed or altered. Upon confirmation of a Differing Site Condition the Design Builder shall provide detailed technical and cost information to the Owner.

4.2.2 Owner shall investigate such conditions, and if it finds that such conditions do materially differ and could not have been discovered, or reasonably inferred, from the Contract Documents or a thorough inspection of the Project Site by the Design-Builder, and such conditions cause an impact to the Contract pricing, or Work Completion Time, Owner may issue a Change Directive.

4.2.3 If the Design-Builder has not fully complied with the documentation and submittal requirements of the Contractor Potential Change Notice in accordance with the Contract, the Design-Builder shall be deemed to have waived its right to assert a claim for any adjustment to the Contract pricing, or Work Completion Time arising out of such differing Project Site conditions.

4.2.4 Should an agreement not be reached on a Change Order, pursuant to Article 9, the Owner may issue a Change Directive to have the Work performed. Such an Order is unilateral and the Work will be performed on a Time and Material basis. The Design-Builder shall be required to keep detailed records of all costs related to performing the Work and compensation for said work will be reconciled in a Change Order upon agreement of a lump sum price or completion of the Work, whichever occurs first.

Article 5

Insurance and Bonds

5.1 Design-Builder's Insurance Requirements.

5.1.1 Design-Builder is responsible for procuring and maintaining the insurance for the coverage amounts all as set forth in the Insurance Exhibit H to the Agreement. Coverage shall be secured from insurance companies authorized to do business in the state in which the Project is located, and with a minimum rating set forth in the Insurance Exhibit H.

5.1.2 Design-Builder's insurance policies shall specifically delete any design-build or similar exclusions that could compromise coverage's because of the design-build delivery of the Project.

5.1.3 Prior to commencing any design and construction services hereunder, Design-Builder shall provide Owner with certificates and pertinent additional insured and other endorsements evidencing that (i) all insurance obligations required by the Contract Documents are in full force and in effect and will remain in effect for the duration required by the Contract Documents; and (ii) no insurance coverage will be canceled, renewal refused, or materially changed unless at least thirty (30) days' prior written notice is given to Owner and all other insureds. If any of the foregoing insurance coverage's is required to remain in force after final payment additional certificate(s) and endorsement(s) evidencing continuation of such coverage shall be submitted with the Final Application for Payment.

5.3.5 Owner and Design-Builder waive against each other and Owner's separate contractors, Design Consultants, Subcontractors, agents and employees of each and all of them, all damages covered by property insurance provided herein, except such rights as they may have to the proceeds of such insurance. Design-Builder and Owner shall, where appropriate, require similar waivers of subrogation from Owner's separate contractors, Design Consultants and Subcontractors and shall require each of them to include similar waivers in their contracts. These waivers of subrogation shall not contain any restriction or limitation that will impair the full and complete extent of its applicability to any person or entity unless agreed to in writing prior to the execution of this Agreement.

5.2 Bonds and Other Performance Security.

5.2.1 If Owner requires Design-Builder to obtain performance and labor and material payment bonds, or other forms of performance security, the amount, form and other conditions of such security shall be as set forth in the Agreement.

5.2.2 The Design-Builder shall file surety bonds with Owner to be approved by the City and/or its counsel in the amount and for the purposes noted below. Bonds issued by a surety who is listed in the latest version of U.S. Department of Treasury

Circular 570, who is authorized to issue bonds in California, and whose bonding limitation shown in said circular is sufficient to provide bonds in the amount required by the Contract. Bonds from all other sureties shall be accompanied by all of the documents enumerated in Code of Civil Procedure 995.660(a). The Design-Builder shall pay all bond premiums, costs, and incidentals.

5.2.3 The Design-Builder shall provide Payment and Performance bonds on forms provided by Owner. The "Payment Bond" (Material and Labor bond) shall be for 100 percent (100%) of the Contract price, as amended from time to time, to satisfy claims of material suppliers and mechanics and laborers employed by it on the Work.

5.2.4 The Performance Bond shall be for one hundred percent (100%) of the Contract price as amended from time to time. The Design-Builder shall submit all bonds within fifteen (15) calendar days of the award of Contract.

5.2.5 Should any bond become insufficient, the Design-Builder shall renew the bond within 10 days after receiving notice from Owner.

5.2.6 Should any surety at any time be unsatisfactory to the Owner, notice will be given the Design-Builder to that effect. No further payment shall be deemed due or will be made under the Contract until a new surety shall qualify and be accepted by the Owner.

5.2.7 Changes in the Work or extensions of time made pursuant to the Contract shall in no way release the Design-Builder or surety from its obligations. Notice of such changes or extensions shall be waived by the surety.

Article 6

Payment

6.1 Schedule of Values.

6.1.1 Unless required by Owner upon execution of this Agreement, within ten (10) days of execution of the Agreement, Design-Builder shall submit for Owner's review and approval a schedule of values for all of the Work. The Schedule of Values will (i) subdivide the Work into its respective parts; (ii) include values for all items comprising the Work; and (iii) serve as the basis for monthly progress payments made to Design-Builder throughout the Work.

6.1.2 Owner will timely review and approve the schedule of values so as not to delay the submission of Design-Builder's first application for payment. Owner and Design-Builder shall timely resolve any differences so as not to delay Design-Builder's submission of its first application for payment.

6.2 Monthly Progress Payments.

6.2.1 On or before the date established in the Agreement, Design-Builder shall submit for Owner's review and approval its Application for Payment requesting

payment for all Work performed as of the date of the Application for Payment. The Application for Payment shall be accompanied by all supporting documentation required by the Contract Documents , including but not limited to:

6.2.1.1 Unconditional releases of lien in the statutory form for all subcontractors and suppliers, through the prior payment application.

6.2.1.2 Actual invoices for materials and equipment must be submitted with the Application for Payment (for cost reimbursable contracts).

i. Unless otherwise provided in the Contract Documents, up to eighty percent (80%) of the invoiced amount may be paid on account of materials and equipment delivered and suitably stored at the Project Site for subsequent incorporation in the Work.

ii. Payment will not be made for any materials or equipment unless each individual piece of the material or equipment becomes a permanent part of the Work or the material or equipment is required by the Contract Documents and is specifically manufactured for the Project and could not be readily utilized or diverted to another job. Actual invoices for materials and equipment must be submitted with the Application for Payment

6.2.2 Owner may withhold a payment in whole or in part to the extent reasonably necessary to protect Owner due to Owner's determination that the Work has not progressed to the point indicated in the Application for Payment or that the quality of work is not in accordance with the Contract Documents. Owner may also withhold a payment because of subsequently discovered evidence which may nullify the whole or a part of an Application for Payment previously issued to such extent as may be necessary to protect Owner from loss for which the Design-Builder is responsible.

6.2.3 Where Allowances have been used, the Design-Builder may be paid for Allowance items on either a cost reimbursable or lump sum basis. The Design-Builders mark-up shall be all-inclusive of supervision and coordination and no additional compensation shall be allowed. An Allowance shall not be considered a change for the purposes of granting time extensions. Unused portions of a stipulated Allowance will not be paid to the Design-Builder and shall be deducted from the contract value at the completion of the Project via a deductive change order.

6.2.4 Upon prior written approval from the Owner, the Application for Payment may request payment for equipment and materials not yet incorporated into the Project, provided that (i) Owner is satisfied that the equipment and materials are suitably stored at either the Site or another acceptable location; (ii) the equipment and materials are protected by suitable insurance; and (iii) upon payment, Owner will receive the equipment and materials free and clear of all liens and

encumbrances.

6.2.5 The Application for Payment shall constitute Design-Builder's representation that the Work described therein has been performed consistent with the Contract Documents, has progressed to the point indicated in the Application for Payment, and that title to all Work will pass to Owner free and clear of all claims, liens, encumbrances, and security interests upon the incorporation of the Work into the Project, or upon Design-Builder's receipt of payment, whichever occurs earlier.

6.3 Withholding of Payments.

6.3.1 On or before the date established in the Agreement, subject to the Retention provisions, Owner shall pay Design-Builder all amounts properly due. If Owner determines that Design-Builder is not entitled to all or part of an Application for Payment as a result of Design-Builder's failure to meet its obligations hereunder, it will notify Design-Builder in writing at least five (5) days prior to the date payment is due. The notice shall indicate the specific amounts Owner intends to withhold, the reasons and contractual basis for the withholding, and the specific measures Design-Builder must take to rectify Owner's concerns. Design-Builder and Owner will attempt to resolve Owner's concerns prior to the date payment is due

6.3.2 Notwithstanding anything to the contrary in the Contract Documents, Owner shall pay Design-Builder all undisputed amounts in an Application for Payment within the times required by the Agreement.

6.4 Design-Builder's Payment Obligations.

6.4.1 Design-Builder will pay Design Consultants and Subcontractors, in accordance with its contractual obligations to such parties, all the amounts Design-Builder has received from Owner on account of their work. Design-Builder will impose similar requirements on Design Consultants and Subcontractors to pay those parties with whom they have contracted. Design-Builder will indemnify and defend Owner against any claims for payment, stop payment notices, and mechanic's liens as set forth in Section 7.3 hereof.

6.5 Substantial Completion.

6.5.1 Design-Builder shall notify Owner when it believes the Work, or to the extent permitted in the Contract Documents, a portion of the Work, is Substantially Complete. Within five (5) days of Owner's receipt of Design-Builder's notice, Owner and Design-Builder will jointly inspect such Work to verify that it is Substantially Complete in accordance with the requirements of the Contract Documents. If such Work is Substantially Complete, Owner shall prepare and issue a Certificate of Substantial Completion that will set forth (i) the date of Substantial Completion of the Work or portion thereof; (ii) the remaining items of Work that have to be completed before final payment; (iii) provisions (to the extent not already provided in the Contract Documents) establishing Owner's and Design-Builder's responsibility for the Project's security, maintenance, utilities and insurance pending final payment; and (iv) an acknowledgment that warranties

commence to run on the date of Substantial Completion, except as may otherwise be noted in the Certificate of Substantial Completion. The Certificate of Substantial Completion shall not relieve the Design-Builder of the responsibility to complete all work in accordance with the Contract Documents. Failure to include any items on the punch list shall not alter the responsibility of the Design-Builder to complete all Work in accordance with the Contract Documents.

6.5.2 Substantial Completion occurs when all of the following conditions have been met:

6.5.2.1 The Design-Builder has submitted and Owner has approved in writing, such approval not to be unreasonably withheld, a certification by the Design-Builder and the lead Design Firm that construction of the Project, excepting the items on the Final Punch List, is complete and in all respects is in compliance with this Agreement.

6.5.2.2 A preliminary or temporary certificate of occupancy has been issued for the Project, where required by applicable law

6.5.2.3 The Design-Builder has delivered to Owner a red-lined set of "as-built" construction record drawings as required by the Contract Documents

6.5.2.4 All Utilities specified or required under this Agreement to be arranged for by the Design-Builder are connected and functioning properly

6.5.2.5 The Design-Builder and Owner have agreed in writing upon the Final Punch List (or, if they are unable to agree, Owner shall have prepared and issued the Final Punch List to the Design-Builder within 15 business days of the Design-Builder having submitted its proposed Final Punch List to Owner)

6.5.2.6 The Design-Builder has delivered to Owner written certification from the equipment manufacturers (including information technology systems and instrumentation and controls) that all major items of machinery and equipment included in the Project have been properly installed, performance tested, and commissioned in accordance with the manufacturers' recommendations, warranties, and requirements

6.5.2.7 The Design-Builder has submitted written certification that all of the foregoing conditions have been satisfied and Owner has approved the Design-Builder's certification, which approval shall be effective as of the date of the Design-Builder's certification.

6.5.3 Upon Substantial Completion of the entire Work or, if applicable, any portion of the Work, Owner may at its sole discretion per DBIA Agreement No. 545, Article 7, release to Design-Builder portions of the retained amounts relating, as applicable, to the entire Work or completed portion of the Work, less an amount equal to the reasonable value of all remaining or incomplete items of Work as noted in the Certificate of Substantial Completion.

6.5.4 Owner, at its option, may use a portion of the Work which has been determined to be Substantially Complete, provided, however, that (i) a Certificate of Substantial Completion has been issued for the portion of Work addressing the items set forth in Section 6.5.1 above; (ii) Design-Builder and Owner have obtained the consent of their sureties and insurers, and to the extent applicable, the appropriate government authorities having jurisdiction over the Project; and (iii) Owner and Design-Builder agree that Owner's use or occupancy will not interfere with Design-Builder's completion of the remaining Work.

6.6 Final Completion and Final Payment.

6.6.1 When the Design-Builder considers that the Work is complete and ready for final inspection, it shall submit a Notice of Final Completion to Owner for inspection with certification that:

6.6.1.1 Work has been completed in accordance with Contract Documents and Certificate of Occupancy issued.

6.6.1.2 Work has been inspected by the Design-Builder for compliance with Contract Documents and all Punch List work has been completed.

6.6.1.3 All damaged or destroyed real, personal**,** public or private property has been repaired or replaced**.**

6.6.1.4 All required as-builts and close out documents have been submitted and accepted.

6.6.1.5 All operation and maintenance manuals and warranties have been submitted and accepted and all training and commissioning has been completed.

6.6.1.6 Work is ready for final inspection by Owner.

6.6.2 Owner will inspect to verify the status of completion with reasonable promptness after receipt of such certifications. The inspection of the Work will be done in accordance with the Contract provisions.

6.6.3 If Owner finds incomplete or defective work:

6.6.3.1 Owner may, at Owner's sole discretion, either terminate the inspection or prepare a punch list and notify the Design-Builder in writing, listing incomplete or defective work.

6.6.3.2 The Design-Builder shall take immediate steps to remedy stated deficiencies. Upon completion and correction of all stated deficiencies, the Design-Builder shall send a second written certification to Owner that work is complete.

6.6.3.3 Owner will then re-inspect the Work.

6.6.3.4 Owner may, at Owner's sole discretion, have a separate contractor make corrections and deduct the cost of the corrections from the Design-Builder's final payment if the work is not promptly corrected.

6.6.4 Final Acceptance

6.6.4.1 Within 120 days after Substantial Completion, and after Owner has made the final inspection and is satisfied that the Work has been completed in accordance with the Agreement, and is satisfied that all submittals have been made and accepted, all as-builts and record documents have been completed and accepted, all Change Orders executed, all final quantities agreed to, and all other Contract requirements, except for possible future warranty and guarantee work have been accomplished, Owner shall issue a document evidencing Final Acceptance.

6.6.4.2 If Owner finds the Work to be complete, Owner will issue a letter of Final Acceptance to the Design-Builder.

6.6.4.3 The Work shall be under the charge and care of the Design-Builder until Owner issues the letter of Final Acceptance unless otherwise approved by Owner. The Design-Builder shall take every precaution against injury or damage to the Work from the action of the elements or any other cause, whether arising from the execution or non-execution of the Work. The Design-Builder shall rebuild, repair, restore, and make good, at the Design-Builder's expense, all injuries or damage to the Work occurring before acceptance of the Work.

6.6.5 Upon issuance of a letter of Final Acceptance, the Design-Builder shall submit a Final Application for Payment, and Owner shall make final payment by the time required in the Agreement, provided that Design-Builder has achieved Final Completion.

6.6.6 At the time of submission of its Final Application for Payment, Design-Builder shall provide the following information:

6.6.6.1 An affidavit that there are no claims, obligations or liens outstanding or unsatisfied for labor, services, material, equipment, taxes or other items performed, furnished or incurred for or in connection with the Work which will in any way affect Owner's interests;

6.6.6.2 A general release executed by Design-Builder waiving, upon receipt of final payment by Design-Builder, all claims, except those claims previously made in writing to Owner and remaining unsettled at the time of final payment;

6.6.6.3 Consent of Design-Builder's surety, if any, to final payment;

6.6.6.4 All operating manuals, warranties and other deliverables required by the Contract Documents; and

6.6.6.5 Certificates of insurance confirming that required coverage's will remain in effect consistent with the requirements of the Contract Documents.

6.6.7 Upon making final payment, Owner waives all claims against Design-Builder except claims relating to (i) Design-Builder's failure to satisfy its payment obligations, if such failure affects Owner's interests; (ii) Design-Builder's failure to complete the Work consistent with the Contract Documents, including defects appearing after Substantial Completion; (iii) the terms of any special warranties required by the Contract Documents; and claims for indemnification arising hereunder. After the date of Final Acceptance of the Work by Owner, no additional claims or change requests may be submitted by Design-Builder.

6.6.8 Deficiencies in the Work discovered after Substantial Completion, whether or not such deficiencies would have been included on the punch list if discovered earlier, shall be deemed warranty Work. Such deficiencies shall be corrected by Design-Builder under Sections 2.9 and 2.10 herein and shall not be a reason to withhold final payment from Design-Builder, provided, however, that Owner shall be entitled to withhold from the Final Payment the reasonable value of completion of such deficient work until such work is completed.

Article 7

Indemnification

7.1 Patent and Copyright Infringement.

7.1.1 Design-Builder shall defend any action or proceeding brought against Owner based on any claim that the Work, or any part thereof, or the operation or use of the Work or any part thereof, constitutes infringement of any United States patent or copyright, now or hereafter issued. Owner shall give prompt written notice to Design-Builder of any such action or proceeding and will reasonably provide authority, information and assistance in the defense of same. Design-Builder shall indemnify and hold harmless Owner from and against all damages and costs, including but not limited to attorneys' fees and expenses awarded against Owner or Design-Builder in any such action or proceeding. Design-Builder agrees to keep Owner informed of all developments in the defense of such actions.

7.1.2 If Owner is enjoined from the operation or use of the Work, or any part thereof, as the result of any patent or copyright suit, claim, or proceeding, Design-Builder shall at its sole expense take reasonable steps to procure the right to operate or use the Work. If Design-Builder cannot so procure such right within a reasonable time, Design-Builder shall promptly, at Design-Builder's option and at Design-Builder's expense, (i) modify the Work so as to avoid infringement of any such patent or copyright; or (ii) replace said Work with Work that does not infringe or violate any such patent or copyright.

7.1.3 Sections 7.1.1 and 7.1.2 above shall not be applicable to any suit, claim or

proceeding based on infringement or violation of a patent or copyright (i) relating solely to a particular process or product of a particular manufacturer specified by Owner and not offered or recommended by Design-Builder to Owner; or (ii) arising from modifications to the Work by Owner or its agents after acceptance of the Work. If the suit, claim or proceeding is based upon events set forth in the preceding sentence, Owner shall defend, indemnify and hold harmless Design-Builder to the same extent Design-Builder is obligated to defend, indemnify and hold harmless Owner in Section 7.1.1 above.

7.1.4 The obligations set forth in this Section 7.1 shall constitute the sole agreement between the parties relating to liability for infringement of violation of any patent or copyright.

7.2 Tax Claim Indemnification.

7.2.1 If, in accordance with Owner's direction, an exemption for all or part of the Work is claimed for taxes, Owner shall indemnify, defend and hold harmless Design-Builder from and against any liability, penalty, interest, fine, tax assessment, attorneys' fees or other expenses or costs incurred by Design-Builder as a result of any action taken by Design-Builder in accordance with Owner's directive. Owner shall furnish Design-Builder with any applicable tax exemption certificates necessary to obtain such exemption, upon which Design-Builder may rely.

7.3 Payment Claim Indemnification.

7.3.1 Provided that Owner is not in breach of its contractual obligation to make payments to Design-Builder for the Work, Design-Builder shall indemnify, defend and hold harmless Owner from any claims or mechanic's liens brought against Owner or against the Project as a result of the failure of Design-Builder, or those for whose acts it is responsible, to pay for any services, materials, labor, equipment, taxes or other items or obligations furnished or incurred for or in connection with the Work. Within three (3) days of receiving written notice from Owner that such a claim or mechanic's lien has been filed, Design-Builder shall commence to take the steps necessary to discharge said claim or lien, including, if necessary, the furnishing of a mechanic's lien bond. If Design-Builder fails to do so, Owner will have the right to discharge the claim or lien and hold Design-Builder liable for costs and expenses incurred, including attorneys' fees.

7.4 Design-Builder's General Indemnification.

7.4.1 To the fullest extent permitted by law, Design-Builder shall defend, indemnify and hold harmless Owner and any and all of Owner's Council, Boards, officers, agents, employees, assigns and successors in interest from and against any and all suits, claims, causes of action, liability, losses, damages, demands or expenses (including, but not limited to, attorney's fees and costs of litigation), (collectively, "Loss") claimed by anyone (including Design-Builder and/or Design-Builder's agents or employees) by reason of injury to, or death of, any person(s) (including Design-Builder and/or Design-Builder's agents or employees), or for damage to, or destruction of, any property (including property of Design-Builder

and/or Design-Builder's agents or employees) or for any and all other losses, founded upon or alleged to arise out of, pertain to, or relate to the Design-Builder's and/or subcontractor's performance of the Work on the Project, whether or not contributed to by any act or omission of Owner, or of any of Owner's Council, Boards, officers, agents or employees; Provided, however, that where such suits, claims, causes of action, liability, losses, damages, demands or expenses arise from or relate to Design-Builder's performance of a "Construction Contract" as defined by California Civil Code section 2783, this paragraph shall not be construed to require Design-Builder to indemnify or hold Owner harmless to the extent such suits, causes of action, claims, losses, demands and expenses are caused by the Owner's sole negligence, willful misconduct or active negligence; Provided further that where such suits, claims, causes of action, liability, losses, damages, demands or expenses arise from Design-Builder's design professional services as defined by California Civil Code section 2782.8, Design-Builder's indemnity obligations shall be limited to allegations, suits, claims, causes of action, liability, losses, damages, demands or expenses arising out of, pertaining to, or relating to the Design-Builder's negligence, recklessness or willful misconduct in the performance of the Agreement.

7.4.2 For indemnity obligations that arise from professional errors and omissions, Design-Builder, to the fullest extent permitted by law, shall indemnify Owner, its officers, directors, and employees from and against claims, losses, damages, liabilities, including attorneys' fees and expenses, for non-party bodily injury, sickness, or death and non-party property damage or destruction (other than to the Work itself) but only to the extent resulting from the negligent acts or omissions of Design-Builder, Design Consultants, Subcontractors, anyone employed directly or indirectly by any of them or anyone for whose acts any of them may be liable.

7.4.3 If an employee of Design-Builder, Design Consultants, Subcontractors, anyone employed directly or indirectly by any of them or anyone for whose acts any of them may be liable has a claim against Owner, its officers, directors, employees, or agents, Design-Builder's indemnity obligations set forth in Sections 7.4.1 and 7.4.2 above shall not be limited by any limitation on the amount of damages, compensation or benefits payable by or for Design-Builder, Design Consultants, Subcontractors, or other entity under any employee benefit acts, including workers' compensation or disability acts.

7.4.3 Design-Builder's obligation to defend the Owner and the other referenced indemnitees arises at the time such Loss is tendered to Design-Builder by the Owner and continues at all times until finally resolved, and/or decided by an adjudicatory body or a court of competent jurisdiction.

7.5 Owner's General Indemnification.

7.5.1 For claims and liabilities arising during Design-Builder's Phase 1 services, Owner, to the fullest extent permitted by law, shall indemnify, hold harmless and defend Design-Builder and any of Design-Builder's officers, directors, and employees, from and against claims, losses, damages, liabilities, including attorneys' fees and expenses, for bodily injury, or death, and property damage or

destruction (other than to the Work itself) but only in proportion to and to the extent resulting from the negligent acts or omissions of Owner, or Owner's employees or agents who are directly under Owner's authority or control (separate and distinct from Design-Builder or others under Design-Builder's authority or control) and for whose acts Owner may be liable.

7.6 Survival of Indemnities

7.6.1 The provisions of this Article 7 shall remain operative following a termination of all other performance under this Agreement unless specifically extinguished in a writing signed as approved by the Design-Builder, the Owner and its attorney.

7.7 Limited Recourse.

7.7.1 None of the obligations set forth in this Agreement (on behalf of any party) constitute personal obligations of any natural persons who are the officers, shareholders, members, partners, employees, or agents of any party unless the natural person is expressly identified as a contracting party. All Parties to this Agreement shall not seek recourse against any natural person described herein. This provision, however, shall not protect such natural persons from liability for willful misconduct, illegal acts or intentional violation of any duty of corporate loyalty.

Article 8

Time

8.1 Obligation to Achieve the Contract Times.

8.1.1 Design-Builder agrees that it will commence performance of the Work and achieve the Contract Time(s) in accordance with Article 5 of the Agreement.

8.1.2 The Design-Builder shall be permitted reasonable, uninterrupted access to the Project Site subject to the operational protocols in place and as revised from time to time. The Design-Builder shall cooperate with Owner to reasonably accommodate Owner's other work on the Project Site. Design-Builder shall actively schedule plan and coordinate the sequence of the Work and shall not delegate such responsibility for coordination to subcontractors but rather shall actively and proactively schedule and lead subcontractor coordination.

8.1.3 The Design-Builder shall diligently prosecute the Work to completion. If Owner determines that the Design-Builder is failing to prosecute the Work in accordance with its approved schedule or the Project milestones, the Design-Builder shall, upon orders from Owner, immediately take steps to remedy the situation

8.1.4 All work performed and services provided hereunder by the Design-Builder shall conform to the highest professional standards for the construction industry in the State of California as applicable to a Design-Builder with prior

successful experience in work similar in size and scope and complexity as the Work of the Contract Documents.

8.1.5 The Design-Builder shall give Owner full information in advance as to its plans for performing each part of its work. If at any time, Design-Builder's actual progress is inadequate to meet the requirements of this Agreement, Owner may so notify Design-Builder who shall thereupon take such steps as may be necessary to improve its progress. A Recovery Schedule is required along with the submission of a monthly Progress Schedule Update if the monthly Progress Schedule Update shows a delay of more than 21 calendar days to the Contract Milestones. If within a reasonable period as determined by Owner, the Design-Builder does not improve performance to meet the currently approved Construction Schedule; Owner may require an increase in the Design-Builder's labor force, the number of shifts, overtime operations, and additional days of work per week, all without additional cost to Owner. Neither such notice by Owner nor Owner's failure to issue such notice shall relieve Design-Builder of its obligation to achieve the quality of work and rate of progress required by this Agreement.

8.2 Delays to the Work.

8.2.1 If Design-Builder is delayed on the critical path in the performance of the Work due to acts, omissions, conditions, events, or circumstances beyond its control and due to no fault of its own or those for whom Design-Builder is responsible, subject to compliance with Section 2.12, the Contract Time(s) for performance may be reasonably extended by Change Order. An excusable delay is a delay to the critical path of the Project and meets all of the following requirements:

8.2.1.1 It was not the responsibility of the Design-Builder under the Contract Documents and was beyond the control of Design-Builder;

8.2.1.2 It could not have been foreseen or avoided by Design-Builder;

8.2.1.3 It could not have been mitigated by Design-Builder;

8.2.1.4 It was not caused in whole or in part by Design-Builder, its subcontractors or agents;

8.2.1.5 Design-Builder has provided written notice to Owner of the delay act or event within seven (7) calendar days of being made aware of its occurrence and thereafter satisfies all requirements in the Contract Documents for making a request for extension to the Project Schedules and Contract milestones. Pursuant to California Civil Code section 1511, the Parties agree that any failure to submit a timely and properly documented notice of delay or a request for extension of to the Project Schedules and Contract Milestones shall constitute a waiver by Design-Builder of any claim for additional compensation, time or impact costs from Owner.

8.2.2 In addition to Design-Builder's right to a time extension for those events set forth in Section 8.2.1 above, Design-Builder may be entitled to an appropriate adjustment of the Contract Price. A delay which is excusable must also meet the requirements for a compensable delay in order to be compensable. A Force Majeure delay is an excusable non-compensable delay. Owner shall make the final determination of Force Majeure delays. A delay due to financial issues of Design-Builder or any of its subcontractors or suppliers, including bankruptcy or insolvency, is not an excusable delay. A non-excusable delay is also non-compensable. A compensable delay must be excusable and meet all of the following requirements:

8.2.2.1 The costs of delay requested could not be mitigated;

8.2.2.2 It was a result of a change directed by Owner, a material breach of the Agreement by Owner or resulting from the active negligence of Owner;

8.2.2.3 The Contract Documents do not preclude the claim for compensation;

8.2.2.4 The delay is not concurrent with a delay caused in whole or part by Design-Builder;

8.2.2.5 Design-Builder has satisfied all requirements in the Contract Documents for making a claim for compensation pursuant to a compensable delay in a timely manner.

8.2.3 If the Contractor Change Request is based in whole or in part on a delay of any kind or nature, the complete itemized proposal shall include the following information in addition to all other required information:

8.2.3.1 The date, nature and circumstances of each event regarded as a cause of the delay;

8.2.3.2 If the Design-Builder claims acceleration costs of scheduled performance or delivery, the basis upon which acceleration arose;

8.2.3.3 The identification of any documents and the substance of any oral communication known to the Design-Builder which substantiate, refute or concern such delay;

8.2.3.4 A Critical Path Method (CPM) schedule, including design, construction and commissioning corrected to reflect actual performance, showing delay impacts as separate tasks and Design-Builder's mitigation of such impacts; and

8.2.3.5 The specific elements of Contract performance for which the Design-Builder may seek an equitable adjustment, including:

i. Identification of each Contract or schedule line item which has been or may be affected by such delay;

ii. To the extent practicable, identification of the delay and disruption in the manner and sequence of performance, and the effect on continued performance, which have been or may be caused by such delay;

iii. Identification of labor, materials, or both, or other cost items including overhead and subcontractor costs, which have been or may be added, deleted or wasted by such delay, and a statement that the Design-Builder is maintaining records by some generally accepted accounting procedure which allows the separately identifiable direct costs due to the delay, and those not incurred as a result of the delay, to be readily identified and segregated; and

iv. Estimates of the necessary adjustments to Contract Amount, Contract Time and any other Contract provisions affected by the delay.

8.2.4 Claims for a compensable delay shall not be allowed for any costs incurred if the Design-Builder fails to notify Owner in writing within seven (7) calendar days of being made aware of the act or event causing the delay. The Design-Builder will have the burden of proving that the delay is both an excusable delay and a compensable delay. If an excusable delay is found to be a compensable delay, Owner will by Change Order extend the Work Completion Time for the increase in the time of performance and will adjust the total Contract Price. The Change Order will be the Design-Builder's sole remedy arising out of the compensable delay. Pursuant to California Civil Code section 1511, the Parties agree that any failure to submit a timely and properly documented notice of excusable or compensable delay shall constitute a waiver by Design-Builder of any claim for additional compensation, time or impact costs from Owner.

8.3 Force Majeure

8.3.1 The term "Force Majeure" as employed herein shall mean an excusable, non-compensable delay which is one of the below listed types, to the extent that the event(s) delays the progress of critical path activities, are beyond the Design-Builder's control, were not anticipatable by Design-Builder and could not be mitigated by Design-Builder, regardless of the cost of mitigation: acts of God (except as excluded herein), strikes (except those determined by Owner to be within the control of the Design-Builder), lockouts, or other industrial disturbances, acts of public enemies, terrorist acts, wars, blockades, insurrections, riots, epidemics, pandemics, earthquakes, hurricanes, tornadoes, orders by any court, board, department, commission or city or county of the United States or of any

State, civil disturbances, explosions, rain or other adverse weather conditions, including fire (except fire which was the responsibility of the Design-Builder).

8.3.2 The Design-Builder's observance of non-sanctioned picket lines or other similar labor actions shall be considered a non-excusable delay under this Contract and, as such, is not a Force Majeure event.

8.3.3 Should either party be rendered unable, either wholly or in part, by an event of Force Majeure to fulfill its obligations under the Contract, the obligation(s) affected by such event of Force Majeure shall be suspended only during the continuance of the Force Majeure event. Suspension of Work is not required for a Force Majeure event. The party so affected shall give notice of the existence, extent and nature of such Force Majeure in writing to the other party within seven (7) calendar days after the commencement of the Force Majeure event. The party so affected shall remedy such inability with all reasonable dispatch and shall use due diligence in this regard. Failure to give such notice shall result in the continuance of such party's obligation regardless of the extent of any existing Force Majeure event. Pursuant to California Civil Code section 1511, the Parties agree that any failure to submit a timely and properly documented notice and description of a Force Majeure event shall constitute a waiver by Design-Builder of any claim for additional compensation, time or impact costs from Owner.

8.3.4 Nothing within this Article shall restrict the Owner's rights to pursue a termination or suspension pursuant to the Contract Documents.

8.4 Liquidated Damages

8.4.1 Liquidated Damages are the specified dollar amount the Design-Builder shall pay to the Owner due to the Design-Builder's failure to complete the Work within the Work Completion Time. Unless provided otherwise in the Contract Documents. Liquidated Damages are intended to cover Owner's administrative, inspection, project management, and professional services costs in the period of extended construction and shall not be construed to cover or apply to costs of completion of the Work, costs or delays resulting from defective work, property damage or any costs or damages covered by insurance of any type.

8.4.2 The parties recognize and agree that time is of the essence for this Contract. If Substantial Completion has not occurred on or before the scheduled Substantial Completion date, Owner will assess Liquidated Damages, as it is and will be impractical and extremely difficult to ascertain the actual damages which Owner will sustain in the event of and by reason of such delay. Owner shall have the right to deduct said Liquidated Damages from any amount due or that may become due the Design-Builder, or to collect such Liquidated Damages from the Design-Builder or its surety. These Liquidated Damages shall not be construed as a penalty.

8.4.3 Execution of the Contract shall constitute agreement by Owner and Design-

Builder that the amount specified in the Contract Documents is the minimum value of the costs and actual damage caused by the failure of the Design-Builder to complete the Work within the allotted time. Such sum is Liquidated Damages and may be deducted from payments due the Design-Builder if such delay occurs.

8.4.4 Owner expressly denies that any progress payments made after the scheduled completion date constitute a waiver of Liquidated Damages.

8.4.5 These provisions shall not prevent Owner, in the case of the Design-Builder's default under this Contract, from terminating the right of the Design-Builder to proceed as provided in the Contract Documents and seeking all damages and other remedies available to Owner under this Contract or by Law.

Article 9

Changes to the Contract Price and Time

9.1 Change Orders.

9.1.1 A Change Order is a written instrument issued after execution of the Agreement signed by Owner and Design-Builder, stating their agreement upon all of the following:

9.1.1.1 The scope of the change in the Work;

9.1.1.2 The amount of the adjustment to the Contract Price; and

9.1.1.3 The extent of the adjustment to the Contract Time(s).

9.1.2 All changes in the Work authorized by applicable Change Order shall be performed under the applicable conditions of the Contract Documents. Owner and Design-Builder shall negotiate in good faith and as expeditiously as possible the appropriate adjustments for such changes.

9.1.3 The Contract Pricing and Work Completion Time may only be changed by executed Change Order. Change Orders are generally bilateral signed by the Design-Builder and by Owner. Owner may also issue unilateral Change Orders, should there be an impasse on executing a bilateral agreement or time does not permit further negotiations.

9.1.4 No extra work or change in the Contract Documents shall be made unless by a written Change Order approved by Owner. No claim for any change to the Contract Pricing or Work Completion Time shall be valid unless so ordered. A Change Order signed by the Design-Builder conclusively establishes the Design-Builder's agreement therewith, including the adjustment in the Contract Pricing and the Work Completion Time. Owner reserves the right to contract with any person or firm other than the Design-Builder for any or all changed work.

9.1.5 Accord and Satisfaction. It is the intent of Owner to settle each Change Order full and final at the time the Change Order is issued. Therefore, the following language will be deemed incorporated into all Change Orders:

"The undersigned hereby proposes and agrees to furnish any and all labor, material and equipment, including all overhead and profit, in strict accordance with the requirements of the original Contract Documents except as specifically above noted otherwise for the sum stated above, and that are *required in connection with the above proposed change.*

By signing the Change Order, the Design-Builder acknowledges and agrees, on behalf of himself, all subcontractors, and all suppliers, that the stipulated compensation includes payment for all work contained in the Change Order, plus all payment for the interruption of schedules, extended overhead costs, delay, all impacts, and ripple effect of cumulative impact on all other work under this Contract. The signing of the Change Order indicates that the Change Order constitutes the compensation (time and cost) set forth in the Change Order and comprises the total compensation due the Design-Builder, all subcontractors, and all suppliers, for the Work or change defined in the Change Order, including impact on unchanged work. The Design-Builder is in full mutual accord and satisfaction with the change, and that the time and /or cost under the Change Order constitute the total equitable adjustment owed the Design-Builder, all subcontractors, and all suppliers, as a result of the changes. The Design-Builder. on behalf of the Design-Builder, all subcontractors, and all suppliers, agrees to waive all right, without exception or reservation of any kind whatsoever, to file any further Claim related to this Change Order *No further Claim or request for equitable adjustment of any type shall arise out of or as a result of this Change Order or the impact of this Change Order on the remainder of the Work under the Contract. The Design-Builder further agrees to indemnify and hold the Owner and its agents harmless from any further Claims, requests for equitable adjustment, or damages raised by subcontractors or suppliers at any tier, as a result of the Work under this Contract. The Design-Builder, on behalf of the Design-Builder, all subcontractors, and all suppliers, expressly waives the benefits of the provisions of Section 1542 of the Civil Code, which reads as follows: "A GENERAL RELEASE DOES NOT EXTEND* TO *CLAIMS WHICH THE CREDITOR DOES NOT KNOW* OR *SUSPECT* TO *EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM OR HER MUST HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR." The Owner and the Design-Builder hereby agree that this Change Order constitutes full mutual accord and satisfaction for all time, all costs, and all impacts related directly to this Change Order."*

9.1.6 Unilateral Change Order. In case of failure on the part of Owner and the Design-Builder to arrive at an agreement on the amount of a credit or an extra cost for a proposed change to the Contract Documents, a unilateral Change Order will be processed in the amount believed by Owner to be reasonable and the Design-Builder shall proceed with the Work. If the Design-Builder believes that the amount set forth in the unilateral Change Order is not a reasonable payment for the Work required the Design-Builder may file a Claim and request for review in accordance

with Article 10.

9.1.7 No oral statement of any person including the Design-Builder's personnel shall in any manner or degree, modify or otherwise affect the terms of this Contract.

9.1.8 Design-Builder's Overhead and Profit Limitation - For all negotiated Change Orders the allowance for overhead and profit and all other items of expense or cost not included in the Cost of the Work, to the extent they are applicable to the conditions created by the Change Order. The allowance for overhead and profit shall not exceed the following schedule:

Total Combined Overhead and Profit

Labor = 15 percent
Materials = 15 percent
Equipment = 15 percent
Subcontractor = 10 percent

9.1.9 Not Used

9.1.10 Equipment Rental Rates – Rental equipment required specifically for the Additional Work. Whenever possible, changed work will be accomplished using equipment available on-site or owned by the Design-Builder. If no on-site equipment can be used and a specific piece of equipment must be rented to be used exclusively for the changed work, the rental rate that will apply will be the rate shown on the supplier's invoice.

9.1.11 Design-Builder's Extra Work Report - In order to be paid for extra work based on time and materials, the Design-Builder must submit a daily Extra Work Report on a form provided by the Owner's Representative. The form must be completely filled out based on the provisions of this Article and signed by the Design-Builder and Owner's Representative at the end of each work day. Failure to complete the form and obtain appropriate signatures by the next working day after the Work was completed will result in Design-Builder's costs for extra work being disallowed until such form is completed and agreed to by the Owner's Representative. Delay in submitting the form beyond seven (7) days will result in the Owner's records becoming the official record for payment purposes.

9.1.12 No Additional Compensation for Overtime - Except as otherwise provided in this Article, the **Design-Builder** shall receive no additional compensation for overtime Work (i.e., work in excess of 8 hours in any one calendar day or 40 hours in any one calendar week), even though such overtime Work may be required under emergency conditions and may be ordered by the Owner in writing. Owner will pay additional compensation to the **Design-Builder** for overtime Work only in the event extra Work is ordered by the Owner, and the Change Order specifically authorizes the use of overtime Work and then only to such extent as overtime

wages are regularly being paid by the **Design-Builder** for overtime Work of a similar nature in the same locality.

9.2 Work Change Directives.

9.2.1 A Work Change Directive is a written order prepared and signed by Owner directing a change in the Work prior to agreement on an adjustment in the Contract Price and/or the Contract Time(s).

9.2.2 Owner and Design-Builder shall negotiate in good faith and as expeditiously as possible the appropriate adjustments for the Work Change Directive. Upon reaching an agreement, the parties shall prepare and execute an appropriate Change Order reflecting the terms of the agreement.

9.3 Minor Changes in the Work.

9.3.1 Minor changes in the Work do not involve an adjustment in the Contract Price and/or Contract Time(s) and do not materially and adversely affect the Work, including the design, quality, performance and workmanship required by the Contract Documents. Design-Builder may make minor changes in the Work consistent with the intent of the Contract Documents, provided, however, that Design-Builder shall promptly inform Owner, in writing, of any such changes and record such changes on the documents maintained by Design-Builder.

9.4 Contract Price Adjustments.

9.4.1 The increase or decrease in Contract Price resulting from a change in the Work shall be determined by one or more of the following methods:

9.4.1.1 Unit prices set forth in the Agreement or as subsequently agreed to between the parties;

9.4.1.2 A mutually accepted lump sum, properly itemized and supported by sufficient substantiating data to permit evaluation by Owner;

9.4.1.3 Costs, fees and any other markups set forth in the Agreement; or

9.4.1.4 If an increase or decrease cannot be agreed to as set forth in items 9.4.1.1 through 9.4.1.3 above and Owner issues a Work Change Directive, the cost of the change of the Work shall be determined by the reasonable expense and savings in the performance of the Work resulting from the change, including a reasonable overhead and profit, as may be set forth in the Agreement.

9.4.2 If unit prices are set forth in the Contract Documents or are subsequently agreed to by the parties, but application of such unit prices will cause substantial inequity to Owner or Design-Builder because of differences in the character or quantity of such unit items as originally contemplated, such unit prices shall be

equitably adjusted.

9.5 Escalation of Cost

9.5.1 Potential Time and Price-Impacted Material. As of the date of this Agreement, certain markets providing essential materials to the Project are experiencing or are expected to experience significant, industry-wide economic fluctuation during the performance of this Agreement that may impact price, availability and deliver time frames ("Potential Time and Price-Impacted Material"). This Agreement provides for a fair allocation of the risk of such market conditions between the Owner and the Design-Builder and shall only apply to the Potential Time and Price-Impacted material(s) listed in Schedule (To be included in the Phase 2 Amendment) to this Agreement.

9.5.2 Baseline Price and Time. Owner and Design-Builder shall agree upon a method for establishing the market price as of the date of this Agreement ("Baseline Price"), and the method for calculating an adjustment in the pricing for a Potential Time and Price-Impacted Material listed in Schedule (To be included in the Phase 2 Amendment) to this Agreement.

9.5.2.1 Compensation for any Potential Time and Price-Impacted Material shall not be duplicated in any contingency amounts established under the terms of the Agreement.

9.5.3 Adjustment In Baseline Price. If during the course of the Project a Potential Time and Price-Impacted Material item experiences an increase or decrease in its Baseline Price of 25% over 180 days as a result of unanticipated and significant industry wide price fluctuation, either party may notify the other in writing within thirty (30) days from the date the basis for equitable adjustment arises and shall provide appropriate documentation. Material shall not include any amount for overhead and profit.

9.5.3.1 In the event of a decrease in a Baseline Price, the Contract Price shall be equitably adjusted to reflect such decrease, subject to Article 9 of this Agreement, but only for those Potential Time and Price-Impacted Materials delivered on or after the date on which written notice of the adjustment in Baseline Price is given.

9.5.3.2 In the event of an increase in a Baseline Price, the Contract Price shall be equitably adjusted to reflect such decrease, subject to Article 9 of this Agreement, but only for those Potentially Time and Price-Impacted Materials delivered on or after the date on which notice of the adjustment in Baseline Price is given.

9.5.3.3 The Contract Price shall not be adjusted by more than _____ ((To be included in the Phase 2 Amendment) %) percent of the original Contract Price for the aggregate of

the decreases in Baseline Price for Potentially Time and Price-Impacted Materials.

9.5.3.4 No adjustment shall be made for quantities of Potentially Time and Price-Impacted Materials scheduled for delivery under the terms of this Agreement prior to the date on which written notice of the adjustment in Baseline Price is given, unless the failure to deliver such quantities before that date is beyond the control of and without the fault of the Contractor, its Subcontractors and Material Suppliers.

9.5.3.5 Payment, if any, for an adjustment shall be made in accordance with the terms of the Agreement.

9.5.4 Time Impact and Availability. If the Contract is delayed at any time in the commencement or progress of the Work due to a delay in the delivery of, or unavailability of, a Potentially Time and Price-Impacted Material, beyond the control of and without the fault of the Contractor, its Subcontractors and Material Suppliers, the Contractor shall be entitled to an excusable, non-compensable delay subject to the requirements of Article 2.12 of the General Conditions. The Owner and Design-Builder shall undertake reasonable steps to mitigate the effect of such delays.

9.5 Emergencies.

9.5.1 In any emergency affecting the safety of persons and/or property, Design-Builder shall act, at its discretion, to prevent threatened damage, injury or loss. Any change in the Contract Price and/or Contract Time(s) on account of emergency work shall be determined as provided in this Article 9.

Article 10

Contract Adjustments and Disputes

10.1 Requests for Contract Adjustments and Relief.

10.1.1 Claims. For purposes of this Article, "Claim" means a separate demand by the Design-Builder for one of more of the following: (A) a time extension, (B) payment of money or damages arising from Work done by or on behalf of the Design-Builder pursuant to the Contract, or (C) an amount the payment of which is disputed by the Owner. In accordance with California Public Contract Code Section 20104.2 and Public Contract Code Section 9204, presuming Design-Builder has diligently pursued and exhausted the administrative procedures of the Contract, the procedures in this Article apply to claims between the Design-Builder and the Owner.

10.1.2 If the Design-Builder believes that it is entitled to relief against the Owner for any event arising out of or related to the Work or Project, Design-Builder shall provide written notice to the Owner of the basis for its claim for relief, as provided

for in Articles 8 and 9. In the event that the Design-Builder does not accept the Owner's decision on a Change Order Request, the Design-Builder must within 30 calendar days of a written rejection submit in writing and in electronic form to the Owner with all documentation which it believes relate to the issues it is raising ("Dispute Submittal"). All disputes and negotiations shall be documented by each Party in writing in accordance with the Agreement and shall state each claim specifically, show the calculation and basis for each claim for compensation and the schedule (including fragnet) analysis for each schedule demand. Any claim that lacks specific calculation or documentary support will not be considered, and will be a waiver of that claim so that no further administrative or judicial action may be taken. Pursuant to California Civil Code section 1511, the Parties agree that any failure to submit a timely and properly documented Contractor Change Request or Dispute Submittal shall constitute a waiver by Design-Builder of any claim for additional compensation, time or impact costs from Owner.

10.1.3 Certification of Dispute Submittal. Any claim, including without limitation any claim filed on behalf of or having its source in a claim by subcontractor, sub-subcontractor, or supplier, at any tier, which the Design-Builder chooses to make to Owner, shall be accompanied by the certification language set forth below signed by a responsible managing officer of the Design-Builder's organization, who has the authority to sign subcontracts or Purchase Orders on behalf of the Design-Builder, and who has personally investigated and confirmed the truth and accuracy of the matters set forth in such certification. Submission of certification in accordance herewith is a condition precedent to Owner's consideration of or decision on the claim and to the filing and maintenance of any legal action or proceeding to enforce or recover monies under such claim. Failure to submit such a certification along with the claim shall result in the claim being returned to the Design-Builder without any decision, and shall waive the Design-Builder's right to pursue the claim either on its own behalf or on behalf of such subcontractor or supplier.

10.1.4 The certification shall state: "I hereby certify under penalty of perjury that I am a managing officer of (Design-Builder's name) and that I have reviewed the Claim presented herewith on Design-Builder's behalf and/or on behalf of (subcontractor's/supplier's name(s)) and that the following statements are true and correct:

10.1.4.1 The facts alleged in or that form the basis for the Claim are true and accurate; and, Design-Builder does not know of any facts or circumstances, not alleged in the Claim, that by reason of their not being alleged render any fact or statement alleged in the Claim materially misleading; and,

10.1.4.2 Design-Builder has, with respect to any request for money or damages alleged in or that forms the basis for the Claim, reviewed the job cost records (including those maintained by Design-Builder and by any subcontractor or supplier, of any tier, that is asserting all or any portion of the Claim) and confirmed with mathematical certainty that the losses or

damages suffered by Design-Builder and /or such subcontractor or supplier were in fact suffered in the amounts and for the reasons alleged in the Claim; and,

10.1.4.3 Design-Builder has, with respect to any request for extension of time or claim of delay, disruption, hindrance or interference alleged in or that forms the basis for the Claim, reviewed the job schedules(including those maintained by Design-Builder and by any subcontractor or supplier, of any tier, that is asserting all or any portion of the Claim) and confirmed on an event-by-event basis that the delays or disruption suffered by Design-Builder and /or such subcontractor or supplier were in fact experienced for the durations, in the manner, and with the consequent effects on the time and/or sequence of performance of the Work, as alleged in the Claim; and,

10.1.4.4 Design-Builder has not received payment from Owner for, nor has Design-Builder previously released Owner from any portion of the Claim."

10.1.4.5 Design-Builder Signature Line_____

10.1.5 Owner's Response. Upon receipt of a claim pursuant to this Article, the Owner shall conduct a reasonable review of the claim and provide a written response to the Design-Builder within 45 days of the date of the claim, identifying the portion of the claim that is disputed and the portion that is undisputed. Upon receipt of a claim, the Owner and the Design-Builder may, by mutual agreement, extend the time period provided in this subdivision.

10.1.5.1 All amounts that the Owner identifies in its response as undisputed must be processed and paid within 60 days of the Owner's response. Pursuant to Public Contract Code section 9204(d)(4), if the Owner fails to pay within 60 days, undisputed amounts not paid will bear interest at 7 percent per annum.

10.1.5.2 If the Owner needs approval from its governing body to provide the Design-Builder a written statement identifying the disputed portion and the undisputed portion of the claim, and the Owner's governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the Owner shall have up to (3) three days following the next duly publicly noticed meeting of the Owner's governing body after the 45-day period, or extension, expires to provide the Design-Builder a written statement identifying the disputed portion and the undisputed portion.

10.1.6 Meet and Confer. If the Design-Builder disputes the Owner's written response, or the Owner fails to respond within the time prescribed, the Design-Builder may so notify the Owner, in writing, either within 15 days of receipt of the Owner's response or within 15 days of the Owner's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand, the

Owner shall schedule a meet and confer conference within 30 days for settlement of the dispute.

10.1.7 Mediation. Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the Owner shall provide the Design-Builder a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the Owner issues its written statement. If the Owner fails to pay within 60 days, undisputed amounts not paid will bear interest at 7 percent per annum. Any disputed portion of the claim, as identified by the Design-Builder in writing, shall be submitted to nonbinding mediation, with the Owner and the Design-Builder sharing the associated costs equally. The Owner and Design-Builder shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing, unless the parties agree to select a mediator at a later time.

10.1.7.1 If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator.

10.1.7.2 For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

10.1.7.3 Unless otherwise agreed to by the Owner and the Design-Builder in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Public Contract Code Section 20104.4 to mediate after litigation has been commenced.

10.1.7.4 This section does not preclude the Owner from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this section does not resolve the parties' dispute.

10.1.7.5 The mediation shall be held no earlier than the date the Design-Builder completes the Work or the date that the Design-Builder last performs Work, whichever is earlier. All unresolved claims shall be considered jointly in a single mediation, unless a new unrelated claim arises after mediation is complete.

10.1.8 Arbitration. Upon receipt of a claim, the Owner and the Design-Builder may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration.

10.2 Legal Proceedings

10.2.1 Civil Actions. Procedures for civil actions to resolve claims of $375,000 or less between the City and the Design-Builder are governed pursuant to Public Contract Code Section 20104.4.

10.2.2 Government Code Claims. In addition to any and all contract requirements pertaining to notices of and requests for compensation or payment for extra Work, disputed Work, construction claims and/or changed conditions, the Design-Builder must comply with the claim procedures set forth in Government Code Section 900, et seq. prior to filing any lawsuit against the Owner. Such Government Code claims and any subsequent lawsuit based upon the Government Code claims shall be limited to those matters that remain unresolved after all procedures pertaining to the extra Work, disputed Work, construction claims, and/or changed conditions have been followed by the Design-Builder. If no such Government Code claim is submitted, or if the prerequisite contractual requirements are not satisfied, no action against the Owner may be filed. A Government Code claim must be filed no earlier than the date the Work is completed or the date the Design-Builder last performs Work on the Project, whichever occurs first. A Government Code claim shall be inclusive of all unresolved claims unless a new unrelated claim arises after the Government Code claim is submitted.

10.2.3 Non-Waiver. The Owner's failure to respond to a claim from the Design-Builder within the time periods described in this Article or to otherwise meet the time requirements of this Article shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the Owner's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the Design-Builder.

10.2.4 Forum for Dispute Resolution. It is the express intention of the parties that all legal proceedings related to this Agreement or to the Project or to any rights or any relationship between the parties arising therefrom shall be governed by the laws of the State of California, without regard for conflicts of laws principles, and shall be solely and exclusively initiated and maintained in Riverside County Superior Court. The Design-Builder and Owner each irrevocably consents to the jurisdiction of such courts in any such legal proceeding and waives any objection it may have to the laying of the jurisdiction of any such legal proceeding.

10.3 Duty to Continue Performance.

10.3.1 Unless provided to the contrary in the Contract Documents, Design-Builder shall continue to perform the Work and Owner shall continue to satisfy its payment obligations for undisputed amounts to Design-Builder as well as any further amounts pursuant to Section 9.4, pending the final resolution of any dispute or disagreement between Design-Builder and Owner.

Article 11

Suspension and Termination for Cause

11.1 Owner's Right to Suspend Work.

11.1.1 Owner may suspend all or any part of the Work by written order signed by Owner ("Suspension Order"), without invalidating the Agreement, for such period or periods as it may deem necessary due to:

11.1.1.1 Any reason for the convenience of the Owner, with or without cause;

11.1.1.2 An order from a state or federal court or a government administrative agency; or

11.1.1.3 The Design-Builder's failure to perform any provision of the Contract Documents.

11.1.2 Upon receipt from Owner of a Suspension Order, the Design-Builder shall, unless the notice requires otherwise:

11.1.2.1 Immediately discontinue work on the date and to the extent specified in the notice;

11.1.2.2 Place no further orders or subcontracts for material, services, or facilities with respect to suspended work other than to the extent required in the notice;,

11.1.2.3 Promptly make every reasonable effort to obtain suspension in terms satisfactory to Owner of all orders, subcontracts and rental agreements to the extent they relate to performance of suspended work;

11.1.2.4 Continue to protect and maintain the Work including those portions on which work has been suspended; if the Design-Builder fails to properly provide for public safety, traffic, and protection of the Work during periods of suspension, Owner may elect to do so and back charge or deduct the cost thereof from monies due the Design-Builder. Such actions will not relieve the Design-Builder from liability.

11.1.2.5 Within three (3) days of the receipt of the Suspension Order, submit a suspension plan to Owner for acceptance. The plan shall describe how the Design-Builder will store all materials in a manner so that the materials will not become an obstruction or become damaged in any way, what cost effective methods it will employ to prevent damage to or deterioration of the Work and otherwise protect the Work, how suitable drainage will be provided, what temporary structures will be necessary, and how the Design-Builder will prepare for resuming the Work for the

least possible remobilization cost. After the plan is accepted, the Design-Builder shall implement it in accordance with instructions received from Owner; and

11.1.2.6 Take any and all measures to minimize costs associated with such suspension.

11.1.3 Under no circumstance shall a suspension absolve the Design-Builder or the Design-Builder's sureties of the duties and responsibilities guaranteed under the performance and payment bond(s). The Design-Builder shall again proceed with the Work when it is ordered to do so in writing by Owner.

11.1.4 Design-Builder is entitled to seek an adjustment of the Contract Price and/or Contract Time(s) if its cost or time to perform the Work has been adversely impacted by any suspension of stoppage of the Work by Owner. If the Design-Builder intends to assert a claim for compensation or time extension under this Article, it must, and not withstanding any time limitations specified elsewhere in the Contract Documents, within seven (7) calendar days after receipt of notice to resume work, submit to Owner a Contractor Change Request setting forth the schedule impact and monetary impact of the suspension in sufficient detail to permit thorough analysis. Adjustment of work Completion Time, if appropriate, will be made pursuant to the provisions of the Contract Documents. Adjustment of the not to exceed contract amount, if any, will be within the Owner’s sole discretion and shall not in any event, exceed the cost of the extra work resulting from such suspension. Such cost, if any, shall be determined in accordance with the Contract Documents. Pursuant to California Civil Code section 1511, the Parties agree that any failure to submit a timely and properly documented Contractor Change Request shall constitute a waiver by Design-Builder of any claim for additional compensation, time or impact costs from Owner.

11.1.5 Suspension due to a ruling of City, State or Federal Court -- The Suspension Order will identify the court or agency ruling which caused the suspension, and subject to Owner approval, may extend the Work Completion Time by the stated amount of time specified by the court or agency order. If the ruling causes suspension for an indefinite period of time and as a result a time extension cannot be established, the Suspension Order may also be for an indefinite period of time, subject to Owner approval. If the Suspension Order is issued because of acts or omissions of the Design-Builder, the Design-Builder shall not be entitled to a time extension or payment for any additional costs it incurs.

11.1.6 Suspension Resulting from Design-Builder’s Failure to Perform -- If a Suspension Order results from the Design-Builder's failure to satisfactorily perform any of the provisions of the Agreement, including but not limited to faulty workmanship, safety concerns, improper or inadequate manpower, equipment, supplies or supervision, or failure to perform the Work or pay employees, subcontractors or suppliers in a timely manner, the Suspension Order will identify

the reason, or reasons, for the order. In this circumstance, no time extension will be authorized for the Design-Builder and any costs to the Design-Builder resulting from such Suspension Order will not be reimbursed by Owner. A Suspension Order issued under these circumstances will remain in effect until the Design-Builder has removed or corrected the grounds for the suspension, or the Suspension Order expires by its terms.

11.2 Owner's Right to Perform and Terminate for Cause.

11.2.1 If Design-Builder persistently fails to (i) provide a sufficient number of skilled workers, (ii) supply the materials required by the Contract Documents, (iii) comply with applicable Legal Requirements, (iv) timely pay, without cause, Design Consultants or Subcontractors, (v) prosecute the Work with promptness and diligence to ensure that the Work is completed by the Contract Time(s), as such times may be adjusted, or (vi) perform material obligations under the Contract Documents, then Owner, in addition to any other rights and remedies provided in the Contract Documents or by law, shall have the rights set forth in Sections 11.2.2 and 11.2.3 below.

11.2.2 Upon the occurrence of an event set forth in Section 11.2.1 above, Owner may provide written notice to Design-Builder that it intends to terminate the Agreement unless the problem cited is cured, or commenced to be cured, within seven (7) days of Design-Builder's receipt of such notice. If Design-Builder fails to cure, or reasonably commence to cure, such problem, then Owner may give a second written notice to Design-Builder of its intent to terminate within an additional seven (7) day period. If Design-Builder, within such second seven (7) day period, fails to cure, or reasonably commence to cure, such problem, then Owner may declare the Agreement terminated for default by providing written notice to Design-Builder of such declaration.

11.2.3 Upon declaring the Agreement terminated pursuant to Section 11.2.2 above, Owner may elect to:

11.2.3.1 Enter upon the premises and take possession, for the purpose of completing the Work, of all materials, equipment, scaffolds, tools, appliances and other items thereon, which have been purchased or provided for the performance of the Work, all of which Design-Builder hereby transfers, assigns and sets over to Owner for such purpose, and to employ any person or persons to complete the Work and provide all of the required labor, services, materials, equipment and other items. In the event of such termination, Design-Builder shall not be entitled to receive any further payments under the Contract Documents until the Work shall be finally completed in accordance with the Contract Documents. At such time, if the unpaid balance of the Contract Price exceeds the cost and expense incurred by Owner in completing the Work, such excess shall be paid by Owner to Design-Builder. Notwithstanding the preceding sentence, if the Agreement establishes a Guaranteed Maximum Price, Design-Builder will only be entitled to be paid for Work performed prior to its default. If Owner's cost and expense of completing the Work exceeds the unpaid balance of

the Contract Price, then Design-Builder shall be obligated to pay the difference to Owner. Such costs and expense shall include not only the cost of completing the Work, but also losses, damages, costs and expense, including attorneys' fees and expenses, incurred by Owner in connection with the re-procurement and defense of claims arising from Design-Builder's default, subject to the waiver of consequential damages set forth in Article 13 in the 545 Design Build Agreement hereof; or

11.2.3.2 Serve written notice upon the Design-Builder and its surety on its performance bond demanding satisfactory compliance with the Contract.

i. If the surety assumes the Contract, all money which may become due the Design-Builder shall be payable to the surety as the Work progresses, subject to the terms of the Contract.

ii. If the surety does not assume the Contract and commence performance of the Work within twenty-one (21) days after receiving the Public Works Director's notice and demand, or fails to continue to comply, the Public Works Director may remove the surety from the premises. If the surety bond has provisions contrary to this right, then the 60 day time limit stated elsewhere in this Contract shall apply.

iii. Upon any Surety default, Owner may then take possession of all material and equipment and complete the Work by use of its own forces, by letting the unfinished work to another Design-Builder, or by a combination of such methods. In any event, the cost of completing the Work shall be charged against the Design-Builder and its surety and may be deducted from any money due or becoming due from the Design-Builder. If the amount unpaid under the Agreement is insufficient for completion, the Design-Builder or surety shall pay to Owner within five (5) days after the completion and an itemized demand for payment from Owner, all costs and damages incurred by Owner in excess of the amount unpaid under the Agreement.

11.2.4 If Owner improperly terminates the Agreement for cause, the termination for cause will be converted to a termination for convenience in accordance with the provisions of Section 11.4 hereof.

11.3 Bankruptcy of Owner or Design-Builder.

11.3.1 If either Owner or Design-Builder institutes or has instituted against it a case under the United States Bankruptcy Code (such party being referred to as the "Bankrupt Party"), such event may impair or frustrate the Bankrupt Party's ability

to perform its obligations under the Contract Documents. Accordingly, should such event occur:

11.3.1.1 The Bankrupt Party, its trustee or other successor, shall furnish, upon request of the non-Bankrupt Party, adequate assurance of the ability of the Bankrupt Party to perform all future material obligations under the Contract Documents, which assurances shall be provided within ten (10) days after receiving notice of the request; and

11.3.1.2 The Bankrupt Party shall file an appropriate action within the bankruptcy court to seek assumption or rejection of the Agreement within sixty (60) days of the institution of the bankruptcy filing and shall diligently prosecute such action.

If the Bankrupt Party fails to comply with its foregoing obligations, the non-Bankrupt Party shall be entitled to request the bankruptcy court to reject the Agreement, declare the Agreement terminated and pursue any other recourse available to the non-Bankrupt Party under this Article 11.

11.3.2 The rights and remedies under Section 11.3.1 above shall not be deemed to limit the ability of the non-Bankrupt Party to seek any other rights and remedies provided by the Contract Documents or by law, including its ability to seek relief from any automatic stays under the United States Bankruptcy Code or the right of Design-Builder to stop Work under any applicable provision of these General Conditions.

11.4 Termination for Convenience.

11.4.1 Upon ten (10) days' written notice to Design-Builder, Owner may, for its convenience and without cause, elect to terminate this Agreement. In such event, Owner shall pay Design-Builder for the following:

11.4.1.1 All Work executed and for proven loss, cost or expense in connection with the Work;

11.4.1.2 The reasonable costs and expenses attributable to such termination, including demobilization costs and amounts due in settlement of terminated contracts with Subcontractors and Design Consultants; and

11.4.1.3 The amount set forth in Article 6 of the Agreement.

11.4.2 If Owner terminates this Agreement pursuant to Section 11.4.1 above and proceeds to design and construct the Project through its employees, agents or third parties, Owner's rights to use the Work Product shall be as set forth in Article 4 of the Agreement. Such rights may not be transferred or assigned to others without Design-Builder's express written consent and such third parties' agreement to the terms of Article 4 of the Agreement.

Article 12

Electronic Data

12.1 Electronic Data.

12.1.1 The parties recognize that Contract Documents, including drawings, specifications and three-dimensional modeling (such as Building Information Models) and other Work Product may be transmitted among Owner, Design-Builder and others in electronic media as an alternative to paper hard copies (collectively "Electronic Data").

12.2 Transmission of Electronic Data.

12.2.1 Owner and Design-Builder shall agree upon the software and the format for the transmission of Electronic Data. Each party shall be responsible for securing the legal rights to access the agreed-upon format, including, if necessary, obtaining appropriately licensed copies of the applicable software or electronic program to display, interpret and/or generate the Electronic Data.

12.2.2 Neither party makes any representations or warranties to the other with respect to the functionality of the software or computer program associated with the electronic transmission of Work Product. Unless specifically set forth in the Agreement, ownership of the Electronic Data does not include ownership of the software or computer program with which it is associated, transmitted, generated or interpreted.

12.2.3 By transmitting Work Product in electronic form, the transmitting party does not transfer or assign its rights in the Work Product. The rights in the Electronic Data shall be as set forth in Article 4 of the Agreement. Under no circumstances shall the transfer of ownership of Electronic Data be deemed to be a sale by the transmitting party of tangible goods.

12.3 Electronic Data Protocol.

12.3.1 The parties acknowledge that Electronic Data may be altered or corrupted, intentionally or otherwise, due to occurrences beyond their reasonable control or knowledge, including but not limited to compatibility issues with user software, manipulation by the recipient, errors in transcription or transmission, machine error, environmental factors, and operator error. Consequently, the parties understand that there is some level of increased risk in the use of Electronic Data for the communication of design and construction information and, in consideration of this, agree, and shall require their independent contractors, Subcontractors and Design Consultants to agree, to the following protocols, terms and conditions set forth in this Section 12.3.

12.3.2 Electronic Data will be transmitted in the format agreed upon in Section 12.2.1 above, including file conventions and document properties, unless otherwise agreed upon in advance in writing.

12.3.3 The Electronic Data represents the information at a particular point in time and is subject to change. Therefore, the parties shall agree upon protocols for notification by the author to the recipient of any changes which may thereafter be made to the Electronic Data, which protocol shall also address the duty, if any, to update such information, data or other information contained in the electronic media if such information changes prior to Final Completion of the Project.

12.3.4 The transmitting party specifically disclaims all warranties, expressed or implied, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose, with respect to the media transmitting the Electronic Data. However, transmission of the Electronic Data via electronic means shall not invalidate or negate any duties pursuant to the applicable standard of care with respect to the creation of the Electronic Data, unless such data is materially changed or altered after it is transmitted to the receiving party, and the transmitting party did not participate in such change or alteration.

Article 13

Miscellaneous

13.1 Confidential Information.

13.1.1 Confidential Information is defined as information which is determined by the transmitting party to be of a confidential or proprietary nature and: (i) the transmitting party identifies as either confidential or proprietary; (ii) the transmitting party takes steps to maintain the confidential or proprietary nature of the information; and (iii) the document is not otherwise available in or considered to be in the public domain. The receiving party agrees to maintain the confidentiality of the Confidential Information and agrees to use the Confidential Information solely in connection with the Project. For avoidance of doubt, all data and information provided or made accessible to Design-Builder by Owner, shall be deemed to be confidential information and may only be disclosed as required to perform the Work, or as required by by law.

13.1.2 The parties understand that all the material provided or produced under this Agreement may be subject to the California Public Records Act, Cal. Government Code section 7920.000, et seq., and that in the event of a request to the Owner for disclosure of such information, the Owner shall advise the Design-Builder of such request in order to give the Design-Builder the opportunity to object to the disclosure of any of its proprietary or confidential material. In the event of the filing of a lawsuit to compel such disclosure, the Owner will tender all such material to the court for judicial determination of the issue of disclosure and the Design-Builder

agrees to intervene in such lawsuit to protect and assert its claims of privilege against disclosure of such material. The Design-Builder further agrees to defend, indemnify and save and hold harmless the Owner, its council, officers, agents and employees, from any claim, damages, expense, loss or costs arising out of the Design-Builder's intervention to protect and assert its claims of privilege against disclosure under this Article including, but not limited to, prompt reimbursement to the Owner of all reasonable attorney fees, costs and damages that the Owner may incur directly or may be ordered to pay by such court.

13.2 Assignment.

13.2.1 Neither Design-Builder nor Owner shall, without the written consent of the other, assign, transfer or sublet any portion or part of the Work or the obligations created by the Contract Documents.

13.2.2 For purposes of this Contract, the terms "transfer" and "assign" shall include, but not be limited to, the following:

13.2.2.1 If the Design-Builder is a joint venture, a limited liability company, or a partnership, the transfer of fifty percent (50%) or more of the interest or membership in the joint venture, the limited liability company, or the partnership;

13.2.2.2 If the Design-Builder is a corporation, any cumulative or aggregate sale, transfer, merger, assignment, or hypothecation of fifty percent (50%) or more of the voting shares of the Design/Builder;

13.2.2.3 The dissolution by any means of Design-Builder; and

13.2.2.4 A change in business or corporate structure. Any such transfer, assignment, mortgaging, pledging, or encumbering of Design/Builder without the written consent of the Owner is a violation of this Contract and shall be voidable at Owner's option and shall confer no right, title, or interest in or to this Contract upon the assignee, mortgagee, pledgee, encumbrance, or other lien holder, successor, or purchaser.

13.3 Successorship.

13.3.1 Design-Builder and Owner intend that the provisions of the Contract Documents are binding upon the parties, their employees, agents, heirs, successors and assigns.

13.4 Governing Law.

13.4.1 The Agreement and all Contract Documents shall be governed by the laws of the State of California, without giving effect to its conflict of law principles.

13.5 Severability.

13.5.1 If any provision or any part of a provision of the Contract Documents shall

be finally determined to be superseded, invalid, illegal, or otherwise unenforceable pursuant to any applicable Legal Requirements, such determination shall not impair or otherwise affect the validity, legality, or enforceability of the remaining provision or parts of the provision of the Contract Documents, which shall remain in full force and effect as if the unenforceable provision or part were deleted.

13.6 No Waiver.

13.6.1 The failure of either Design-Builder or Owner to insist, in any one or more instances, on the performance of any of the obligations required by the other under the Contract Documents shall not be construed as a waiver or relinquishment of such obligation or right with respect to future performance.

13.7 Headings.

13.7.1 The headings used in these General Conditions of Contract, or any other Contract Document, are for ease of reference only and shall not in any way be construed to limit or alter the meaning of any provision.

13.8 Notice.

13.8.1 Whenever the Contract Documents require that legal notice be provided to the other party, notice will be deemed to have been validly given (i) if delivered in person to the individual intended to receive such notice; (ii) four (4) days after being sent by registered or certified mail, postage prepaid to the address indicated in the Agreement; or (iii) if transmitted by facsimile, by the time stated in a machine-generated confirmation that notice was received at the facsimile number of the intended recipient. All other communications requiring non-legal notice will be deemed to have been validly given if delivered by the aforementioned methods or by electronic mail.

13.9 Amendments.

13.9.1 The Contract Documents may not be changed, altered, or amended in any way except in writing signed by a duly authorized representative of each party.

13.10 No Third Party Beneficiary

13.10.1 It is expressly understood and agreed that the enforcement of the terms and conditions of the Contract, and all rights of action relating to such enforcement, shall be strictly reserved to the Owner and the Design-Builder, and that nothing contained in the Contract shall give or allow any claim or right of action by any other or third person under the Contract. It is the express intention of the Owner and the Design-Builder that any member of the public, subcontractor, supplier, material man, tradesman, vendor or other person or entity other than the Owner or the Design-Builder receiving services or benefits under the Contract shall be deemed to be an incidental beneficiary only. The foregoing shall not, however, impair Owner's status as a third party beneficiary of subcontracts of any tier for the performance of work or delivery of services, material or equipment to the Project.

13.11 Labor and Prevailing Wages

13.11.1 California Labor Code Compliance

13.11.1.1 Public Work

The Design-Builder acknowledges that the Project is a "public work" as defined in Labor Code Section 1720 *et seq*. ("Chapter 1"), and that this Project is subject to (a) Chapter 1, including without limitation Labor Code Section 1771 and (b) the rules and regulations established by the Director of Industrial Relations ("DIR") implementing such statutes. The Design-Builder shall perform all Work on the Project as a public work. The Design-Builder shall comply with and be bound by all the terms, rules and regulations described in (a) and (b) as though set forth in full herein.

13.11.1.2 Copies of Wage Rates

Pursuant to Labor Code Section 1773.2, copies of the prevailing rate of per diem wages for each craft, classification, or type of worker needed to perform the Project are on file at City Hall and will be made available to any interested party on request. By initiating any Work, the Design-Builder acknowledges receipt of a copy of the DIR determination of such prevailing rate of per diem wages, and the Design-Builder shall post such rates at each job site covered by these Contract Documents.

The Design-Builder shall comply with and be bound by the provisions of Labor Code Sections 1774 and 1775 concerning the payment of prevailing rates of wages to workers and the penalties for failure to pay prevailing wages. The Design-Builder shall, as a penalty paid to the City, forfeit two hundred dollars ($200) for each calendar day, or portion thereof, for each worker paid less than the prevailing rates as determined by the DIR for the work or craft in which the worker is employed for any public work done pursuant to these Contract Documents by the Design-Builder or by any Subcontractor.

13.11.1.3 Payroll Records

The Design-Builder shall comply with and be bound by the provisions of Labor Code Section 1776, which requires the Design-Builder and each Subcontractor to (1) keep accurate payroll records and verify such records in writing under penalty of perjury, as specified in Section 1776, (2) certify and make such payroll records available for inspection as provided by Section 1776, and (3) inform the City of the location of the records. The Design-Builder has ten (10) days in which to comply subsequent to receipt of a written notice requesting these records, or as a penalty to the City, the Design-Builder shall forfeit one hundred dollars ($100) for each Day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due.

The Design-Builder and each Subcontractor shall comply with and be bound by the provisions of Labor Code Section 1771.4(a)(3), which requires that each Design-Builder and each Subcontractor shall furnish the records specified in Section 1776 directly to the Labor Commissioner at least monthly, in a format prescribed by the Labor Commissioner.

13.11.1.4 Hours of Labor

The Design-Builder acknowledges that eight (8) hours labor constitutes a legal day's work. The Design-Builder shall comply with and be bound by Labor Code Section 1810. The Design-Builder shall comply with and be bound by the provisions of Labor Code Section 1813 concerning penalties for workers who work excess hours. The Design-Builder shall, as a penalty paid to the City, forfeit twenty-five dollars ($25) for each worker employed in the performance of this Project by the Design-Builder or by any Subcontractor for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any one (1) calendar day and forty (40) hours in any one calendar week in violation of the provisions of Division 2, Part 7, Chapter 1, Article 3 of the Labor Code. Pursuant to Labor Code Section 1815, work performed by employees of the Design-Builder in excess of eight (8) hours per day, and forty (40) hours during any one week shall be permitted upon public work upon compensation for all hours worked in excess of eight (8) hours per day at not less than one and one-half (1-1/2) times the basic rate of pay.

13.11.1.5 Apprentices

The Design-Builder shall comply with and be bound by the provisions of Labor Code Sections 1777.5, 1777.6 and 1777.7 and California Code of Regulations Title 8, Section 200 *et seq*. concerning the employment of apprentices on public works projects. The Design-Builder shall be responsible for compliance with these Sections for all apprenticeable occupations. Before commencing Work on this Project, the Design-Builder shall provide the City with a copy of the information submitted to any applicable apprenticeship program. Within sixty (60) Days after concluding Work, Design-Builder and each of its Subcontractors shall submit to the City a verified statement of the journeyman and apprentice hours performed under this Contract. Design-Builder is also required to comply with the requirements of Public Contract Code Section 22164(c)(1) requiring the use of a skilled and trained workforce as defined in Public Contract Code Section 2600, et seq. See Section 13.12, below.

13.11.1.6 Debarment or Suspension

The Design-Builder shall not perform Work with any Subcontractor that has been debarred or suspended pursuant to California Labor Code Section 1777.1 or any other federal or State law providing for the debarment of contractors from public works. The Design-Builder and Subcontractors

shall not be debarred or suspended throughout the duration of this Contract pursuant to Labor Code Section 1777.1 or any other federal or State law providing for the debarment of contractors from public works. If the Design-Builder or any Subcontractor becomes debarred or suspended during the duration of the Project, the Design-Builder shall immediately notify the City.

13.11.1.7 Registration with the DIR

In accordance with Labor Code Sections 1725.5 and 1771.1, no contractor or subcontractor shall be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, unless currently registered and qualified to perform public work pursuant to Section 1725.5.

13.11.1.8 Compliance Monitoring and Posting Job Sites

This Project is subject to compliance monitoring and enforcement by the DIR. The Design-Builder shall post job site notices, as prescribed by regulation.

13.11.1.9 Subcontractors

For every Subcontractor who will perform Work on the Project, the Design-Builder shall be responsible for such Subcontractor's compliance with the requirements set forth above, and Labor Code Sections 1860 and 3700, and the Design-Builder shall include in the written Contract between it and each Subcontractor a copy of these provisions and a requirement that each Subcontractor shall comply with those provisions. The Design-Builder shall be required to take all actions necessary to enforce such contractual provisions and ensure Subcontractor's compliance, including without limitation, conducting a periodic review of the certified payroll records of the Subcontractor and upon becoming aware of the failure of the Subcontractor to pay its workers the specified prevailing rate of wages, the Design-Builder shall diligently take corrective action to halt or rectify any failure.

13.12 Use of Skilled and Trained Workforce Required

13.12.1 At all times herein, Design-Builder shall comply with the provisions of Public Contract Code Section 22164(c)(1), which requires Design-Builder and its subcontractors at every tier to use a skilled and trained workforce to perform all work on this Project that falls within an apprenticeable occupation in the building and construction trades, in accordance with Public Contract Code Section 2600, et seq.

13.13 Mandatory Terms

13.13.1 Public Contract Code. Pursuant to Public Contract Code Section 7103.5, Design-Builder offers and agrees to assign to Owner all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C.

Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the California Business and Professions Code) arising from purchases of goods, services, or materials pursuant to the Contract. This assignment shall be made and become effective at the time the Owner tenders final payment to Design-Builder without further acknowledgment by the parties.

Pursuant to Public Contract Code Section 7104, if the project involves trenching more than four (4) feet deep, Design-Builder shall promptly and before the following conditions are disturbed notify the Owner in writing of any:

a. Material that Design-Builder believes may be material that is hazardous waste, as defined in California Health and Safety Code Section 25117, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law; and/or

b. Subsurface or latent physical conditions at the site differing from those indicated; and/or

c. Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract.

The Owner shall promptly investigate the conditions, and if the Owner finds that the conditions do materially differ or do involve hazardous waste and cause a decrease or increase in Design-Builder's cost of or the time required for performance of any part of the work the Owner shall issue a change order.

Pursuant to Public Contract Code Section 9201, the Owner has full authority to compromise or otherwise settle any claim relating to this Contract at any time. The Owner shall timely notify Design-Builder of the receipt of any third-party claim relating to the Contract. The Owner shall be entitled to recover its reasonable costs incurred in providing the notification required by Public Contract Code Section 9201(b).

Additionally, pursuant to Government Code Section 8546.7, since this Contract involves the expenditure of public funds in excess of ten thousand dollars ($10,000), Design-Builder shall be subject to State Auditor examination and audit at the request of the Owner or as part of any audit of the Owner, for a period of three (3) years after final payment under this Contract.

13.13.2 Other Statutorily Required Terms.

As required by Labor Code Section 6705, and in addition thereto, whenever work under the Contract that involves an estimated expenditure in excess of twenty-five thousand dollars ($25,000) for the excavation of any trench or trenches five (5) feet or more in depth, Design-Builder shall submit for acceptance by Owner in advance of excavation, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be

made for worker protection from the hazard of caving ground during the excavation, of such trench or trenches. If such plan varies from the shoring system standards established by the Construction Safety Orders of the Division of Industrial Safety, the plan shall be prepared by a registered civil or structural engineer employed by Design-Builder, and all costs therefor shall be included in the price of the Contract. Nothing in this provision shall be deemed to allow the use of a shoring, sloping, or other protective system less effective than that required by the Construction Safety Orders. Nothing in this provision shall be construed to impose tort liability on the Owner or on any Owner officer, agent, consultant, representative, or employee. All plans, processing and shoring costs are Design-Builder's responsibility.

The methods used and costs involved to locate existing elements, points of connection and all construction methods are Design-Builder's sole responsibility. Accuracy of information furnished, as to existing conditions, is not guaranteed. Design-Builder, at its sole expense, must make all investigations necessary to determine locations of existing elements, which requires compliance with Government Code Section 4216, et seq., and includes, without limitation, contacting regional notification center(s) such as DigAlert, and other private underground locating firm(s), and/or utilizing potholes, specialized locating equipment and/or hand trenching. Pursuant to Government Code Section 4215, the Owner acknowledges its responsibilities with respect to locating, relocating, removing or protecting utility facilities on the site of the Project, if it entails construction and such utilities are not identified by the Owner in writing prior to commencement of construction.

Design-Builder agrees not to accept any employment or representation during the term of this Contract or within twelve (12) months after completion of the work under this Contract which is or may likely make Design-Builder "financially interested," as provided in Government Code Section 1090 and 87100, in any decisions made by Owner on any matter in connection with which Design-Builder has been retained pursuant to this Contract.



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CITY OF BANNING
STAFF REPORT

TO:	**CITY COUNCIL**
FROM:	**Robert Fisher, Acting City Manager**
PREPARED BY:	**Lincoln Bogard, Administrative Services Director**
MEETING DATE:	**February 25, 2025**
SUBJECT:	**Zencity Contract Presentation, Discussion and Direction**

RECOMMENDATION:

Provide direction to City Manager regarding Zencity contract.

BACKGROUND:

Mayor Flynn consideration of the Zencity contract as a future agenda item. The Zencity platform is a central element of the City's community engagement program because it provides ongoing surveying, project dialogue, and lesser used feature called organic. The current contract requires a 90-day notice of termination, which means notice must be provided no later than September 1, 2025, if the City chooses to terminate the agreement.

Zencity Community Survey is a rolling 3-month survey of community members. The survey is a tool that is used to measure community satisfaction levels with City services and characteristics. In addition, the survey results can be tracked to compare the current survey results with prior periods so trends can be measured. The information is useful because it provides insight into community satisfaction, which can be used to focus resources in areas needing improvement.

Zencity Engage/Projects is the feature used to provide information to the community about current and upcoming projects (public and private). This feature is embedded in the City website and has been invaluable for staff and community members.

Zencity Organic is a feature that monitors and summarizes social media feeds to track conversations. This feature is helpful because it provides staff with information to help us better understand issues that are important to the community. This feature also gives staff a better understanding of the sentiment of social media conversations so we can provide information that is relevant and helpful to the community.

JUSTIFICATION:

A City Council adopted priority for the past 8 years has been to enhance community engagement efforts. The implementation of Zencity is one of several actions intended to enhance community engagement.

FISCAL IMPACT:

The total cost for all features of Zencity is $42,000 annually.

ALTERNATIVES:

Provide direction to City Manager.

BUDGETED?:

Yes

CONTRACT/AGREEMENT:

Yes

ATTACHMENTS:

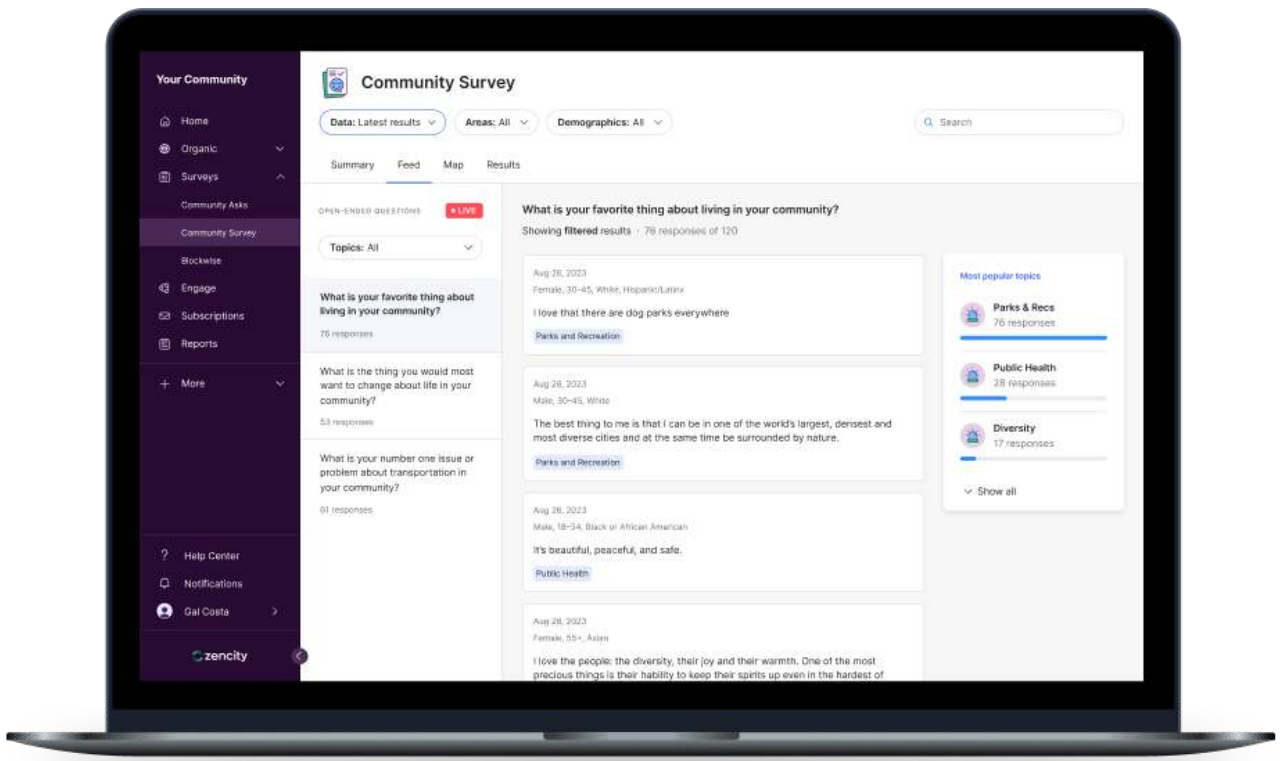
1. Banning, CA Community Survey Report - July 2024.pdf

Banning, CA

Community Survey

April - June 2024

Powered by Zencity



The Zencity Community Survey

A recurring survey that never stops running, the Zencity Community Survey measures how satisfied residents are with their community and with local government-provided services and allows officials to compare these scores over time and against a cohort of similar communities.

Survey Methodology

529 respondents were digitally recruited (e.g. over social media, mobile apps, local websites, and survey panels) between April - June 2024. Zencity built a representative sample by matching respondent data to the U.S. Census Bureau's race, ethnicity, age, and gender distributions in Banning, CA. Finally, rake-weighting was applied as a statistical safeguard to balance out any remaining discrepancies in distribution, so no demographic group is overrepresented or underrepresented in the final score.

Score Calculation

The overall satisfaction score is calculated by averaging how each resident rated quality of life and community characteristics on a numeric scale (1-5), and classifying this average as satisfied, neutral, or not satisfied. The resulting score, then, is the weighted percentage of residents who gave an overall satisfied rating.

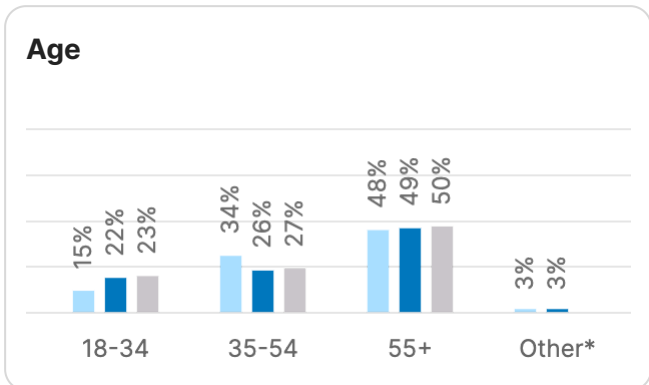
Sample Composition

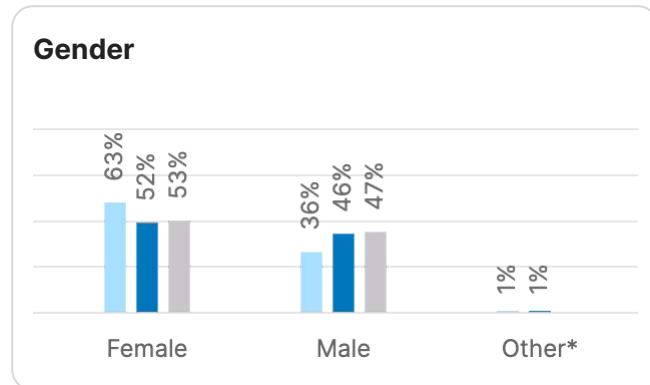
529 **valid respondents**

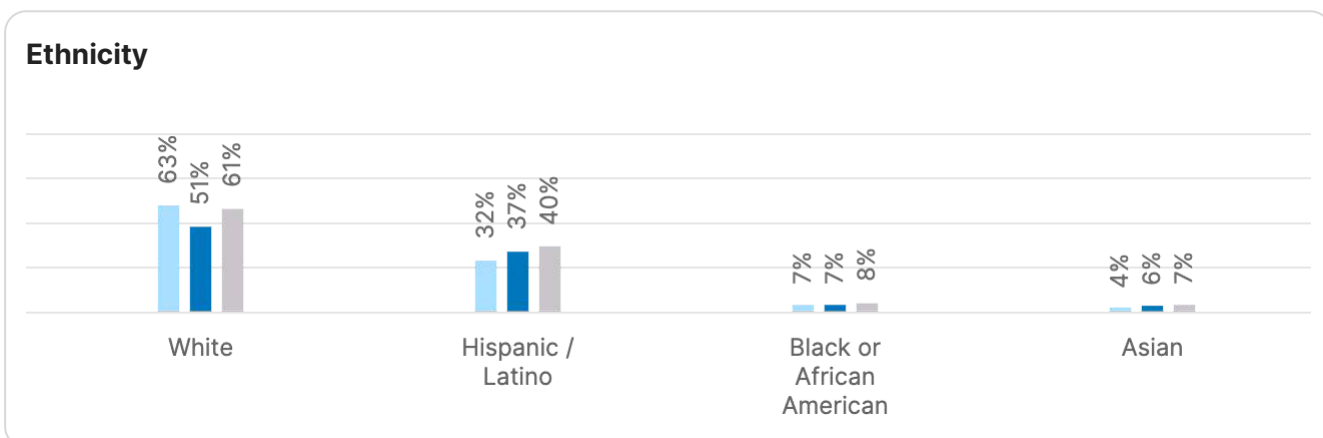
Key

- **Unweighted demographics** - What we collected, without adjustments
- **Weighted demographics** - Our sample, adjusted to be representative of the population
- **Population demographics** - The demographics of the 18+ population

* The "Other" category includes missing data, people who selected "prefer not to say", and other groups not defined in the census.







Overall Satisfaction

The overall satisfaction score is calculated from the questions in the two main sections of the survey: general quality of life and satisfaction with different characteristics of life in your community.

We take the average of these questions, then classify the score as positive (3+), neutral (1.5 to <3), or negative (≤1.5). The percentages represent the percent of respondents in each category.

If you have a previous cycle, the up (↑) and down (↓) arrows will show the change in percentage points.

Zencity Community Survey

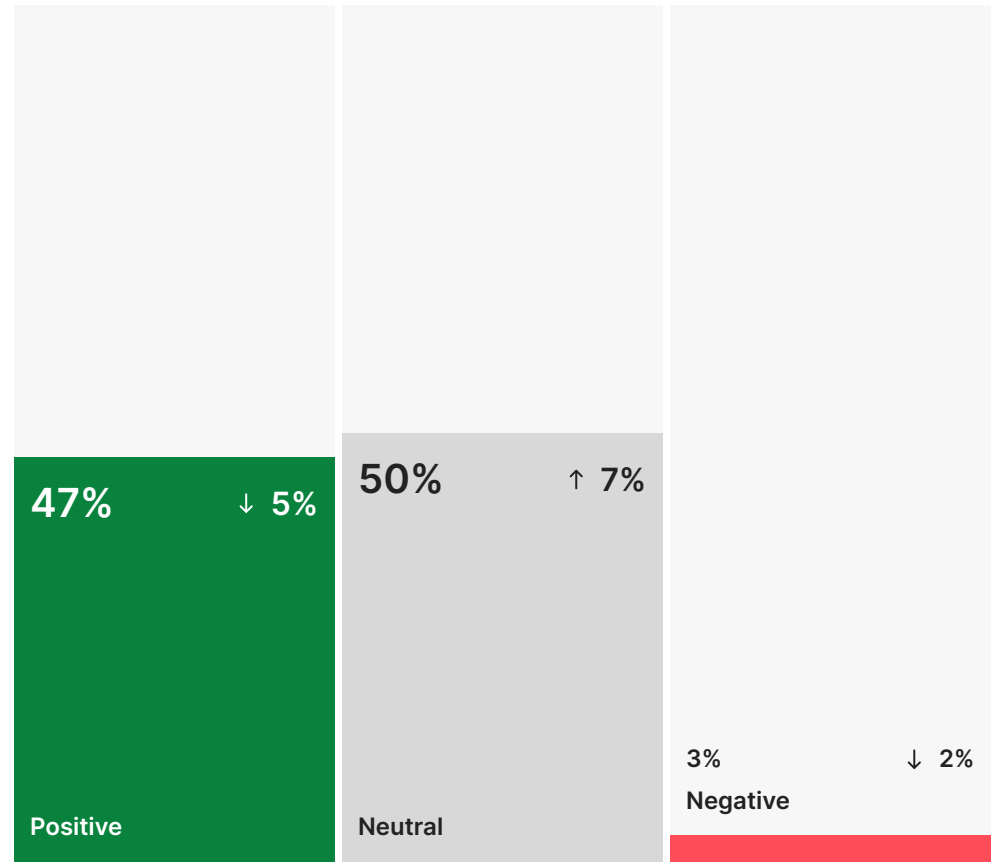
Banning, CA
April - June 2024

Powered by Zencity

47%

of 529 surveyed residents are satisfied with life in Banning

↓ 5% vs. previous cycle



These are the main measures of satisfaction in your community

The bars on the right show the proportion of responses that are positive (4 or 5), neutral (3), or negative (1 or 2). The percentages show the percent in the positive category.

We take the average of the Community Characteristics, then classify the score as positive (3+), neutral (1.5 to <3), or negative (≤1.5). The percentages represent the percent of respondents in each category.

If you have a previous cycle, the up (↑) and down (↓) arrows will show the change in percentage points.

QUESTION	RESIDENT SATISFACTION
How is the overall quality of life in Banning?	**32%** • ↓ 5%
How likely are you to recommend Banning as a place to live?	**32%** • --
How likely are you to be living in Banning 5 years from now?	**58%** • --
Average rating from the Community Characteristics questions	**38%** • ↓ 6%

Demographic Breakdown

Smaller sample sizes can lead to unreliable estimates. For this reason, we hide scores for groups under 30 respondents.

For groups between 30 and 49 respondents, we highlight the small sample size using an asterisk (*). Use these scores with caution.

Zencity Community Survey

Banning, CA
April - June 2024

Powered by Zencity

DEMOGRAPHIC	GROUP	SCORE	N
Age	18-34	30%	77
Age	35-54	45%	181
Age	55+	56%	256
Education	High school degree or less	49%	123
Education	Some college or college degree	45%	301
Education	Higher education degree	51%	64
Ethnicity	Black or African American	55% *	35
Ethnicity	Hispanic/Latino	46%	168

DEMOGRAPHIC	GROUP	SCORE	N
Ethnicity	White	51%	335
Gender	Female	47%	332
Gender	Male	47%	191
Income	$49,999 or less	43%	144
Income	$50,000-$149,999	48%	253
Income	$150,000 or more	48%	50

Life in Banning

The bars show the percent of respondents who reported positively (4 or 5) in response to questions about community characteristics.

We also display the percent of respondents who were neutral (3, shown with a gray dot) or negative (1 or 2, shown with a red dot).

Zencity Community Survey

Banning, CA
April - June 2024

Powered by Zencity

COMMUNITY CHARACTERISTIC	SATISFACTION SCORE	CHANGE
Sense of safety within your neighborhood	50% 22% 27%	↓ 5% ↑ 4%
Quality of water utility services	41% 34% 25%	↓ 11% ↑ 6%
Quality of municipal electric services	37% 32% 31%	↓ 13% ↑ 9%
Availability of affordable housing	34% 33% 33%	↓ 3% ↑ 4%
Quality of parks and recreational amenities	32% 32% 36%	↓ 5% ↑ 4%
Ease of getting around by public transportation	27% 32% 40%	↓ 6% ↑ 1%
Access to quality education	23% 35% 42%	↓ 6% ↓ 3%
Sense of safety within the downtown	23% 27% 50%	↓ 6% ↑ 8%

KEY

- POSITIVE
- NEUTRAL
- NEGATIVE
- NON-SUBSTANTIATIVE

↓ ↑ CHANGE IN POSITIVE SCORE

↓ ↑ CHANGE IN NEGATIVE SCORE

The 'Change' column shows the percentage point changes in positive and negative scores from the previous cycle. In addition, questions with the largest changes above 5% are highlighted.

Zencity Community Survey

Banning, CA
April - June 2024

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COMMUNITY CHARACTERISTIC	SATISFACTION SCORE	CHANGE
Overall quality of services provided by Banning	22% 39% 38%	↓ 12% ↑ 2%
Sense of overall safety	21% 33% 46%	↓ 10% ↑ 7%
Overall cleanliness and maintenance	20% 32% 49%	↓ 9% ↑ 4%
Ability of residents to give input to the Banning government	19% 31% 50%	↓ 5% ↑ 3%
Availability of a variety of art and cultural events	15% 29% 56%	↓ 8% ↑ 8%
Availability of jobs that pay a living wage	8% 25% 67%	↓ 10% ↑ 9%

KEY

- POSITIVE
- NEUTRAL
- NEGATIVE
- NON-SUBSTANTIATIVE

↓ ↑ CHANGE IN POSITIVE SCORE

↓ ↑ CHANGE IN NEGATIVE SCORE

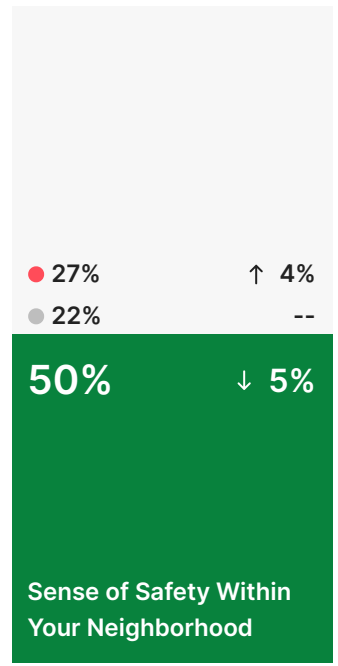
The 'Change' column shows the percentage point changes in positive and negative scores from the previous cycle. In addition, questions with the largest changes above 5% are highlighted.

The ratings residents gave these parts of life showed a connection to their overall satisfaction

In order to appear here, a characteristic must a) demonstrate a strong correlation with how residents rated their overall satisfaction and b) receive a notably high or low satisfaction score

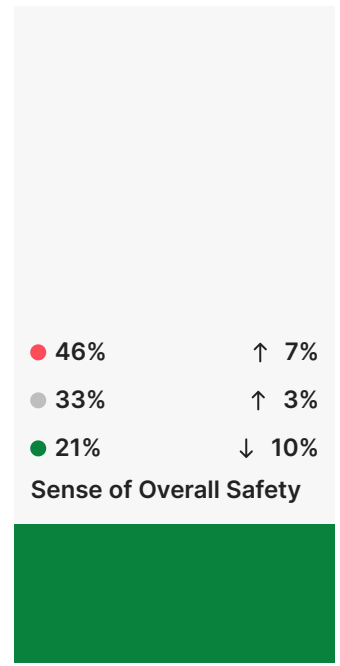
Maintain

High-scoring characteristics with strong correlation to overall satisfaction



Focus on

Low-scoring characteristics with strong correlation to overall satisfaction



Strengths

This community characteristic was selected because it had a high correlation with satisfaction AND received a notably high score.

The percentages shown indicate the percent of respondents who responded positively (4 or 5). The bars indicate the proportion of respondents who were positive, neutral (3), or negative (1 or 2).

For groups between 30 and 49 respondents, we highlight the small sample size using an asterisk (*). Use these scores with caution.

Zencity Community Survey

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50%

of residents are satisfied with the sense of safety within their neighborhood

↓ **5%** vs. previous cycle



Neutral
22% • --

Dissatisfied
27% • ↑ 4%

AGE

18-34	**38%** • ↓ 11%	
35-54	**44%** • ↓ 1%	
55+	**60%** • ↓ 5%	

RACE/ETHNICITY

White	**55%** • ↓ 9%	
Black or African American *	**44%** • --	
Hispanic	**49%** • ↑ 4%	

GENDER

Male	**54%** • ↓ 2%	
Female	**48%** • ↓ 8%	

In Focus

This community characteristic was selected because it had a high correlation with satisfaction AND received a notably low score.

The percentages shown indicate the percent of respondents who responded positively (4 or 5). The bars indicate the proportion of respondents who were positive, neutral (3), or negative (1 or 2).

For groups between 30 and 49 respondents, we highlight the small sample size using an asterisk (*). Use these scores with caution.

Zencity Community Survey

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21%

of residents are satisfied with the sense of overall safety

↓ 10% vs. previous cycle



Neutral
33% • ↑ 3%

Dissatisfied
46% • ↑ 7%

AGE

18-34	**16%** • ↓ 18%	
35-54	**20%** • ↓ 12%	
55+	**24%** • ↓ 4%	

RACE/ETHNICITY

White	**22%** • ↓ 8%	
Black or African American *	**20%** • --	
Hispanic	**24%** • ↓ 10%	

GENDER

Male	**19%** • ↓ 11%	
Female	**23%** • ↓ 8%	

Community Benchmark

How we compare Banning, CA to other similar communities

Residents from more than 1,000 communities across the United States have participated in Zencity's Community Surveys. We use the combined results from these surveys to produce our benchmark estimates. By averaging across respondents from dozens or hundreds of different communities, it's possible to arrive at a picture of what the results for a "typical" community in that cohort look like. This offers a way to compare your results- particularly strengths and areas for improvement- within a greater context. Each community running a Community Survey with Zencity receives a customized community benchmark cohort that reflects its unique characteristics.

First, the cities, towns, and counties in the United States are allocated into cohorts using variables such as population size, geography, density, and demographics to group similar communities together. Then, each cohort's benchmarks are calculated using the same scoring methodology outlined in the Survey Methodology section. Finally, since recruitment methods can differ slightly according to the needs of each community, cohort benchmarks are adjusted accordingly to match the exact distribution of recruitment methods.

These are some of the communities represented in your cohort

Density is calculated by people per square mile of land area.
Diversity is measured by percentage of people who are not in the largest race or ethnicity group.
Median income is the median annual dollars of income per household.

COMMUNITY NAME	TOTAL POP	DENSITY	DIVERSITY	MEDIAN INCOME ($)
Banning, California	29,929	1,288	34.85%	$54,083
Desert Hot Springs, California	32,386	1,075	35.35%	$45,863
Lompoc, California	44,086	3,793	28.79%	$66,947
Oroville, California	20,283	1,459	22.44%	$46,362
Eureka, California	26,519	2,772	17.97%	$51,971
Brawley, California	26,509	3,265	15.44%	$56,229

+ more communities with similar characteristics

The data displayed on this page was sourced from the U.S. Census Bureau's 2020 Census of Population and Housing.

Community Benchmark

Banning, CA
April - June 2024

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The overall resident satisfaction in Banning is lower than its cohort.

47%	82%	78%
Banning	Cohort	National

- Banning
- Cohort
- National

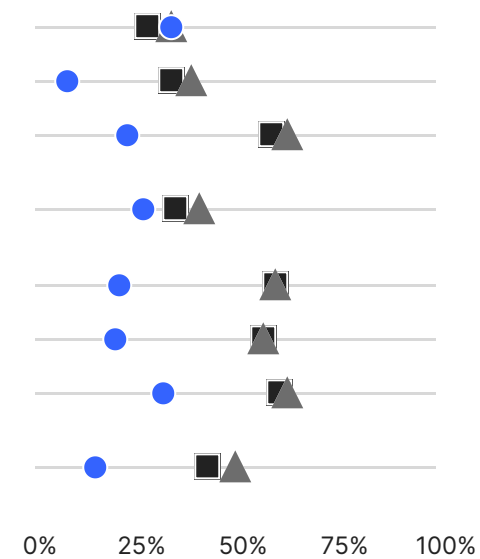
QUESTION	NATIONAL	COHORT	YOUR SCORE	SATISFACTION COMPARISON
How is the overall quality of life in Banning?	66%	66%	32%	
How likely are you to recommend Banning as a place to live?	63%	61%	32%	
How likely are you to be living in Banning 5 years from now?	65%	70%	58%	



Satisfaction with Life in Banning, CA

Breakdown by characteristic

QUESTION	NATIONAL	COHORT	YOUR SCORE	SATISFACTION COMPARISON
Availability of affordable housing	34%	28%	34%	
Availability of jobs that pay a living wage	39%	34%	8%	
Access to quality education	63%	59%	23%	
Ease of getting around by public transportation	41%	35%	27%	
Sense of overall safety	60%	60%	21%	
Overall cleanliness and maintenance	57%	57%	20%	
Quality of parks and recreational amenities	63%	61%	32%	
Availability of a variety of art and cultural events	50%	43%	15%	



- Banning
- Cohort
- National

Free-Text Responses

Zencity Community Survey

Banning, CA
April - June 2024

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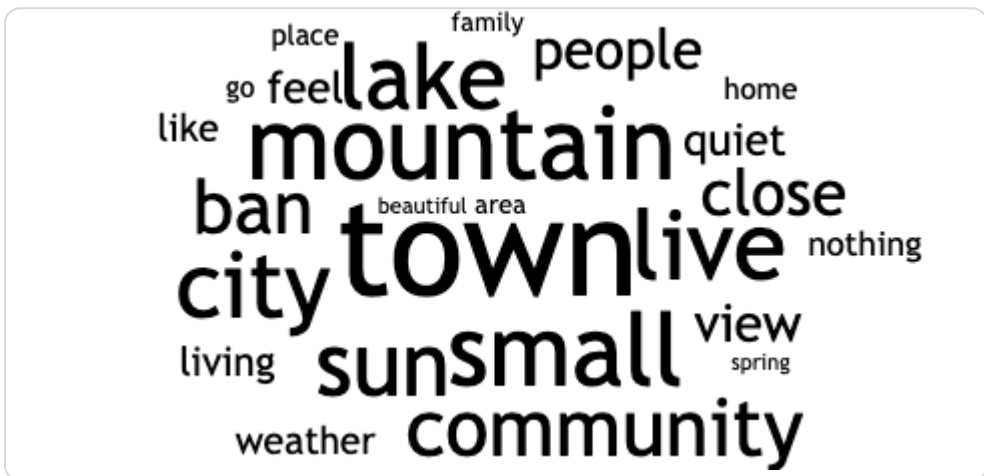
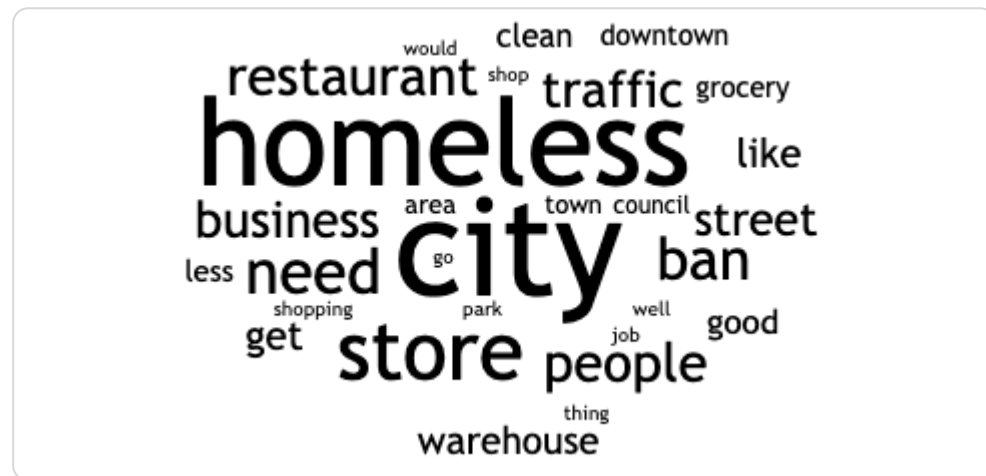
What residents love

Question: What is your favorite thing about living in Banning?



What residents want changed

Question: What is the one thing you would change in Banning?

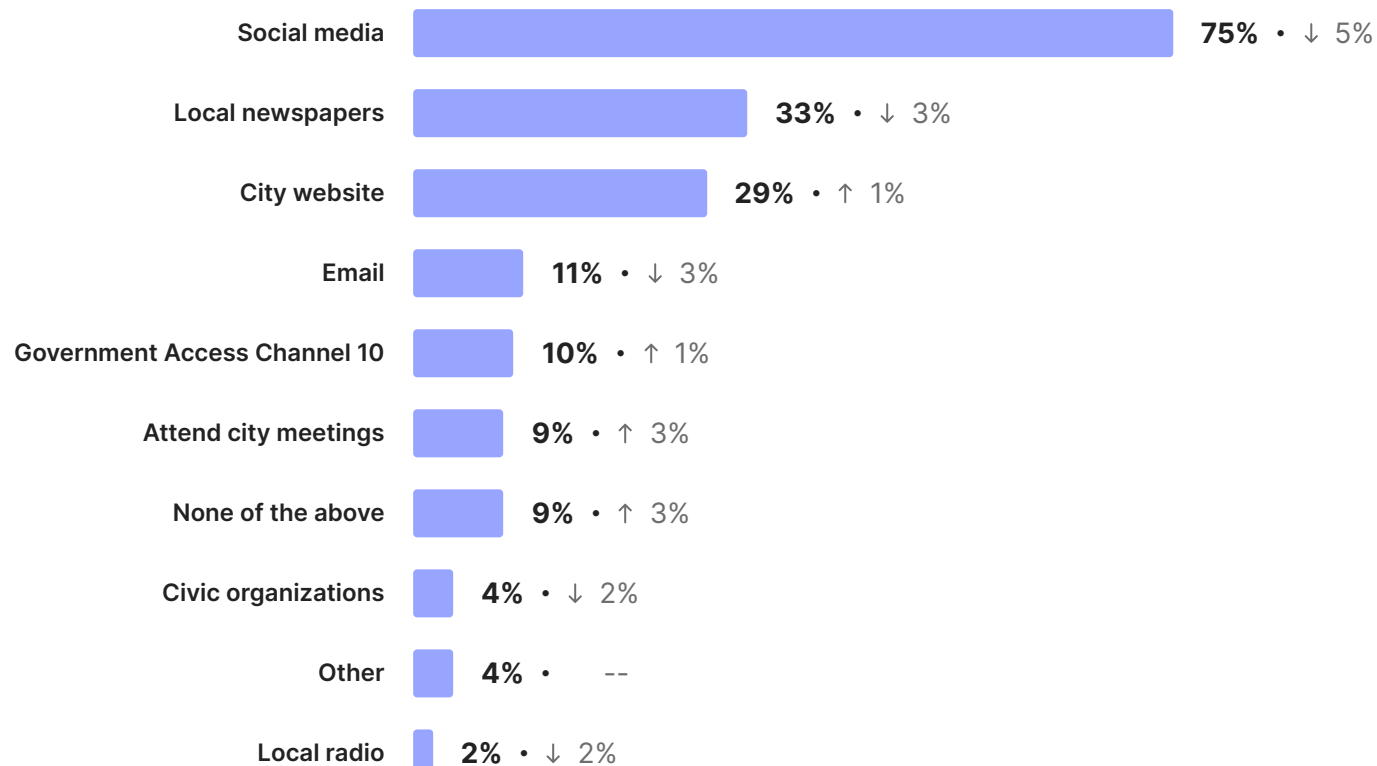


Rotating Survey Section

The rotating survey section focuses on one issue per survey cycle and can be updated as new areas of interest emerge.

75% of respondents frequently use social media to get information about things going on in Banning.

The question: Which of the following sources do you frequently use to get information about things going on in Banning?



Zencity Community Survey

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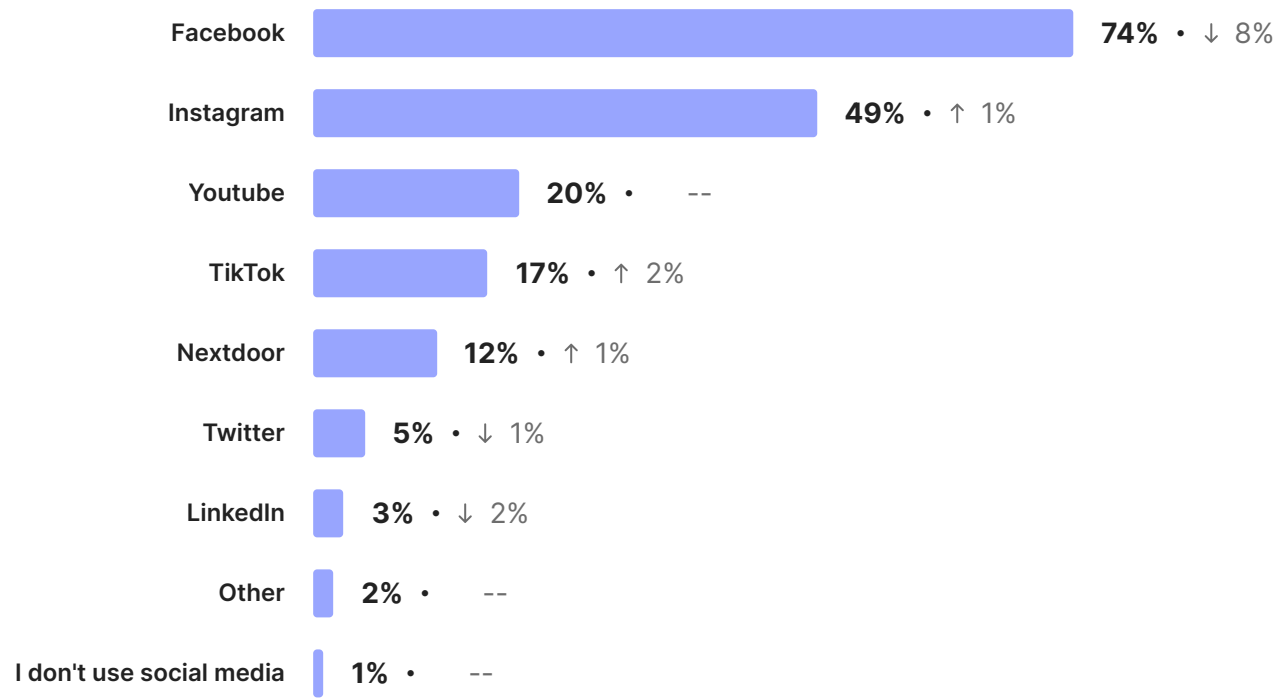
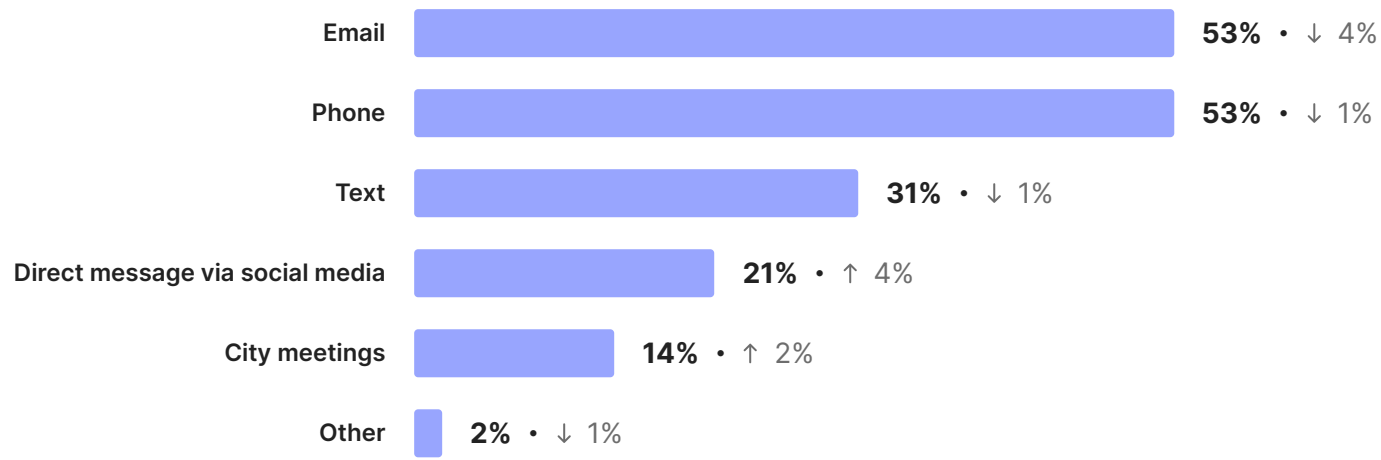
74% of respondents use Facebook the most.

The question: Which social media platforms do you use most?



53% of respondents prefer to contact the City and City departments by email or by phone.



The question: How would you prefer to contact the City and City departments?

The Questionnaire

Zencity Community Survey

Banning, CA
April - June 2024

Powered by Zencity

Section 1

General Satisfaction

QUESTIONS	CHOICES
How is the overall quality of life in Banning? *	1 - 5 Scale (Poor - Excellent)
How likely are you to recommend Banning as a place to live? *	1 - 5 Scale (Very unlikely - Very likely)
How likely are you to be living in Banning 5 years from now? *	1 - 5 Scale (Very unlikely - Very likely)
What is your favorite thing about living in Banning?	Open Ended
What is the thing you would most want to change about life in Banning?	Open Ended

Section 2

Community Characteristics

QUESTIONS
Availability of affordable housing
Availability of jobs that pay a living wage
Access to quality education
Availability of a variety of art and cultural events
Ease of getting around by public transportation
Sense of overall safety
Sense of safety within your neighborhood
Sense of safety within the downtown

QUESTIONS
Ability of residents to give input to the Banning government
Overall cleanliness and maintenance
Quality of parks and recreational amenities
Overall quality of services provided by Banning
Quality of municipal electric services
Quality of water utility services

Section 3

Rotating Survey Section

QUESTIONS	CHOICES
Which of the following sources do you frequently use to get information about things going on in Banning?	Social media / Local newspapers / City website / Email / Local radio / Government Access Channel 10 / Civic organizations / Attend city meetings / None of the above / Other
Which social media platforms do you use most?	Facebook / Instagram / TikTok / Twitter / LinkedIn / Youtube / Nextdoor / I don't use social media / Other
How would you prefer to contact the City and City departments?	Email / Phone / Text / Direct message via social media / City meetings / Other

Section 4

Demographics

QUESTIONS	CHOICES
In what year were you born? *	Open Ended
Which of the following do you identify as? *	Male / Female / Prefer to self-describe
Please state the gender you identify as.	Open Ended
Which one of these statements best describes your current situation? *	Full-time employed / Part-time employed / Unemployed / Student / Apprentice/intern / In retirement or early retirement / Permanently disabled / Fulfilling domestic tasks or looking after children/family / Prefer not to say / Other
Are you of Hispanic, Latino, or Spanish origin? *	Yes / No / Prefer not to say
What is your race? *	White / Black or African American / American Indian or Alaska Native / Asian / Native Hawaiian, Samoan, Chamorro, or other Pacific Islander / Prefer not to say / Other

Section 4

Demographics

QUESTIONS	CHOICES
Are you of Hispanic, Latino, or Spanish origin? *	Yes / No / Prefer not to say
What is your race? *	White / Black or African American / American Indian or Alaska Native / Asian / Native Hawaiian, Samoan, Chamorro, or other Pacific Islander / Prefer not to say / Other
Is your home: *	Owned by you or someone in your household, with or without a mortgage or loan? / Rented? / Occupied without payment of rent? / Prefer not to say
What is the highest level of school you have completed or the highest degree you have received? *	Less than a high school diploma / High school graduate or GED / Trade school / Some college but no degree / Associate degree in college / Bachelor's degree (For example: BA, AB, BS) / Master's degree (for example: MA, MS, MBA) / Professional School Degree (for example: MD, DDS, DVM, LLB, JD) / Doctorate degree (for example: PhD, EdD) / Prefer not to say



Published on July 18, 2024 by Zencity

support@zencity.io

CITY OF BANNING
STAFF REPORT

TO:	**CITY COUNCIL**
FROM:	**Robert Fisher, Acting City Manager**
PREPARED BY:	**Art Vela, Public Works Director** **Lincoln Bogard, Administrative Finance Director**
MEETING DATE:	**February 25, 2025**
SUBJECT:	**Discussion of Next Steps in the Banning Electric Utility Financial Recovery Plan**

RECOMMENDATION:

City Council previously approved a strategy for recovering the Banning Electric Utility's (BEU) cash balance including a 13.9% rate increase each November 2024 and 2025, and $6 million debt issuance to replenish cash balance ("BEU Financial Recovery Plan"). Staff requests a discussion and confirmation of the next step (debt issuance) or alternative Council direction.

BACKGROUND:

Prior to November 2024, the Banning Electric Utility (BEU) last increased rates overall in 2013. During the intervening years, the BEU saw increased pressure from operating expense inflation, increasing power purchase costs (increasing 31% from 2019-2023), and increased capital expenditures. During this time, BEU's average monthly single family residential bill was significantly lower than neighboring cities served by Southern California Edison.

During the three-year period from fiscal years 2020-21 through 2022-23, BEU expended approximately $10 million per year on capital projects (compared to a prior 6-year average of $3.5 million per year). Prior to fiscal year 2020-21, the BEU's reserves remained above $15 million (higher than the ~$11 million policy). However, with the increased capital expenditures beginning in Fiscal year 2020-21, BEU's reserves and cash balance saw dramatic decreases during the subsequent three-year period. In fiscal year 2023-24, BEU did not generate sufficient revenues to cover its operating costs, debt service, and capital expenditures (though capital expenditures were reduced to the minimum amount possible in fiscal year 2023-24). As a result, BEU had a bond debt service coverage covenant default (debt service coverage was well under the 120% required in the bond documents). Additionally, BEU ended fiscal 2023-24 with a negative $6.5 million cash balance. BEU operating expenses and debt service payments were made through borrowing from other City Funds, putting pressure on those funds – including the City's General Fund.

As a result of this deteriorating financial position, S&P Global Ratings took several actions to decrease the BEU's rating from "A-" (June 2022) to "BB-" (November 2024). They met with City staff twice in 2024 to discuss the financial condition and the City's plan to improve the condition of its finances over the next two years. The most recent downgrade to "BB-" in November 2024 also had a negative outlook – which means that S&P plans to further downgrade the credit rating if BEU's financial position does not increase materially over the next year or two.

At the August 27, 2024, City Council meeting, Council received a report from staff and discussed four

options for a potential BEU Emergency Rate Increase, staff report attached hereto. Those four options ranged from “do nothing” to implementing a one-time 64% emergency rate increase to replenish the BEU’s cash position and remedy its coverage covenant default. After discussion, Councilmembers selected an initial option which included two 22% emergency rate increases (one in November 2024 and the second in November 2025). Council also requested that staff evaluate some additional scenarios and present an updated analysis at a subsequent meeting.

At the September 24, 2024, City Council meeting, Council reviewed updated analysis of options available to bring the Electric Utility’s cash balance from negative to positive by the end of fiscal year 2026, staff report attached hereto. Staff presented three scenarios at that meeting – a scenario (3B) that reflected 22.7% rate increases each November 2024 and November 2025, a second scenario (3C) that spread those rate increases over a 3-year period (14.7% per year, each November 2024-2026), and a third scenario (4B) that targeted a 13.9% rate increase each November 2024 and 2025, and $6 million debt issuance to replenish cash balance (“BEU Financial Recovery Plan”). City Council indicated a preference for the third (4B) scenario, with the assumption that the debt financing component would be evaluated at a subsequent meeting.

At the October 22, 2024 City Council Meeting, City Council took action to adopt Resolution 2024-169 that authorized an emergency 13.9% rate increase, effective November 1, 2024 and authorize a second 13.9% emergency rate increase, effective November 1, 2025. The understanding is that the actual rate increase on November 1, 2025, will be subject to the findings of an electric rate study. That electric rate study is underway and Staff expect that it will be completed in Fall 2025.

Based on this background and the adopted 13.9% rate increases, staff wish to discuss the financing component of the BEU Financial Recovery Plan to get further direction from City Council.

JUSTIFICATION:

The City Council took action in October 2024 to authorize two 13.9% emergency rate increase each November 2024 and November 2025. These rate increases are deemed necessary to maintain the solvency of BEU and ensure that there are sufficient revenues to pay for operating expenses, power purchase costs, and minimal, but essential capital projects.

The current BEU Financial Recovery Plan assumes 13.9% annual rate increases each November 2024 and November 2025. Additionally, it assumes that the City issues a $6.1 million bond, split into two series: a $2.3 million tax exempt series to be used to address capital needs through fiscal year 2026 and a $3.8 million taxable series to be used to repay a portion of what BEU owes to other City Funds and bring BEU cash balance positive by the end of fiscal year 2025-26.

Because of BEU’s current credit rating (“BB-“), a debt financing would likely be issued without a credit rating. Additionally, given the size and anticipated term (20 years or less), the bonds would be sold through private placement process to a single investor (typically a regional or national bank). Given the BEU’s financial position, we would expect that an investor would require a significant risk premium in the interest rate. Additionally, since a portion of the financing would be issued on a taxable basis, we would anticipate that portion to have an interest rate in the 6-7% range. In addition, NHA Advisors informed staff that there may be additional options available to more comprehensively address the liquidity needs through a larger restructuring of the existing debt of BEU. These options require further research to validate, but would still require City Council’s approval to issue new money debt for the purposes outlined in the original plan.

Upon direction from City Council, staff will work with NHA Advisors (the City’s "Municipal Advisor") and other financing professionals (legal counsel, placement agent) to solicit financing proposals from regional and national banks. City staff will work with NHA Advisors to evaluate the proposals, select the best proposal, and bring a financing agreement before council at a subsequent meeting for consideration. It’s important to note that soliciting financing proposals does not obligate the City to enter into a financing

agreement.

If BEU does not issue debt, the timeline for BEU's cash balance to return to a positive position (and repay all inter-fund loans to other City funds) is extended two more years – fiscal year 2027-28. As an alternative option to debt financing, the City could explore higher rate increases in fiscal year 2025-26 (higher than the 13.9% approved by Council in October 2024) to bring BEU's cash balance positive by the end of fiscal year 2025-26. City staff can work with its rate consultant and municipal advisor to determine the magnitude of rate increases needed under this alternative.

FISCAL IMPACT:

There is no fiscal year 2024-25 budgetary impact from Council directing staff to solicit financing proposals from banks. The City would be under no obligation to enter into a financing agreement after soliciting proposals. Said financing proposal would be brought to Council at a future meeting for consideration. The issuance costs of financing (likely ~2% of principal) are paid on a contingent basis (contingent upon successful completion of the financing) and would be paid out of the financing and amortized over the life of the loan. First debt service payments would not commence until fiscal year 2025-26.

If BEU does not bring its cash balance positive by the end of fiscal year 2026, it is possible that S&P would further downgrade BEU's 2015 Bonds. Since the 2015 Bonds were sold with a fixed interest rate, changes in the credit rating (up or down) do not impact the annual debt service on those bonds. Rather, the current credit rating impacts the future cost of issuing bonds or debt financing future capital projects. All else being equal, higher credit ratings translate into lower cost of borrowing.

In addition to the credit rating considerations, BEU's negative cash balance is only possible through extensive inter-fund borrowing. This borrowing puts stress on other City funds, namely the General Fund. Failure to improve BEU's cash balance and bring it into the positive territory would continue to have a negative impact on the General Fund's available cash balance and could impact City services.

ALTERNATIVES:

1. Direct City staff to work with its Municipal Advisor to assemble a finance team to solicit bank bids for a private placement of approximately $6.1 million in BEU debt and evaluate a potential restructuring of existing debt.
2. Direct City staff to work with its rate consultant to provide a comparison of rate impacts with and without debt financing. This alternative will essentially eliminate or defer the debt financing step include as part of the BEU Financial Recovery Plan, lead to a potential downgrade of BEUs credit rating and defer capital investments (i.e. infrastructure and equipment).
3. Provide alternative direction to staff

BUDGETED?:

Yes

CONTRACT/AGREEMENT:

No

ATTACHMENTS:

1. Staff Report - August 27 2024 (BEU Rate Increase Options).pdf
2. Staff Report - September 24 2024 (BEU Rate Increase Options).pdf
3. Resolution 2024-169 - October 22 2024 (Approving BEU Rate Increases).pdf
4. Summary of BEU Recovery Plan.pdf

CITY OF BANNING
STAFF REPORT

TO:	**CITY COUNCIL**
FROM:	**Douglas Schulze, City Manager**
PREPARED BY:	**Art Vela, Public Works Director** **Lincoln Bogard, Administrative Finance Director**
MEETING DATE:	**August 27, 2024**
SUBJECT:	**Discussion of the Banning Electric Utility Emergency Rate Increase Scenarios**

RECOMMENDATION:

Discuss the different alternatives for a possible emergency electrical rate increase and provide direction to staff.

BACKGROUND:

On May 14, 2024 City Council approved Resolution 2024-71, approving a contract with NHA Advisors, LLC (NHA). NHA's scope of work included financial planning, debt management and financial implementation, ballot initiatives and other related services. Recognizing the financial challenges faced by the Banning Electric Utility (BEU), Resolution 2024-71 included a $100,000 task order to evaluate and assess financing and other options for BEU.

On June 25, 2024, staff presented a report regarding the lowering of the Banning Finance Authority's Outstanding Electric System Revenue Bond rating and requested that City Council consider an interim Electric Rate Adjustment. City Council provided direction to staff to return at a future meeting with options for City Council to consider regarding an Emergency Electric Rate Increase.

City staff worked with NHA, to analyze four preliminary options for an emergency electric rate increase in the to improve operating revenues and replenish cash balances. It is important to note that the analysis presented in this staff report are best estimates available at this time based on a dynamic model, but this modeling is not a cost of service study and NHA is not acting as the City's rate consultant. The City will soon be issuing a request for proposals for a consultant to perform a cost of service study, and is also proceeding with this high level analysis in the interest of time.

Option 1

This option is a "do nothing" scenario and evaluates the impact to BEU of not implementing emergency rate increases. This scenario assumes the first electric utility rate increases happen after the City completes a full cost of service study in conjunction with the electric master plan. Under this scenario, the cash balance is expected to be more negative by FY 2025 end, which will further pressure other City funds and could result in an additional credit rating downgrade. Additionally, it is likely that the BEU will have a covenant default related to the 120% debt service coverage requirement on the 2015 Bonds.

Option 2

Option 2 models the amount of emergency rate increase in FY 2025 needed to simply cover operations and essential expenditures. Using FY 2025 budgeted operating revenues and expenses as the baseline,

it calculates that a 13% one-time rate increase (effective October 1, 2024) would generate sufficient revenues in FY 2025 to allow BEU to fund essential CIP, meet the 120% debt service coverage requirement, and cover operating expenses. The fund balance remains negative and does not see any meaningful improvement under this scenario – which means that other City funds will not be paid back for funds loaned to BEU.

Option 3

Option 3 explores the amount of emergency rate increases needed in FY 2025 and FY 2026 to bring the fund balance back into the black – allowing the Electric Utility to repay what it owes to other City Funds. Analysis of this option calculated that a 64% one-time rate increase in FY 2025, effective October 1, 2024, should generate sufficient revenues to bring BEU cash balance to a positive number after paying back the other City Funds. Under this scenario of Option 3, future years could see a reduction in rates, depending on the findings of the upcoming cost of service study. If stretching that recovery timeline out to two years, two 22% annual rate increases would be needed to bring the fund balance to the same place by the end of FY 2026. Under both scenarios for Option 3, BEU meets its 120% debt service coverage requirement for both fiscal years. Additionally, the BEU replenishes its fund balance within the two-year window given to it by the credit rating agency.

Option 4

Option 4 analyzes the amount of emergency rate increase needed in FY 2025 to cover operations and essential expenditures (similar to Option 2) but expands upon Option 2 to include approximately $10 million bond financing to bring BEU's cash balance back into the positive (allowing it to repay what it owes to other City Funds). The debt service requires a 13% emergency rate increase in FY 2025, which is similar to Option 2. The trade-off to the benefit of the rapid improvement in cash balance is that this Option 4 also has the interest cost of a financing and long-term annual debt service payments.

Debt service on a bond financing would be structured to have minimal to no payments in the first two years to allow the Electric Utility to build up its reserves and adopt a longer-term rate increase plan. Compared to Option 2, this option would require higher long-term rate increases to support the annual debt service on a bond.

Because of the Electric Utility's current "BB" credit rating, it is likely that a bond financing would be unrated. Additionally, it would be issued on a taxable basis because of IRS limitations on the use of tax exempt debt to reimburse an issuer for prior capital expenditures.

Staff is seeking direction from City Council on which option it would like to proceed with. Staff would return to City Council in September with a resolution for either Option 2, 3 or 4, if one of those are selected.

JUSTIFICATION:

The Electric Utility's cash balance has decreased significantly in recent years due to a combination of capital spending and inflationary pressures. Over the past three years, the Electric Utility has spent $10 million per year on average toward capital projects. Additionally, while the Electric Utility has historically been able to generate sufficient operating revenues to cover operating expenses, in each of the last three fiscal years – 2022, 2023 and 2024 – operating expenses have been greater than operating revenues. One driver behind this is power purchase costs, which increased 31% from 2019 to 2023.

As a result, the Electric Utility's unrestricted cash and investments balance decreased significantly from over $18 million in FY 2019 to negative $9.5 million in FY 2024. Because operating expenses have been greater than revenues in the last three years and cash balances are negative, Electric Utility has needed to borrow from other City funds, which has put significant strain on those funds.

The General Fund's cash balance in FYE 2023 was $4.5 million after including a $3.5M amount due from other funds. This is a marked decrease from the General Fund's pooled cash balances over $13 million in fiscal year 2018. Continued borrowing from the General Fund is not an option to support the Electric Utility. Additionally, the Banning Utility Authority's Water and Wastewater Funds are subject to California's Proposition 218 related to utility rates and charges and having those funds' send cash to the Electric Utility could expose the City to the risk of a legal challenge.

The options listed above, with the exception of Option 1, would provide relief to the current fiscal challenges faced by BEU.

FISCAL IMPACT:

Options 1 thru 4 have different degrees of fiscal impact to BEU.

ALTERNATIVES:

1. Option 1
2. Option 2
3. Option 3
4. Option 4
5. Provide alternative direction to staff.

BUDGETED?:

No

CONTRACT/AGREEMENT:

No

ATTACHMENTS:

1. Options 1 thru 4.pdf
2. Staff Report Bond Rating Decrease 6.25.24.pdf
3. Staff Report Reso 2024-71 NHA Advisors.pdf

CITY OF BANNING
STAFF REPORT

TO: **CITY COUNCIL**

FROM: **Douglas Schulze, City Manager**

PREPARED BY: **Art Vela, Public Works Director**
Lincoln Bogard, Administrative Services Director

MEETING DATE: **September 24, 2024**

SUBJECT: **Discussion of the Banning Electric Utility Emergency Rate Increase Scenarios**

RECOMMENDATION:

Discussion of the Banning Electric Utility Emergency Rate Increase Scenarios and provide staff with direction with which scenario to move forward with.

BACKGROUND:

On August 27, 2024, City Council received a report from staff and discussed four options for a potential Banning Electric Utility Emergency Rate In Increase, staff report attached hereto. The four options were are follows:

	Option 1	Option 2	Option 3A/3B	Option 4
Description	No Action	Maintains Services	Maintains Services and Replenishes Cash with Rate Revenues	Maintains Services and Replenishes Cash $10M Bond
Rate Increase	None	13% in FY 2025	64% in FY 2025 or 22% in FY 2025 and 22% in FY 2026	13% in FY 2025

After discussing the options above, Councilmembers selected their preferred option as follows:

- Mayor Sanchez: Option 4
- Mayor Pro Tem Minjares: Option 3B
- Councilmember Wallace: Option 3B
- Councilmember Flynn: Option 3B
- Councilmember Happe: Option 3B

As part of the discussion, Mayor Pro Tem Minjares and Councilmember Flynn requested that staff also provide a revised Option 3 to spread the increases over three years rather than two years.

Staff has evaluated and prepared the following scenarios for Council's consideration:

Scenario 3B

This scenario is very similar to the scenario shown to City Council in August and models what kind of rate increase would be required to bring the Electric Utility's cash from negative to positive by the end of fiscal year 2026. This modeling assumes two rate increases – one in November 2024 and one in November 2025. Each of these rate increases is 22.7%. This is slightly higher than the 22% increases shown to Council in August because the analysis in August assumed that the first rate increase would be effective October 1 compared to the November 1 assumption in this update. This analysis assumes that rate increases apply equally to both the energy charge (per kWh) and the Basic Service Charge.

Of the scenarios evaluated for this report, this scenario has the greatest near-term increases.

Scenario 3C

Based on a request at the August 27th City Council meeting, this scenario evaluates the annual rate increases needed to bring the Electric Utility's cash from negative to positive by the end of fiscal year 2027. Because this scenario assumes a longer recovery, it requires approximately 14.7% annual rate increases – one in November 2024, one in November 2025, and one in November 2026. Under this scenario, the cash balance stays negative until FY 2027. Similar to scenario 3B above, the modeling for this scenario assumes the energy charge (per kWh) and the Basic Service Charge increase with the rate increases.

Because this scenario has the slowest recovery of the Electric Utility's cash, there is greater risk that unforeseen expenses or cost increases prevent that recovery. Additionally, there is greater risk of further downgrades in the Electric Utility's credit rating because of this slower recovery.

Finally, due to the anticipated timing of a Cost of Service Study, it is likely that the November 2026 rate increase under this scenario will be changed to something other than 14% based on the findings of that study.

Scenario 4B

This scenario explores the strategic use of bond funding to facilitate the recovery of Electric Utility's cash position by the end of fiscal year 2026. Unlike the bonds scenario presented to the Council in August (Scenario 4), this Scenario 4B assumes a significantly smaller amount of bond funding raised: $6 million total. That amount is split into $2.2 million raised from a tax-exempt financing and $3.8 million raised from a taxable financing. While the taxable portion is used to replenish fund balance, the tax-exempt portion of the financing is used to address the budgeted capital expenditures in FYE 2025 and 2026. While the entire financing will likely be unrated given the current "BB" credit rating, unlike a taxable interest rate (assumed to be 7%) this analysis assumes a tax-exempt interest rate of 5.5% for a 20-year financing.

Under this scenario, two 13.9% annual rate increases are needed in FY 2025 and FY 2026, followed by additional rate increases in future years to support the debt service. Preliminary modeling suggests that those rate increases beyond FY 2026 are in the 4-6% range.

Unlike Scenarios 3B and 3C above, this Scenario 4B spreads the costs of the capital expenditures and fund balance recovery over a longer period of time. However, because this scenario uses bond financing, there is the cost of long-term bond repayments – though those costs are spread out over 18-20 years.

The table below summarizes of the key comparisons of the three scenarios for the Residential Service Rate. Please note that the projections for FY 2027 will likely change based the findings of the Cost of Service Study:

	FY 2025	FY 2026	FY 2027
Date Rate Increases Effective	*November 1*	*November 1*	*November 1*
Scenario 3B			
Rate Increase (Energy Charge Only)	22.7%	22.7%	0%
Cost per kWh	$0.174	$0.214	$0.214
Basic Service Charge	$37	$45	$45
Avg SFR Monthly Bill*	$136	$165	$165
Scenario 3C			
Rate Increase (Energy Charge Only)	14.7%	14.7%	14.7%
Cost per kWh	$0.163	$0.187	$0.214
Basic Service Charge	$34	$39	$45
Avg SFR Monthly Bill*	$127	$145	$166
Scenario 4B			
Rate Increase (Energy Charge Only)	13.9%	13.9%	5%
Cost per kWh	$0.162	$0.184	$0.194
Basic Service Charge	$34	$39	$41
Avg SFR Monthly Bill*	$126	$143	$150

JUSTIFICATION:

The Electric Utility's cash balance has decreased significantly in recent years due to a combination of capital spending and inflationary pressures. Over Fiscal Years 2020-21 through 2022-23, the Electric Utility spent $10 million per year on average toward capital projects. Additionally, while the Electric Utility has historically been able to generate sufficient operating revenues to cover operating expenses, in each of the last three fiscal years – 2022, 2023 and 2024 – operating expenses have been greater than operating revenues. One driver behind this is power purchase costs, which increased 31% from 2019 to 2023.

As a result, the Electric Utility's unrestricted cash and investments balance decreased significantly from over $18 million in FY 2019 to negative $9.5 million in FY 2024. Because operating expenses have been greater than revenues in the last three years and cash balances are negative, Electric Utility has needed to borrow from other City funds, which has put significant strain on those funds.

The General Fund's cash balance in FYE 2023 was $4.5 million after including a $3.5M amount due from other funds. This is a marked decrease from the General Fund's pooled cash balances over $13 million in fiscal year 2018. Continued borrowing from the General Fund is not an option to support the Electric Utility. Additionally, the Banning Utility Authority's Water and Wastewater Funds are subject to California's Proposition 218 related to utility rates and charges and having those funds' send cash to the Electric Utility could expose the City to the risk of a legal challenge.

The options listed above would provide relief to the current fiscal challenges faced by BEU.

FISCAL IMPACT:

Options 3B, 3C and 4B have different degrees of fiscal impact to the Banning Electric Utility.

ALTERNATIVES:

1. Option 3B
2. Option 3C
3. Option 4B
4. Provide alternative direction to staff.

BUDGETED?:

No

CONTRACT/AGREEMENT:

No

ATTACHMENTS:

1. 8.27.24 Electric Rate Increase Options Staff Report.pdf
2. 8.27.24 Electric Rate Increase Power Point NHA Advisors.pdf
3. Option 3B Electric Rate Schedules.pdf
4. Option 3C Electric Rate Schedules.pdf
5. Option 4B Electric Rate Schedules.pdf
6. Financial Analysis of Options.pdf

CITY OF BANNING
STAFF REPORT

TO:	**CITY COUNCIL**
FROM:	**Douglas Schulze, City Manager**
PREPARED BY:	**Art Vela, Public Works Director**
MEETING DATE:	**October 22, 2024**
SUBJECT:	**Consideration of Resolution 2024-169, Approving Electric Rate Increases and Revisions to Certain Electric Rates and Tariffs**

RECOMMENDATION:

Adopt Resolution 2024-169.

BACKGROUND:

On June 25, 2024, staff reported on the lowering of the Banning Finance Authority's Outstanding Electric System Revenue Bond rating, see staff report attached hereto. In summary, the City's outstanding Electric System 2015 Refunding Revenue Bonds (current outstanding balance: $20,880,000) underlying rating was downgraded from A- to BB due to two primary factors:

1. Lack of proactive rate setting: while the electric rates underwent various restructures, the rates have not been increased for the purpose of generating additional revenue since 2013.
2. The use of interfund borrowing to meet financial obligations: due to increases in power purchase costs, operating expenses and accelerated investments in capital improvements, the Banning Electric Utility's cash balance fell below reserve policy and has been supplemented by other City funds.

During the June 25, 2024 discussion, City Council provided direction for staff to prepare different rate increase options. On August 27, 2024, staff returned (see attached staff report) with four options:

1. Option 1: No rate increase; do nothing.
2. Option 2: A 13% rate increase in FY 2025 to cover the annual deficit only.
3. Option 3: A 64% rate increase in FY 2025 (Option 3A) or a 22% rate increase in FY 2025 and FY 2026 (Option 3B) to cover the annual deficit, brings cash balance to positive and avoids debt coverage covenant default.
4. Option 4: A 13% rate increase in FY 2025 to cover the annual deficit, bring cash balance to positive and avoids debt coverage covenant default. This option replenishes cash with $10M bond revenue.

Although the majority of City Council supported Option 3B, two City Councilmembers (Flynn and Minjares) requested to see a modified Option 3B, that would include increases spread over three years rather than two years.

On September 24, 2024, staff presented three electric rate increase options for City Council's consideration:

1. Option 3B: Same as described above, although updated to reflect an increase of 22.7% each year in FY 2025 and FY 2026.
2. Option 3C: 14.7% rate increase each year in FY 2025, FY 2026 and FY 2027 to cover the annual deficit, bring cash balance to positive and avoids debt coverage covenant default.
3. Option 4B: 13.9% rate increase per year in FY 2025 and FY 2026 to cover the annual deficit, bring cash balance to positive and avoids debt coverage covenant default. This options is similar to Option 4 described above, although revised to rely on $6M in bond revenue made up of $3.8M in taxable financing and $2.2m in tax exempt financing.

In concluding the discussion, Council majority supported Option 4B.

If approved, the following rates and tariffs will be adjusted as follows (see Exhibit "A" for revised rate and tariff pages in their entirety; all others remain unchanged):

Residential Service (RS-1)

	Current	11/1/2024	11/1/2025
Basic Service Charge – per meter	$30	$34	$39
Energy Charge – per kWh	$0.1421	$0.1619	$0.1843

General Service Single Phase (GS-1)

	Current	11/1/2024	11/1/2025
Basic Service Charge – per meter	$58.50	$67	$76
Energy Charge – per kWh	$0.1202	$0.1369	$0.1559

Small Commercial Multi-Phase (SC-1)

	Current	11/1/2024	11/1/2025
Basic Service Charge – per meter	$58.50	$67	$76
Energy Charge – per kWh	$0.1202	$0.1369	$0.1559
Multi-Phase Service Meter Charge	$3.97	$4.52	$5.15

Interruptible Well Service (IW-1)

	Current	11/1/2024	11/1/2025
Basic Service Charge – per meter	$300	$342	$389
Energy Charge – per kWh	$0.1052	$0.1198	$0.1365
Demand Charge – per kWh	$13.50	$15.38	$17.51

Medium Commercial Service (MC-1)

	Current	11/1/2024	11/1/2025
Basic Service Charge – per meter	$200	$228	$259
Energy Charge – per kWh	$0.1105	$0.1259	$0.1434
Demand Charge – per kWh	$17.05	$19.42	$22.12

Industrial Service (IS-1)

	Current	11/1/2024	11/1/2025
Basic Service Charge – per meter	$400	$456	$519
Energy Charge – per kWh	$0.1010	$0.1150	$0.1310
Demand Charge – per kWh	$14.50	$16.52	$18.81

Street Lighting Service (SL-1)

	Current	11/1/2024	11/1/2025
Per Street Light	$8.45	$9.62	$10.96

Security Lighting Service (SL-2)

	Current	11/1/2024	11/1/2025
100 Watt Equivalent LED	$9.72	$11.07	$12.61
250 Watt Equivalent LED	$24.30	$27.68	$31.52
100 Watt Sodium Vapor	$19.43	$22.13	$25.21
150 Watt Sodium Vapor	$29.15	$33.20	$37.82
175 Watt Sodium Vapor	$34.00	$38.73	$44.11
200 Watt Sodium Vapor	$38.87	$44.27	$50.43
250 Watt Sodium Vapor	$48.58	$55.33	$63.02
400 Watt Sodium Vapor	$77.73	$88.53	$100.84
20 Foot or 35 Foot Wood Pole (City owned)	$4.01	$4.57	$5.20

JUSTIFICATION:

Banning Electric Utility's ("BEU") cash balance has decreased significantly in recent years due to a combination of capital spending and inflationary pressures. Over Fiscal Years 2020-21 through 2022-23, BEU spent $10 million per year on average toward capital projects. Additionally, while BEU has historically been able to generate sufficient operating revenues to cover operating expenses, in each of the last three fiscal years – 2022, 2023 and 2024 – operating expenses have been greater than operating revenues. One driver behind the increase in operating expenses is power purchase costs, which increased 31% from 2019 to 2023.

As a result, BEU's unrestricted cash and investment balance decreased significantly from over $18 million in FY 2019 to negative $9.5 million in FY 2024. Because operating expenses have been greater than revenues in the last three years and cash balances are negative, BEU has needed to borrow from

other City funds.

BEU's capital improvement plan has been drastically reduced with the intent of reducing expenditures and impacts the required electric rate increase, evident that the rate increases are not in excess of the revenue requirements reasonably necessary to operate the City's electric utility.

FISCAL IMPACT:

If approved, the first rate increase of 13.9% would become effective on November 1, 2024 and the second rate increase of 13.9% would become effective on November 1, 2025. The rate increase will generate sufficient revenue to cover all of Banning Electric Utility expenses including: general administrative services; services rendered by other city departments in support of the Banning Electric Utility; additions and betterments to the electric utility system; the amortization or depreciation of obsolete facilities within the electric utility system; any and all bonded indebtedness incurred in the construction or extension of the electrical utility system, including principal and interest thereof; and a reasonable reserve fund to provide for unforeseen contingencies.

The proposed electric rate increases will result in approximately $2.5M in additional revenue in FY 2025 and $4.1M in additional revenue in FY 2026.

ALTERNATIVES:

1. City Council could elect to reject staff's recommendation and no pursue an electric rate increase. This alternative would result in further degradation of BEUs cash balance as well as impact the City overall cash position. This alternative may also lead to further lowering of BEU's bond rating.
2. City Council could elect to reconsider the previous electric rate increase options or request another be explored. This alternative will result in further degradation of BEU's cash balance until rate increases are approved. This alternative may also lead to further lowering of BEU's bond rating.

BUDGETED?:

No

CONTRACT/AGREEMENT:

No

ATTACHMENTS:

1. Resolution 2024-169, Electric Rates and Tariffs.docx
2. Exhibit A - Revised Electric Rates and Tariffs
3. 6.25.24 Staff Report Lowering of Bond Rating.pdf
4. 8.27.24 Electric Rate Increase Options Staff Report.pdf
5. 8.27.24 Electric Rate Increase Power Point NHA Advisors.pdf
6. 9.24.24 Electric Rate Options.pdf
7. Affidavit - Public Notice of Electric Rates Increase.pdf

Banning Electric Utility Financial Recovery Plan Summary

Background on the Current Situation

- Prior to November 2024, BEU last increased rates overall in 2013
- BEU saw increasing pressure from operating expense inflation, power purchase costs, and increased capital expenditures
- BEU electric rates historically have been significantly less than neighboring cities served by SCE
- BEU expended $10 million per year on capital projects in FYEs 2021-2023 (vs $3.5M annual average for the prior 6 years)
- BEU reserves remained above $15M (vs $11M policy) from 2016-2020, but saw dramatic decreases into negative territory
- Negative $6.5M BEU cash as of June 2024
- Debt Service Coverage was under the 120% requirement in FYE 2024 ("technical default")
- S&P took several actions to decrease the credit rating from "A-" (June 2022) to "BB-" (November 2024) with a negative outlook for
- City Council took action to authorize an emergency rate increase of 13.9% on November 1, 2024, and 13.9% on 11/1/2025

The Current Question

- City is currently in the process of a long-term BEU rate study with multiple years of rate increases; that study is expected to be completed Fall 2025
- Increased revenues following 13.9% emergency rate increase on 11/1/24 are expected to generate sufficient revenue to meet the 120% Debt Service for FYE 2025
- Scenario 4B selected by City Council outlined the use of ~$6M bond financing in FYE 2025, with $3.8M going to replenish fund balance (remainder to be used for capital projects over the next 2-3 years)
- Under Scenario 4B the BEU cash balance is expected to be positive by end of FYE 2026
- In the absence of a bond financing, the BEU cash balance is expected to remain negative until FYE 2028

Should the City proceed at this time with <u>exploring</u> the issuance of approximately $6 million in bonds to replenish BEU cash balance and fund a portion of CIP for the next 2 years?

Financing Considerations

- S&P's November 2024 rating report indicated that rating downgrades were possible if liquidity does not materially improve on a sustained basis; waiting until FYE 2028 for BEU cash to recover to positive balance risks a further downgrade
- Current BEU credit rating is "junk" status, so a financing in 2025 would be issued without a credit rating, likely sold to one purchaser (e.g., a regional or national bank, aka "private placement")
- Term of the financing can vary – typically 10-15 years with a limit at 20 years for a private placement
- Interest rate on the unrated, private placement financing is could be in the 6-7% range
- Costs of issuing $6M in bonds are likely in the $100-120K range (~2% of principal) and would be paid out of the financing with no FYE 2025 budgetary impact to BEU
- Future annual debt service on a $6M financing would need to be factored into long-term financial and rate plans

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Next Steps: If directed, the City's financing team will contact banks for bids/term sheets on a $6M financing and will come back to Council in 1-2 months with a financing proposal and financing agreement for Council vote; financing team's work would be done on a contingent basis and the City will under no obligation to issue debt if bank bids are not acceptable

CITY OF BANNING
STAFF REPORT

TO:	**CITY COUNCIL**
FROM:	**Robert Fisher, Acting City Manager**
PREPARED BY:	**Art Vela, Public Works Director**
MEETING DATE:	**February 25, 2025**
SUBJECT:	**Discussion of a City of Banning Fire Hydrant Maintenance Program**

RECOMMENDATION:

Discuss the City's current fire hydrant maintenance activities and the development of a formal Fire Hydrant Maintenance Program.

BACKGROUND:

Due to the recent fires in Los Angeles County, the public has had general criticism about California's water management and specific concerns about fire hydrant readiness to serve. It's noted that the complications during the recent fires in Southern California primarily revolved around the severity and span of the fires along with a lack of water supply for various reasons (e.g. significant increase in fire suppression demand, unavailable equipment such as storage reservoirs and wells, etc.). Nonetheless, the magnitude of the devastation created by the recent fires is reason enough to reevaluate current practices and identify areas for improvement.

While the City of Banning, Water Division of the Public Works Department, does not currently have a formal written fire hydrant maintenance policy, current practices include the inspection and maintenance of fire hydrants of most, but not all, fire hydrants throughout the City. Typically, the City's Water Division staff inspect and operate fire hydrants during various activities such as: water main flushing, draining related to leak repairs, fire flow testing, installation of construction water meters, pressure testing/monitoring and visual inspections. While these activities regularly allow staff to ensure fire hydrants are maintained, it's possible that not all fire hydrants are visited and operated by staff.

In order to continue with the City's goal of providing safe, affordable and reliable water service, it would be prudent for the Public Works Department to develop a formal Fire Hydrant Maintenance Program which includes:

- Maintenance of approximately 1,820 Fire Hydrants (FH)
- Inspect and exercise each FH once every two years at minimum
- Maintain GIS mapping of FH
- Utilize Asset Management Software as system of record to ensure all FH are inspected and exercised
- Inspection checklist (e.g. rust, bolts, breakaways, paint, lubrication, weeds, traffic marker, nozzle caps, etc.)
- Repair and/or replace FH when needed
- Review and identification of areas in the City that may lack FH

If acceptable to City Council, staff will begin working on a formal written FH Maintenance Program and

present it to City Council at a later date.

JUSTIFICATION:

The development of a formal written Fire Hydrant Maintenance Program will ensure that FH are readily available and in operable condition.

FISCAL IMPACT:

It is anticipated that the Water Division would minimally need to add one Water Service Maintenance Worker position to be dedicated to the FH Maintenance Program.

Other unknown costs would be associated with water loss (non-revenue water) during FH flushing, FH repairs/replacements, miscellaneous materials.

ALTERNATIVES:

Do not move forward with a formal written FH Maintenance Program and continue with current practices.

BUDGETED?:

No

CONTRACT/AGREEMENT:

No

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AGREEMENT FOR PROFESSIONAL SERVICES (C00931) FOR DESIGN OF RAMSEY STREET WATER MAIN BY AND BETWEEN CITY OF BANNING AND GLENN A. RICK ENGINEERING & DEVELOPMENT CO. DBA RICK ENGINEERING COMPANY

THIS AGREEMENT FOR PROFESSIONAL SERVICES (herein "Agreement") is made and entered into this day: November 14, 2023, ("Effective Date") by and between the **CITY OF BANNING,** a California municipal corporation ("City") and Glenn A. Rick Engineering & Development Co., a California Corporation, dba Rick Engineering Company. ("Consultant"). City and Consultant are sometimes hereinafter individually referred to as "Party" and hereinafter collectively referred to as the "Parties."

RECITALS

A. City has sought by issuance of a Request for Proposals (RFP No. 23-036) from the bench of prequalified Engineers (RFQ-22-007), the performance of the services for the Design of Ramsey Street Water Main and as further defined and described particularly in Article 1 of this Agreement.

B. Consultant, following submission of a proposal for the performance of the services defined and described particularly in Article 1 of this Agreement, was selected by City to perform those services.

C. The Parties desire to formalize the selection of Consultant for performance of those services defined and described particularly in Article 1 of this Agreement and desire that the terms of that performance be as particularly defined and described herein.

D. Pursuant to the City of Banning's Municipal Code, City has authority to enter into this Agreement.

NOW, THEREFORE, in consideration of the mutual promises and covenants made by the Parties and contained herein and other consideration, the value and adequacy of which are hereby acknowledged, the Parties agree as follows:

ARTICLE 1. SERVICES OF CONSULTANT

1.1 Scope of Services.

In compliance with all terms and conditions of this Agreement, Consultant shall provide those services specified in the "Scope of Services" attached hereto as **Exhibit A** and incorporated herein by this reference, which services may be referred to herein as the "Services" hereunder. As a material inducement to City entering into this Agreement, Consultant represents and warrants that it has the qualifications, experience, and facilities necessary to properly perform the Services required under this Agreement in a thorough, competent, and professional manner, and is experienced in performing the Services contemplated herein. Consultant shall at all times faithfully, competently and to the best of its ability, experience and talent, perform all Services described herein. Consultant covenants that it shall follow the highest professional standards in

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performing the Services required hereunder and that all materials will be of good quality, and fit for the purpose intended. For purposes of this Agreement, the phrase "highest professional standards" shall mean those standards of practice recognized by one or more first-class firms performing similar work under similar circumstances. This Agreement calls for services that, in whole or in part, constitute "public works" as defined in the California Labor Code. Therefore, as to those services that are "public works," Consultant shall comply in all respects with all applicable provisions of the California Labor Code, including those set forth in Exhibit B hereto.

1.2 Contract Documents and Exhibits.

This Agreement includes the Request for Proposal and Consultant's accepted proposal ("Contract Documents"), both of which are on file with the City and incorporated herein by this general reference as though fully set forth herein. **Exhibit A** (Scope of Services), **Exhibit B** (Special Requirements), **Exhibit C** (Schedule of Compensation), and **Exhibit D** (Schedule of Performance) also constitute a part of this Agreement and are incorporated into this Agreement by this reference. Except as set forth in Section 1.10 regarding **Exhibit B**, this Agreement controls over the Contract Documents and the provisions in **Exhibits A, B** and **C**.

1.3 Compliance with Law.

Consultant shall keep itself informed concerning all ordinances, resolutions, statutes, rules, and regulations of City and any Federal, State or local governmental entity having jurisdiction in effect at the time service is rendered, and shall render all Services hereunder in accordance therewith.

1.4 Licenses, Permits, Fees and Assessments.

Consultant shall obtain and maintain during the term of this Agreement, at its sole cost and expense, all necessary licenses, permits, certificates and approvals required by law for the performance of Services under this Agreement, including a City business license. Consultant shall have the sole obligation to pay for all fees, assessments and taxes, plus applicable penalties and interest, which may be imposed by law and which arise from or are necessary for Consultant's performance of the Services required by this Agreement. Consultant shall indemnify, defend and hold harmless City, its officers, employees or agents, against all such fees, assessments, taxes, penalties or interest levied, assessed or imposed against City hereunder.

1.5 Familiarity with Services.

By executing this Agreement, Consultant warrants that Consultant: (i) has thoroughly investigated and considered the Scope of Services to be performed, (ii) has carefully considered how the Services should be performed, and (iii) fully understands the facilities and any difficulties and restrictions attending performance of the Services under this Agreement. If the Services involve work upon any site, Consultant warrants that Consultant has or will investigate the site and is or will be fully acquainted with the conditions existing therein, prior to commencement of Services hereunder. Should Consultant discover any latent or unknown conditions, which will materially affect the performance of the Services hereunder, Consultant shall immediately inform City of such fact and shall not proceed except at Consultant's risk until written instructions are received from the Contract Officer (defined in Section 1.12. A).

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1.6 Prevention of Loss and Damages.

Consultant shall adopt reasonable methods during the Term (defined in Section 3.4) to furnish continuous protection to the work product, and the equipment, materials, papers, documents, plans, studies and/or other components thereof to prevent losses or damages, and shall be responsible for all such damages, to persons or property, until acceptance of the Services by City, except such losses or damages as may be caused by City's own negligence.

1.7 Further Responsibilities of Parties.

Both Parties agree to use reasonable care and diligence to perform their respective obligations under this Agreement. Both Parties agree to act in good faith to execute all instruments, prepare all documents and take all actions as may be reasonable necessary to carry out the purposes of this Agreement. Unless hereafter specified, neither Party shall be responsible to perform the Services of the other.

1.8 Additional Services.

City shall have the right at any time during the performance of the Services, without invalidating this Agreement, to order extra services beyond that specified in the Scope of Services or to make changes by altering, adding to or deducting from the Services. No such extra services may be undertaken unless a written order is first given by the Contract Officer to Consultant, which written order incorporates therein an adjustment in (i) the Contract Sum (as defined in Section 2.1), and/or (ii) the Schedule of Performance, (as defined in Section 3.2), and which written order is approved in writing by Consultant. Any increase in compensation of up to ten percent (10%) of the Contract Sum, or $25,000, whichever is less; or in the Schedule of Performance of up to one hundred eighty (180) days may be approved by the Contract Officer. Any greater increases, taken either separately or cumulatively, must be approved by City Council. It is expressly understood by Consultant that the provisions of this Section shall not apply to Services which are specifically set forth in the Scope of Services or which are reasonably contemplated therein. Consultant hereby acknowledges that it accepts the risk that the Services to be provided pursuant to the Scope of Services may be more costly or time consuming than Consultant anticipates and that Consultant shall not be entitled to additional compensation therefor.

1.9 Facilities and Equipment.

Except as otherwise provided, Consultant shall, at its own cost and expense, provide all facilities and equipment necessary to perform the Services required by this Agreement. City shall make available to Consultant only physical facilities such as desks, filing cabinets, and conference space ("City Facilities"), as City deems, in its sole discretion, to be reasonably necessary for Consultant's use while consulting with City employees and reviewing records and the information in possession of City. The location, quality, and time of furnishing City Facilities shall be in the sole discretion of City. In no event shall City be required to furnish any facilities that may involve incurring any direct expense, including but not limited to a computer, long distance telephone, network data, internet or other communication charges, vehicles and reproduction facilities.

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1.10 Special Requirements.

Additional terms and conditions of this Agreement, if any, which are made a part hereof are set forth in the "Special Requirements" attached hereto as **Exhibit B** and incorporated herein by this reference. In the event of a conflict between the provisions of **Exhibit B** and any other provisions of this Agreement, the provisions of **Exhibit B** shall govern.

1.11 Corrections.

In addition to the indemnification obligations set forth in Article 4, and Sections 1.4, 1.13, 5.3, 5.4, and 6.3, Consultant shall correct, at its expense, all errors in the Services which may be disclosed during City's review of Consultant's report or plans. Should Consultant fail to make such correction(s) in a reasonably timely manner, such correction(s) may be made by City, and the cost thereof shall be charged to Consultant. In addition to all other available remedies, City may deduct the cost of such correction(s) from any retention amount held by City, or may withhold payment otherwise owed Consultant under this Agreement up to the amount of the cost of correction(s), as provided in Section 6.3.

1.12 Party Representatives.

A. Contract Officer: For the purposes of this Agreement, the Contract Officer shall be the City Manager, or such other person designated in writing by the City Manager ("Contract Officer"). Unless otherwise specified herein, any approval of City required hereunder shall mean the approval of the Contract Officer. The Contract Officer shall have authority, if specified in writing by the City Manager, to sign all documents on behalf of City required hereunder to carry out the terms of this Agreement.

B. Principals and Personnel of Consultant.

1) Consultant Representative: The following principal of Consultant is hereby designated as being the Consultant Representative authorized to act on Consultant's behalf regarding the Services specified herein and make all decisions in connection therewith:

Name	Title
Richard O'Neill	Associate Principal

It is expressly understood that the experience, knowledge, capability and reputation of the foregoing Consultant Representative were a substantial inducement for City to enter into this Agreement. Therefore, the foregoing Consultant Representative shall be responsible during the term of this Agreement for directing all activities of Consultant and devoting sufficient time to personally supervise the Services hereunder. All personnel of Consultant, and any authorized agents, shall at all times be under the exclusive direction and control of the Consultant Representative. For purposes of this Agreement, the foregoing Consultant Representative may not be replaced nor may their responsibilities be substantially reduced or reassigned by Consultant without the express written approval of City. It shall be Consultant's responsibility to assure that the Contract Officer is kept informed of the progress of the performance of the Services, and Consultant shall refer any decisions which must be made by City to the Contract Officer.

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2) Consultant's Personnel: Consultant has, or will secure at its own expense, all personnel required to perform the Services required under this Agreement. All of the Services required under this Agreement shall be performed by Consultant or under its supervision, and all personnel engaged in the Services shall be qualified to perform such Services. Consultant shall make every reasonable effort to maintain the stability and continuity of Consultant's staff and sub-contractors, if any, assigned to perform the Services required under this Agreement. Consultant shall notify City of all changes in Consultant's staff and sub-contractors, if any, assigned to perform the Services required under this Agreement, prior to and during any such performance. In the event that City, in its sole discretion, at any time during the term of this Agreement, desires to reassign any staff or sub-contractor of Consultant, City shall give notice as set forth in Section 8.1. Consultant shall, immediately upon the receipt of the notice to re-assign staff from City, reassign such person or persons.

1.13 Independent Contractor.

A. Consultant is an independent contractor and not an employee of City. Consultant shall have no power to incur any debt, obligation, or liability on behalf of City. All Services provided pursuant to this Agreement shall be performed by Consultant or under its supervision. Consultant will determine the means, methods, and details of performing the Services. Any additional personnel performing Services under this Agreement on behalf of Consultant shall also not be employees of City and shall at all times be under Consultant's exclusive direction and control. Consultant shall pay all wages, salaries, and other amounts due such personnel in connection with their performance of Services under this Agreement and as required by law. Consultant shall be responsible for all reports and obligations respecting such additional personnel, including, but not limited to: social security taxes, income tax withholding, unemployment insurance, disability insurance, and workers' compensation insurance.

B. Consultant shall indemnify and hold harmless City and its elected officials, officers, employees, servants, designated volunteers, and agents serving as independent contractors in the role of City officials, from any and all liability, damages, claims, costs and expenses of any nature to the extent arising from Consultant's personnel practices. City shall have the right to offset against the amount of any fees due to Consultant under this Agreement any amount due to City from Consultant as a result of Consultant's failure to promptly pay to City any reimbursement or indemnification arising under this Section.

1.14 Prohibition Against Subcontracting or Assignment.

The experience, knowledge, capability and reputation of Consultant, the Consultant Representative and employees were a substantial inducement for City to enter into this Agreement. Therefore, Consultant shall not contract with any other entity to perform in whole or in part the Services required hereunder without the express written approval of City. In addition, neither this Agreement nor any interest herein may be transferred, assigned, conveyed, hypothecated or encumbered voluntarily or by operation of law, whether for the benefit of creditors or otherwise, without the prior written approval of City. Transfers restricted hereunder shall include the transfer to any person or group of persons acting in concert of more than twenty-five percent (25%) of the present ownership and/or control of Consultant, taking all transfers into account on a cumulative basis. In the event of any such unapproved transfer, including any bankruptcy proceeding, this

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Agreement shall be void. No approved transfer shall release Consultant or any surety of Consultant of any liability hereunder without the express consent of City.

ARTICLE 2. COMPENSATION AND METHOD OF PAYMENT.

2.1 Contract Sum.

Subject to any limitations set forth in this Agreement, as full compensation for Services satisfactorily rendered, City shall pay Consultant at the hourly rates set forth in **Exhibit C-1** and the not-to-exceed sub-budget rates set forth in the "Schedule of Compensation" attached hereto as **Exhibit C** and incorporated herein by this reference. In no event shall Consultant be paid more than Three Hundred Eighty-Six Thousand Eight Hundred Ninety-Five ($386,895.00) (the "Contract Sum"). The Contract Sum shall include the attendance of Consultant at all project meetings reasonably deemed necessary by City. Coordination of the performance of the Services with City is a critical component of the Services. If Consultant is required to attend additional meetings to facilitate such coordination, Consultant shall not be entitled to any additional compensation for attending those meetings.

2.2 Method of Compensation.

The method of compensation may include: (i) a lump sum payment upon completion of the Services, (ii) payment in accordance with specified tasks or the percentage of completion of the Services, (iii) payment for time and materials based upon Consultant's rates as specified in the Schedule of Compensation, provided that time estimates are provided for the performance of sub tasks, but not exceeding the Contract Sum or (iv) such other methods as may be specified in the Schedule of Compensation.

2.3 Reimbursable Expenses.

City shall only reimburse Consultant for those actual and necessary expenses expressly set forth in **Exhibit C**. Reimbursable expenses may include reimbursement for actual and necessary expenditures for reproduction costs, telephone expenses, and travel expenses approved by the Contract Officer in advance, or actual sub-contractor expenses of an approved sub-contractor pursuant to Section 1.14, and only if specified in the Schedule of Compensation.

2.4 Unauthorized Services and Expenses.

City will not pay for any Services or reimburse for any expenses incurred which are not specified in the Scope of Services, unless authorized in writing as set forth in Section 1.8 of this Agreement. City shall make payment for such authorized additional Services and expenses in accordance with Article 2 of this Agreement.

2.5 Invoices.

Each month Consultant shall furnish to City an original invoice for all Services performed and expenses incurred during the preceding month. Each such invoice shall contain all of the information set forth in Section III of **Exhibit C** to this Agreement. By submitting an invoice for payment under this Agreement, Consultant is certifying compliance with all provisions of the

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Agreement. Consultant shall not invoice City for any duplicate Services performed by more than one person.

City shall independently review each invoice submitted by Consultant to determine whether the Services performed and expenses incurred are in compliance with the provisions of this Agreement. City will use its best efforts to cause Consultant to be paid within thirty (30) days of receipt of Consultant's correct and undisputed invoice, except as to any charges for Services performed or expenses incurred by Consultant which are disputed by City, or as provided in Section 6.3. In the event any charges or expenses are disputed by City, the original invoice shall be returned by City to Consultant for correction and resubmission. Review and payment by City of any invoice provided by Consultant shall not constitute waiver of any rights or remedies provided herein or any applicable law.

2.6 Waiver.

Payment to Consultant for Services performed pursuant to this Agreement shall not be deemed to waive any defects in Services performed by Consultant.

ARTICLE 3. PERFORMANCE SCHEDULE

3.1 Time of Essence.

Time is of the essence in the performance of this Agreement; provided, however, that the foregoing shall not be construed to limit or deprive a Party of the benefits of any grace or use period allowed in this Agreement.

3.2 Schedule of Performance.

Consultant shall commence the Services pursuant to this Agreement upon receipt of a written notice to proceed and shall perform all Services within the time period(s) established in the "Schedule of Performance" attached hereto as **Exhibit D** and incorporated herein by this reference.

3.3 Force Majeure.

The time period(s) specified in the Schedule of Performance for performance of the Services rendered pursuant to this Agreement may be extended because of any delays due to unforeseeable causes beyond the control and without the fault or negligence of Consultant. Such unforeseeable consequences include, but are not restricted to, acts of God or public enemy, unusually severe weather, fires, earthquakes, floods, epidemics, quarantine restrictions, riots, strikes, freight embargoes, wars, litigation, and/or acts of any governmental agency, including City, if Consultant shall within ten (10) days of the commencement of such delay notify the Contract Officer in writing of the causes of the delay. The Contract Officer shall ascertain the facts and the extent of delay, and extend the time for performing the Services for the period of the enforced delay when and if in the judgment of the Contract Officer such delay is justified, subject to the provisions of Section 1.8. The Contract Officer's determination (or the City Council's determination, in the event the period of enforced delay exceeds the period specified in Section 1.8) shall be final and conclusive upon the Parties to this Agreement. In no event shall Consultant

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be entitled to recover damages against City for any delay in the performance of this Agreement, however caused; Consultant's sole remedy shall be the extension of the Agreement pursuant to this Section.

3.4 Term.

The Term of this Agreement shall be from the Effective Date through June 30, 2024, unless sooner terminated as provided in Article 6 of this Agreement or extended as provided in Sections 1.8 and 3.3 of this Agreement. Maximum term and any subsequent amendment or modification shall not exceed five (5) years.

ARTICLE 4. INSURANCE AND INDEMNIFICATION

4.1 Minimum Scope and Limits of Insurance.

Consultant shall procure and at all times during the term of this Agreement carry, maintain, and keep in full force and effect, insurance as follows:

A. Commercial General Liability Insurance with a minimum limit of $1,000,000.00 per occurrence for bodily injury, personal injury and property damage and a general aggregate limit of $2,000,000.00 per project or location. If Consultant is a limited liability company, the commercial general liability coverage shall be amended so that Consultant and its managers, members, affiliates, employees, agents and other persons necessary or incidental to its operation are insureds.

B. Automobile Liability Insurance for any owned, non-owned or hired vehicle used in connection with the performance of this Agreement with a combined single limit of $1,000,000.00 per accident for bodily injury and property damage. If Consultant does not use any owned, non-owned or hired vehicles in the performance of Services under this Agreement, Consultant shall obtain a non-owned auto endorsement to the Commercial General Liability policy.

C. Workers' Compensation Insurance as required by the State of California and Employer's Liability Insurance with a minimum limit of $1,000,000.00 per accident for bodily injury or disease. If Consultant has no employees while performing Services under this Agreement, workers' compensation policy is not required; however, Consultant shall execute a declaration that it has no employees.

D. Professional Liability/Errors and Omissions Insurance with minimum limits of $1,000,000.00 per claim and in the aggregate.

4.2 Acceptability of Insurers.

The insurance policies required under this Article shall be issued by an insurer admitted to write insurance in the State of California with a rating of A:VII or better in the latest

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edition of the A.M. Best Insurance Rating Guide. Self-insurance shall not be considered to comply with the insurance requirements under this Article.

4.3 Additional Insured.

The commercial general and automobile liability policies shall contain an endorsement naming City, its officers, employees, agents and volunteers as additional insureds.

4.4 Primary and Non-Contributing.

The insurance policies required under this Article shall apply on a primary non-contributing basis in relation to any other insurance or self-insurance available to City. Any insurance or self-insurance maintained by City, its officers, employees, agents or volunteers, shall be in excess of Consultant's insurance and shall not contribute with it.

4.5 Consultant's Waiver of Subrogation.

The insurance policies required under this Article shall not prohibit Consultant and Consultant's employees, agents or sub-contractors from waiving the right of subrogation prior to a loss. Consultant hereby waives all rights of subrogation against City.

4.6 Deductibles and Self-Insured Retentions.

Any deductibles or self-insured retentions must be declared to and approved by City. At City's option, Consultant shall either reduce or eliminate the deductibles or self-insured retentions with respect to City; or Consultant shall procure a bond guaranteeing payment of losses and expenses.

4.7 Cancellations or Modifications to Coverage.

Consultant shall not cancel, reduce or otherwise modify the insurance policies required by this Article during the term of this Agreement. The commercial general and automobile liability policies required under this Agreement shall be endorsed to state that should the issuing insurer cancel the policy before the expiration date, the issuing insurer will endeavor to mail 30 days' prior written notice to City. If any insurance policy required under this Article is canceled or reduced in coverage or limits, Consultant shall, within two (2) Business Days (as defined in Section 8.12) of notice from the insurer, phone, fax or notify City via certified mail, return receipt requested, of the cancellation of or changes to the policy.

4.8 City Remedy for Noncompliance.

If Consultant does not maintain the policies of insurance required under this Article in full force and effect during the term of this Agreement, or in the event any of Consultant's policies do not comply with the requirements under this Article, City may either immediately terminate this Agreement or, if insurance is available at a reasonable cost, City may, but has no duty to, take out the necessary insurance and pay, at Consultant's expense, the premium thereon. Consultant shall promptly reimburse City for any premium paid by City, or City may withhold amounts sufficient to pay the premiums from payments due to Consultant.

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4.9 Evidence of Insurance.

Prior to the performance of Services under this Agreement, Consultant shall furnish the City Clerk with a certificate or certificates of insurance and all original endorsements evidencing and effecting the coverages required under this Article. The endorsements are subject to City's approval. Consultant may provide complete, certified copies of all required insurance policies to City. Consultant shall maintain current endorsements on file with the City Clerk. Consultant shall provide proof to the City Clerk that insurance policies expiring during the term of this Agreement have been renewed or replaced with other policies providing at least the same coverage. Consultant shall furnish such proof at least two (2) weeks prior to the expiration of the coverages.

4.10 Indemnity Requirements not Limiting.

Procurement of insurance by Consultant shall not be construed as a limitation of Consultant's liability or as full performance of Consultant's duty to indemnify City under this Agreement.

4.11 Sub-contractor Insurance Requirements.

Consultant shall require each of its sub-contractors that perform Services under this Agreement to maintain insurance coverage that meets all of the requirements of this Article.

4.12 Indemnification, Hold Harmless, and Duty to Defend.

A. Indemnification of City.

1) Indemnity for Design Professional Services. To the fullest extent permitted by law, Consultant shall, at its sole cost and expense, protect, indemnify, and hold harmless City and its elected officials, officers, attorneys, agents, employees, designated volunteers, successors, assigns and those City agents serving as independent contractors in the role of City officials (collectively "Indemnitees"), from and against any and all damages, costs, expenses, liabilities, claims, demands, causes of action, proceedings, judgments, penalties, liens, and losses of any nature whatsoever, including fees of accountants, attorneys, or other professionals and all costs associated therewith, and reimbursement of attorney's fees and costs of defense (collectively "Liabilities"), whether actual, alleged or threatened, which arise out of, are claimed to arise out of, pertain to, or relate to, in whole or in part, the negligence, recklessness or willful misconduct of Consultant, its officers, agents, servants, employees, subcontractors, material men, contractors or their officers, agents, servants or employees (or any entity or individual that Consultant shall bear the legal liability thereof) in the performance of design professional services under this Agreement by a "design professional," as the term is defined under California Civil Code Section 2782.8(c).

2) Other Indemnities. Other than in the performance of design professional services, and to the fullest extent permitted by law, Consultant shall, at its sole cost and expense, defend, hold harmless and indemnify Indemnitees from and against any and all damages, costs, expenses, liabilities, claims, demands, causes of action, proceedings, expenses, judgments, penalties, liens, and losses of any nature whatsoever, including fees of accountants, attorneys, or other professionals and all costs associated therewith and the payment of all consequential

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damages (collectively "Claims"), at law or in equity, whether actual, alleged or threatened, which arise out of, are claimed to arise out of, pertain to, or relate to the acts or omissions of Consultant, its officers, agents, servants, employees, sub-contractors, materialmen, consultants or their officers, agents, servants or employees (or any entity or individual that Consultant shall bear the legal liability thereof) in the performance of this Agreement, including the Indemnitees' active or passive negligence, except for Claims arising from the sole negligence or willful misconduct of the Indemnitees as determined by court decision or by the agreement of the Parties. Consultant shall defend the Indemnitees in any action or actions filed in connection with any Claims with counsel of the Indemnitees' choice, and shall pay all costs and expenses, including all attorneys' fees and experts' costs actually incurred in connection with such defense. Consultant shall reimburse the Indemnitees for any and all legal expenses and costs incurred by Indemnitees in connection therewith.

3) Consultant shall pay all required taxes on amounts paid to Consultant under this Agreement, and indemnify and hold City harmless from any and all taxes, assessments, penalties, and interest asserted against City by reason of the independent contractor relationship created by this Agreement. Consultant shall fully comply with the workers' compensation law regarding Consultant and Consultant's employees. Consultant shall indemnify and hold City harmless from any failure of Consultant to comply with applicable workers' compensation laws. City may offset against the amount of any fees due to Consultant under this Agreement any amount due to City from Consultant as a result of Consultant's failure to promptly pay to City any reimbursement or indemnification arising under this subparagraph A.3.

4) Consultant shall obtain executed indemnity agreements with provisions identical to those in this Article from each and every sub-contractor or any other person or entity involved by, for, with or on behalf of Consultant in the performance of this Agreement. If Consultant fails to obtain such indemnities, Consultant shall be fully responsible and indemnify, hold harmless and defend the Indemnitees from and against any and all Liabilities and Claims, in law or in equity, whether actual, alleged or threatened, which arise out of, are claimed to arise out of, pertain to, or relate to the acts or omissions of Consultant's sub-contractor, its officers, agents, servants, employees, sub-contractors, materialmen, contractors or their officers, agents, servants or employees (or any entity or individual that Consultant's sub-contractor shall bear the legal liability thereof) in the performance of this Agreement, including the Indemnitees' active or passive negligence, except for Liabilities and Claims arising from the sole negligence or willful misconduct of the Indemnitees, as determined by court decision or by the agreement of the Parties.

B. Workers' Compensation Acts not Limiting. Consultant's indemnifications and obligations under this Article, or any other provision of this Agreement, shall not be limited by the provisions of any workers' compensation act or similar act. Consultant expressly waives its statutory immunity under such statutes or laws as to City, its officers, agents, employees and volunteers.

C. Insurance Requirements not Limiting. City does not, and shall not, waive any rights that it may possess against Consultant because of the acceptance by City, or the deposit with City, of any insurance policy or certificate required pursuant to this Agreement. The indemnities in this Article shall apply regardless of whether or not any insurance policies are determined to be applicable to the Liabilities, tax, assessment, penalty or interest asserted against City.

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D. Survival of Terms. Consultant's indemnifications and obligations under this Article shall survive the expiration or termination of this Agreement.

ARTICLE 5. RECORDS, REPORTS, AND RELEASE OF INFORMATION

5.1 Service Records.

Consultant shall keep, and require sub-contractors to keep, such ledgers, books of accounts, invoices, vouchers, canceled checks, reports, studies or other documents relating to the disbursements charged to City and Services performed hereunder (the "Service Records"), as shall be necessary to perform the Services required by this Agreement and enable the Contract Officer to evaluate the performance of such Services. Any and all such Service Records shall be maintained in accordance with generally accepted accounting principles and shall be complete and detailed. The Contract Officer shall have full and free access to such Service Records at all times during normal business hours of City, including the right to inspect, copy, audit and make copies and transcripts from such Service Records. Such Service Records shall be maintained for a period of three (3) years following completion of the Services hereunder, and City shall have access to such Service Records in the event any audit is required. In the event of dissolution of Consultant's business, custody of the Service Records may be given to City, and access shall be provided by Consultant's successor in interest ("Consultant's Successor"). If custody of the Service Records is given to Consultant's Successor, Consultant shall give written notice to City of the transfer of the Service Records to Consultant's Successor. The notice shall include contact information (address and telephone number) for Consultant's Successor, and access shall be provided to City by Consultant's Successor.

5.2 Reports.

Consultant shall periodically prepare and submit to the Contract Officer such reports concerning the performance of the Services required by this Agreement as the Contract Officer shall require. Consultant hereby acknowledges that City is greatly concerned about the cost of Services to be performed pursuant to this Agreement. For this reason, Consultant agrees that if Consultant becomes aware of any facts, circumstances, techniques, or events that may or will materially increase or decrease the cost of the Services contemplated herein, Consultant shall promptly notify the Contract Officer of that fact, circumstance, technique or event and the estimated increased or decreased cost related thereto.

5.3 Ownership of Documents.

All drawings, specifications, maps, designs, photographs, studies, surveys, data, notes, computer files, reports, records, documents and other materials (the "Consultant Documents") prepared by Consultant, its employees, sub-contractors and agents in the performance of this Agreement shall be the property of City and shall be delivered to City upon request of the Contract Officer or upon the termination of this Agreement. Consultant shall have no claim for further employment or additional compensation as a result of the exercise by City of its full rights of ownership use, reuse, or assignment of the Consultant Documents hereunder. Any use, reuse or assignment of such completed Consultant Documents for other projects and/or use of uncompleted Consultant Documents without specific written authorization by Consultant will be at City's sole

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risk and without liability to Consultant, and Consultant's guarantee and warranties shall not extend to such use or assignment. Consultant may retain copies of such Consultant Documents for its own use. Consultant shall have an unrestricted right to use the concepts embodied therein. All sub-contractors shall provide for assignment to City of all Consultant Documents prepared by them; and in the event Consultant fails to secure such assignment, Consultant shall indemnify City for all damages resulting therefrom.

5.4 Confidentiality and Release of Information.

A. All information gained or work product produced by Consultant in performance of this Agreement shall be considered confidential, unless such information is in the public domain or already known to Consultant. Consultant shall not release or disclose any such information or work product to persons or entities other than City without prior written authorization from the Contract Officer.

B. Consultant, its officers, employees, agents or sub-contractors, shall not, without prior written authorization from the Contract Officer or unless requested by the City Attorney, voluntarily provide documents, declarations, letters of support, testimony at depositions, response to interrogatories or other information concerning the Services performed under this Agreement. Response to a subpoena or court order shall not be considered "voluntary" provided Consultant gives City notice of such court order or subpoena.

C. If Consultant, or any officer, employee, agent or sub-contractor of Consultant, provides any information or work product in violation of this Agreement, then City shall have the right to reimbursement and indemnity from Consultant for any damages, costs and fees, including attorneys' fees, caused by or incurred as a result of Consultant's conduct.

D. Consultant shall promptly notify City should Consultant, its officers, employees, agents or sub-contractors be served with any summons, complaint, subpoena, notice of deposition, request for documents, interrogatories, request for admissions or other discovery request, court order or subpoena from any Party regarding this Agreement and the Services performed thereunder. City retains the right, but has no obligation, to represent Consultant or be present at any deposition, hearing or similar proceeding. Consultant agrees to cooperate fully with City and to provide City with the opportunity to review any response to discovery requests provided by Consultant. However, this right to review any such response does not imply or mean the right by City to control, direct, or rewrite the response.

ARTICLE 6. ENFORCEMENT OF AGREEMENT AND TERMINATION

6.1 California Law.

This Agreement, and any dispute arising from the relationship between the Parties to this Agreement, shall be interpreted, construed and governed both as to validity and to performance of the Parties in accordance with the laws of the State of California. Legal actions concerning any dispute, claim or matter arising out of or in relation to this Agreement shall be instituted in the Superior Court of the County of Riverside, State of California, or any other appropriate court in such county, and Consultant covenants and agrees to submit to the personal jurisdiction of such

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court in the event of such action. In the event of litigation in a U.S. District Court, venue shall lie exclusively in the Central District of California, in Riverside.

6.2 Disputes; Default.

A. In the event that City determines Consultant is in default under the terms of this Agreement, City shall have no obligation or duty to continue compensating Consultant for any Services performed after the date of default. In addition to the provisions of Section 4.8, and the right to terminate pursuant to Section 6.7, if the City Manager determines that Consultant is in default in the performance of any of the terms or conditions of this Agreement, City may serve Consultant with written notice of the default. Consultant shall have ten (10) calendar days after service upon it of the notice in which to cure the default by rendering a satisfactory performance. In the event that Consultant fails to cure its default within such period of time, City may, notwithstanding any other provision of this Agreement, terminate this Agreement without further notice and without prejudice to any other remedy to which it may be entitled at law, in equity or under this Agreement.

B. In the event of termination pursuant to this Section, City may take over the Services and prosecute the same to completion by contract or otherwise, and Consultant shall be liable to the extent that the total cost for completion of the Services required hereunder exceeds the compensation herein stipulated (provided that City shall use reasonable efforts to mitigate such damages), and City may withhold any payments to Consultant for the purpose of set-off or partial payment of the amounts owed City as provided in Section 6.3.

6.3 Retention of Funds.

Consultant hereby authorizes City to deduct from any amount payable to Consultant (whether or not arising out of this Agreement): (i) any payment amount of which may be in dispute hereunder or which is necessary to compensate City for any losses, costs, liabilities, or damages suffered by City, (ii) all amounts retained pursuant to the provisions of Section 4.8, (iii) all amounts for which City may be liable to third parties, by reason of Consultant's acts or omissions in performing or failing to perform Consultant's obligation under this Agreement, and (iv) all payments due or that become due to Consultant during the period that Consultant or any of its sub-contractors fail to maintain any required insurance in full force and effect, until notice is received by City that the required insurance has been restored to full force and effect and that the premiums therefore have been paid for a period satisfactory to City, as provided in Section 4.9, above. In the event that any claim is made by a third party, the amount or validity of which is disputed by Consultant, or any indebtedness shall exist which shall appear to be the basis for a claim of lien, City may withhold from any payment due, without liability for interest because of such withholding, an amount sufficient to cover such claim. The failure of City to exercise such right to deduct or to withhold shall not, however, affect the obligations of Consultant to insure, indemnify, and protect City as elsewhere provided herein.

6.4 Waiver.

Waiver by any Party to this Agreement of any term, condition, or covenant of this Agreement shall not constitute a waiver of any other term, condition, or covenant. Waiver by any

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Party of any breach of the provisions of this Agreement shall not constitute a waiver of any other provision or a waiver of any subsequent breach or violation of any provision of this Agreement. Acceptance by City of any Services by Consultant shall not constitute a waiver of any of the provisions of this Agreement. No delay or omission in the exercise of any right or remedy by a non-defaulting Party on any default shall impair such right or remedy or be construed as a waiver. Any waiver by either Party of any default must be in writing, and shall not be a waiver of any other default concerning the same or any other provision of this Agreement.

6.5 Rights and Remedies are Cumulative.

Except with respect to rights and remedies expressly declared to be exclusive in this Agreement, the rights and remedies of the Parties are cumulative and the exercise by either Party of one or more of such rights or remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default or any other default by the other Party.

6.6 Legal Action.

In addition to any other rights or remedies, either Party may take legal action, in law or in equity, to cure, correct or remedy any default, to recover damages for any default, to compel specific performance of this Agreement, to obtain declaratory or injunctive relief, or to obtain any other remedy consistent with the purposes of this Agreement. Notwithstanding any contrary provision herein, Consultant must file a statutory claim pursuant to Government Code Sections 905 et seq. and 910 et seq., in order to pursue a legal action against City under this Agreement.

6.7 Termination Prior to Expiration of Term.

This Article 6 shall govern any termination of this Agreement except as specifically provided in Section 6.2 for termination for default of Consultant. City reserves the right to terminate this Agreement at any time, with or without cause, upon thirty (30) days' written notice to Consultant, except that where termination is due to the fault of Consultant, the period of notice may be a shorter time as may be determined by the Contract Officer. In addition, Consultant reserves the right to terminate this Agreement at any time, with or without cause, upon sixty (60) days' written notice to City, except that where termination is due to the fault of City, the period of notice may be a shorter time as Consultant may determine. Upon receipt of any notice of termination, Consultant shall immediately cease all Services hereunder except such as may be specifically approved by the Contract Officer. Except where Consultant has initiated termination, Consultant shall be entitled to compensation for all Services rendered prior to the effective date of the notice of termination and for any Services authorized by the Contract Officer thereafter in accordance with the Schedule of Compensation or such as may be approved by the Contract Officer, except as provided in Section 6.3. In the event Consultant has initiated termination, Consultant shall be entitled to compensation only for the reasonable value of the work product actually produced hereunder. In the event of termination without cause pursuant to this Section, the terminating Party need not provide the non-terminating Party with the opportunity to cure pursuant to Section 6.2.

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6.8 Attorneys' Fees.

In any litigation or other proceeding by which a Party seeks to enforce its rights under this Agreement (whether in contract, tort or both) or seeks a declaration of any rights or obligations under this Agreement, the prevailing Party in such action or proceeding, in addition to any other relief which may be granted, whether legal or equitable, shall be entitled to reasonable attorneys' fees. Attorneys' fees shall include attorney's fees on any appeal, and in addition the Party entitled to attorneys' fees shall be entitled to all other reasonable costs for investigating such action, taking depositions and discovery and all other necessary costs the court allows which are incurred in such litigation. All such fees shall be deemed to have accrued on commencement of such action and shall be enforceable whether or not such action is prosecuted to judgment.

ARTICLE 7. CITY OFFICERS AND EMPLOYEES: NON-DISCRIMINATION

7.1 Non-liability of City Officers and Employees.

No officer or employee of City shall be personally liable to Consultant, or Consultant's Successor, in the event of any default or breach by City or for any amount which may become due to Consultant or Consultant's Successor, or for breach of any obligation of the terms of this Agreement.

7.2 Conflict of Interest.

Consultant covenants that neither it, nor any officer or principal of its firm, has or shall acquire any interest, directly or indirectly, which would conflict in any manner with the interests of City or which would in any way hinder Consultant's performance of Services under this Agreement. Consultant further covenants that in the performance of this Agreement, no person having any such interest shall be employed by it as an officer, employee, agent or sub-contractor without the express written consent of the Contract Officer. Consultant agrees to at all times avoid conflicts of interest or the appearance of any conflicts of interest with the interests of City in the performance of this Agreement.

No officer or employee of City shall have any direct or indirect financial interest in this Agreement within the scope of Government Code section 1090, nor shall any such officer or employee make, participate in making, or use his or her official position to influence, any City decision relating to the Agreement which has a material financial effect on his or her financial interests or the financial interests of any corporation, partnership or association in which he or she is, directly or indirectly, interested, in violation of any State statute or regulation. Consultant warrants that it has not paid or given, and will not pay or give any third party any money or other consideration for obtaining this Agreement.

Consultant and its officers, employees, associates and sub-contractors, if any, shall comply with all conflict of interest statutes of the State of California applicable to Consultant's Services under this Agreement, including the Political Reform Act (Gov. Code § 81000, et seq.) and Government Code Section 1090. During the term of this Agreement, Consultant may perform similar services for other clients; but Consultant and its officers, employees, associates and sub-contractors shall not, without the Contract Officer's prior written approval, perform services for another person or entity for whom Consultant is not currently performing services that would

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require Consultant or one of its officers, employees, associates or sub-contractors to abstain from a decision under this Agreement pursuant to a conflict of interest statute. Consultant shall incorporate a clause substantially similar to this Section into any subcontract that Consultant executes in connection with the performance of this Agreement.

7.3 Covenant Against Discrimination.

Consultant covenants that, by and for itself, its heirs, executors, assigns, and all persons claiming under or through them, that there shall be no discrimination against or segregation of, any person or group of persons on account of race, color, creed, religion, sex, gender, sexual orientation, marital status, national origin, or ancestry in the performance of this Agreement. Consultant shall take affirmative action to insure that applicants are employed, and that employees are treated during employment, without regard to their race, color, creed, religion, sex, marital status, national origin, or ancestry, or other protected class.

7.4 Unauthorized Aliens.

Consultant hereby promises and agrees to comply with all of the provisions of the Federal Immigration and Nationality Act, 8 U.S.C.A. §§ 1101, et seq., as amended, and in connection therewith, shall not employ unauthorized aliens as defined therein. Should Consultant so employ such unauthorized aliens for the performance of Services covered by this Agreement, and should the any liability or sanctions be imposed against City for such use of unauthorized aliens, Consultant hereby agrees to and shall reimburse City for the cost of all such liabilities or sanctions imposed, together with any and all costs, including attorneys' fees, incurred by City.

ARTICLE 8. MISCELLANEOUS PROVISIONS

8.1 Notices.

Any notice, demand, request, document, consent, approval, bill, invoice, report or other communication required or permitted under this Agreement shall be in writing and conclusively deemed effective: (a) on confirmed delivery by courier service or overnight delivery service during Consultant's and City's regular business hours; or (b) three (3) Business Days after deposit in the United States mail, by certified or registered mail, and addressed to the Party to be notified as set forth below:

If to City

Attn: Nathan Smith
Deputy Director of Engineering
City of Banning
99 East Ramsey Street
Banning, California 92220
Email: nsmith@banningca.gov

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With a courtesy copy to:	Serita R. Young, City Attorney Richards, Watson & Gershon 350 South Grand Avenue, 37th Floor Los Angeles, California 90071 Email: SYoung@rwglaw.com
If to Consultant:	Attn: Rick O'Neill Rick Engineering Company 1770 Iowa Avenue, Suite 100 Riverside, CA 92507

8.2 Interpretation.

The terms of this Agreement shall be construed in accordance with the meaning of the language used and shall not be construed for or against either Party by reason of the authorship of this Agreement or any other rule of construction which might otherwise apply.

8.3 Counterparts.

This Agreement may be executed in counterparts, each of which shall be deemed to be an original, and such counterparts shall constitute one and the same instrument.

8.4 Integration; Amendment.

This Agreement, and all exhibits referred to in this Agreement, constitute the final, complete and exclusive statement of the terms of the agreement between the Parties pertaining to the subject matter of this Agreement and supersede all other and cancels any and all previous negotiations, arrangements, agreements and understandings, if any, between the Parties, and none shall be used to interpret this Agreement. No Party has been induced to enter into this Agreement by, nor is any Party relying on, any representation or warranty except those expressly set forth in this Agreement. No amendment to or modification of this Agreement, nor any provision or breach hereof waived, shall be valid unless made in writing and approved by Consultant and by City Council. The Parties agree that this requirement for written modifications cannot be waived and that any attempted waiver shall be void.

8.5 Severability.

In the event that any one or more of the phrases, sentences, clauses, paragraphs, or sections contained in this Agreement shall be declared invalid or unenforceable by a valid judgment or decree of a court of competent jurisdiction, such invalidity or unenforceability shall not affect any of the remaining phrases, sentences, clauses, paragraphs, or sections of this Agreement which are hereby declared as severable and shall be interpreted to carry out the intent of the Parties hereunder unless the invalid provision is so material that its invalidity deprives either Party of the basic benefit of their bargain or renders this Agreement meaningless.

8.6 Mutual Cooperation.

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A. City's Cooperation. City shall provide Consultant with all pertinent data, documents and other requested information as is reasonably available for Consultant's proper performance of the Services required under this Agreement.

B. Consultant's Cooperation. In the event any claim or action is brought against City relating to Consultant's performance of Services rendered under this Agreement, Consultant shall render any reasonable assistance that City requires.

8.7 No Third Party Beneficiaries Intended.

This Agreement is made solely for the benefit of the Parties to this Agreement and their respective successors and assigns, and no other person or entity may have or acquire a right by virtue of this Agreement.

8.8 Final Payment Acceptance Constitutes Release.

The acceptance by Consultant of the final payment made under this Agreement shall operate as and be a release of City from all claims and liabilities for compensation to Consultant for anything done, furnished or relating to Consultant's Services. Acceptance of payment shall be any negotiation of City's check or the failure to make a written extra compensation claim within ten (10) calendar days of the receipt of that check. However, approval or payment by City shall not constitute, nor be deemed, a release of the responsibility and liability of Consultant, its employees, sub-contractors and agents for the accuracy and competency of the information provided and/or Services performed; nor shall such approval or payment be deemed to be an assumption of such responsibility or liability by City for any defect or error in the Services prepared by Consultant, its employees, sub-contractors and agents.

8.9 Non-Appropriation of Funds.

Payments to be made to Consultant by City for Services performed within the current fiscal year which are within the current fiscal budget and within an available, unexhausted fund. In the event that City does not appropriate sufficient funds for payment of Consultant's Services beyond the current fiscal year, this Agreement shall cover payment for Consultant's Services only to the conclusion of the last fiscal year in which City appropriates sufficient funds and shall automatically terminate at the conclusion of such fiscal year.

8.10 Headings.

The headings in this Agreement are included solely for convenience of reference and shall not affect the interpretation of any provision of this Agreement or any of the rights or obligations of the Parties to this Agreement.

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8.11 Word Usage.

Unless the context clearly requires otherwise, (a) the words "shall," "will" and "agrees" are mandatory and "may" is permissive; (b) "or" is not exclusive; and (c) "includes" or "including" are not limiting.

8.12 Business Days.

"Business Days" refers to days that the Banning City Hall is open for business.

8.13 Corporate Authority.

The persons executing this Agreement on behalf of the Parties hereto warrant that (i): such Party is duly organized and existing, (ii) they are duly authorized to execute and deliver this Agreement on behalf of that Party, (iii) by so executing this Agreement, such Party is formally bound to the provisions of this Agreement, and (iv) the entering into this Agreement does not violate any provision of any other Agreement to which that Party is bound. This Agreement shall be binding upon the heirs, executors, administrators, successors and assigns of the Parties.

8.14 Electronic Signatures.

Each Party may adopt as its signature an electronic identification consisting of a symbol or code that is affixed to or contained in each document transmitted by such Party ("electronic signature"). The Parties hereto herby agree that electronic signatures are acceptable, shall have the same force and effect under the law as original wet signatures, and shall be sufficient to verify that the Parties have executed this Agreement and such other documents transmitted by the Parties.

[SIGNATURES ON FOLLOWING PAGE]

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IN WITNESS WHEREOF the Parties hereto have executed this Agreement the day and year first hereinabove written.

CITY OF BANNING

11/15/2023

Douglas Schulze, Date
City Manager

ATTEST:

11/15/2023

Caroline Patton Date
Deputy City Clerk

APPROVED AS TO FORM:
Richards, Watson & Gershon

Serita Young 11/8/2023

Serita R. Young Date
City Attorney

CONSULTANT

Richard O'Neill 11/10/2023

NAME: Richard O'Neill Date
TITLE: Associate Principal

NAME: Date
TITLE:

95-1859899

Tax ID No.

Address:
Rick Engineering Company
1770 Iowa Ave, Suite 100
Riverside, CA 92507

City Council Approval: 11/14/2023

NOTE: PROOF OF AUTHORITY TO BIND CONTRACTING PARTY REQUIRED. APPROPRIATE ATTESTATIONS SHALL BE INCLUDED AS MAY BE REQUIRED BY THE BYLAWS, ARTICLES OF INCORPORATION, OR OTHER RULES OR REGULATIONS APPLICABLE TO CONSULTANT'S BUSINESS ENTITY.

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EXHIBIT "A"
SCOPE OF SERVICES

I. Consultant will perform the following Services in connection with providing Engineer Design Services prepared in connection therewith:

II. As part of the Services, Consultant will prepare and deliver the following tangible work products and services to City:

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SCOPE OF WORK

Rick Engineering Company (RICK) will perform the following services in connection with providing the design of a new ductile iron pipe (size TBD by city) water main in Ramsey Street between Sunset Avenue and Highland Home Road based on the following scope of work.

Task 1. Project Management

1.1 Kick-off Meeting and Project Management

After execution of the contract, Rick Engineering Company (RICK) will schedule and attend a kick-off meeting with the City of Banning (City) to discuss the project scope, goals, preliminary findings and alignment selected by the City, finalize the project schedule, and identify available as-built plans and studies. RICK will prepare the meeting agenda and provide the team with meeting minutes following the meeting.

RICK will provide project management of the project that includes preparation and maintenance of a project specific Work Plan. The Work Plan will include details of methodology of design, sequence of tasks lists of deliverables, milestone submittal schedule, summary of organizational responsibilities, and a communication plan with contacts of all team members. Additionally, RICK will provide utility coordination with the utility providers that have utilities along the alignment, and perform quality assurance and quality control prior to each milestone submittal, and in conformance with federal, state, and city standards.

Deliverables – Meeting agenda and minutes, Work Plan

1.2 Progress Meetings

RICK will schedule monthly progress meetings with the City and project team, that will be face to face or virtual, and facilitate additional meetings with the City departments/stakeholders as needed for the project during the project duration. Scope assumes 8 monthly meetings, that includes milestone design review / comment resolution meetings and an additional 3 project meetings.
RICK will prepare agendas and minutes for the meetings, distribute the minutes, and will also provide a monthly progress report to be included with the monthly invoice.

Deliverables – Meeting agendas and minutes

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1.3 Invoicing

RICK will develop and provide a monthly invoice to the City. The invoice will include RICK labor costs, subconsultant invoices and direct expenses. Direct expenses will be supported by a copy of the receipt if applicable. Invoices shall include details of billed and remaining budget for each task, and will include the monthly progress report of the tasks completed, identify any outstanding issues to be resolved, and upcoming work to be performed.

Deliverable – Monthly invoices and progress reports

Task 2. Project Development

2.1 Utility Research, Base Mapping, and Site Reconnaissance

RICK will conduct research with the City of Banning, County of Riverside, and other governing agencies and utility companies for existing plans and maps of the adjacent area to be used for the design of the project.

RICK will conduct a field visit to collect visible information of project site. Research will consist of the private water systems that will be reconnected to the new/proposed waterline in Ramsey Street and the affected private properties. RICK will verify existing site data in terms of surrounding street system, geometry, parking, signing and striping, and private improvements and private water system appurtenances on the properties.

RICK will prepare a CAD file based on the boundary survey described below showing the existing utilities discovered in the research.

Deliverables - Photo log for any photos taken, letters to utility companies, utility as-built maps, and an AutoCAD drawing of the existing utilities.

2.1.1 Property Research

RICK will research City of Banning and County of Riverside survey records and record mapping for property and right of way information. RICK will also conduct a field survey to establish street centerline and rights of way of Ramsey Street within the project limits (between Sunset Avenue and Highland Home Road), Omar Street (between Ramsey and W. Jacinto View Road), W. Jacinto View Road (between Omar Street and Winchester Drive), and the property lines of the adjacent private properties and private properties that are affected by the relocation of water services. Survey basis of bearings and coordinates will be California State Plane Coordinates. Survey data and records analysis will be prepared within a CAD file establishing project mapping for centerline and right of

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way, including intersecting streets. Base mapping will include existing easements. Easements will be researched to identify their applicability/inapplicability with new waterline alignments.

Deliverables - Field Review notes, photo log for any photos taken, and an AutoCAD drawing of the rights of ways and centerline.

2.1.2 Site Topography and Surveying

RICK will provide a supplemental field topography along the existing water line points of connection and where needed and the effected private properties (where water systems will be reconnected in Ramsey Street). Consultant will locate and dip existing sewer and storm drain manholes. Topography will be vertically controlled by local published benchmarks.

Deliverables – Field Review notes, photo log for any photos taken, and CAD file with survey points.

2.1.3 Aerial Topography

RICK will provide an aerial topography of the project site consisting of surface utility appurtenances and improvements such as curb, edge of pavement, drainage inlets, valve cans, fences, driveways, mailboxes, utility vaults, power poles, signs, lights, traffic signals, sidewalks, pedestrian ramps, and notable grade features.

Deliverables – 40-scale at 1-foot contours

2.2 Potholing

RICK's subconsultant, C Below, will perform potholing for the project. C Below will perform forty (40) potholes as indicated in the RFP. A standard pothole is 12 in. x 12 in, performed to the top of pipe or encasement with sand backfill and a permanent surface patch. Potholes are assumed to be 5' in depth. Potholes include water line tie-in points and underground utility crossings. Potholes will also be used to locate the old Highway 99 concrete by setting alignment of potholes perpendicular to Ramsey Street, spaced 10' on center curb to curb. Alignments will be performed at mid-point of each project phase (3 alignments). C Below will provide a detailed potholing report at the conclusion of the investigation. Service includes Dig Alert Coordination and Delineation, Encroachment permit, vacuum excavation to top of utility, encasement, or stop depth, standard traffic control, 12-inches of hot patching (restored within 30-days of excavation activity), sand backfill, removal of debris, and pothole report. Services not included are slurry backfill, extensive traffic control, flagging for traffic control, sidewalk concrete

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panel replacement, and removal of Dig Alert marks.

Standard traffic control includes one lane closure with minimal signage not spanning an intersection.

Prior to potholing, a potholing plan will be developed showing location of potholes for connection points, intermediate points, and location of other underground utilities.

Deliverables – Potholing plan and potholing report

2.3 Geotechnical Study

Geocon is proposing to drill six (6) geotechnical borings up to 15 feet in depth, along portions of the proposed water main alignment, where the subsurface explorations of our 2018 geotechnical investigation cannot supplement. The geotechnical borings will be performed to the observe subsurface soil conditions and collect samples for laboratory testing. We expect that traffic control signage/equipment will be sufficient and flag persons will not be required. Furthermore, we expect that the Banning encroachment permit will be a no fee permit for this project, and that patching of the borings with asphalt concrete cold-patch is acceptable.

RICK's subconsultant, Geocon West, Inc, will consist of:

- Mark the planned boring locations and notify Underground Surface Alert of Southern California to mark any subsurface utility locations near the exploration locations. Additionally, the client should provide plans depicting the locations of all utilities in the project area.
- Prepare no-fee encroachment permits with the City of Banning for our work. We have assumed a traffic control plan utilizing MUTCD or Watchbook details will be sufficient, and an engineered traffic control plan will not be required.
- Provide traffic control setup and breakdown at each boring location. We plan to source traffic control signage/equipment for our work and did not include flag persons in this budget.
- Drill six (6) geotechnical borings along the portion of the proposed water main alignment that our 2018 subsurface explorations cannot supplement. We will collect bulk and ring samples of the subgrade soil for laboratory testing. Borings will be backfilled with soil cuttings and clean sand, and capped with asphalt concrete cold-patch upon completion. We expect borings of up to 15 feet will be sufficient for design of the proposed water main. Borings will be located so that there is an approximate 500-foot interval maintained between the new borings and 2018 borings, along the proposed water main alignment, to ensure an appropriate standard of care. We have budgeted one day of drilling.
- Perform laboratory testing which is expected to include in-situ moisture content and dry density determinations, maximum dry density and optimum moisture

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content, grain size analysis, corrosion screening, sand equivalent, and direct shear testing. The laboratory testing program will be based on the conditions encountered during the field investigation with respect to the proposed improvements. Our 2018 laboratory test results will be provided as supplemental information for the portion of the proposed water main alignment able to be covered by our 2018 geotechnical investigation.

- Prepare a geotechnical report presenting our findings in the field, boring logs, a map depicting the boring locations, a discussion of the geotechnical conditions at the site, and geotechnical parameters for storm drain design.

Assumptions:

- The borings can be safely performed in the vicinity of the proposed water main alignment, considering existing utilities are present and to facilitate traffic flow around our drilling operations. Where performing the borings poses a conflict with existing utilities, resulting in an unsafe working environment for property, personnel, and/or motorists/pedestrians, the planned borings will be relocated, as feasible.
- This proposal does not include any costs to re-grade, install hot-mix asphalt concrete patching, re-vegetate, landscape or otherwise repair disturbed areas.

Deliverables – Geotechnical report

Task 3. Preliminary Engineering Design

3.1 Preliminary Design Plans (30% design)

RICK will prepare waterline plans for approximately (7,200 LF) for a proposed Ductile Iron pipe in Ramsey Street between Sunset Avenue and Highland Home Road. Plans will be at 40-scale and include plan and profile. Plans will be setup for 3 construction phases:
Phase 1: The waterline between Sunset Avenue to near the property at 3929 W. Ramsey Street.
Phase 2: The continuation of Phase 1 to Omar Street, then continuing north on Omar to W. Jacinto View Road, and then east to the Winchester Drive intersection.
Phase 3: From Omar Street westerly on Ramsey Avenue to approximately Highland Home Road.

Additionally, RICK will:

a. Collect the data from the utility and property research from scope items above to use as part of the base file for the water plans. Existing utilities will be shown on the plans in locations verified by the potholing above and/or provided by the utility companies. As part of the plan preparation, RICK will contact affected

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utility companies to obtain permits if needed (utility fees to be paid by the City of Banning).

b. RICK will arrange and participate in informal meetings as necessary with City staff to review the progress of the project and exchange ideas and information.
c. Meetings with the City of Banning will discuss the key design issues and develop general project criteria for construction, including schedule and possible ways of minimizing problems. RICK will prepare and submit meeting agendas prior to the meetings.
d. RICK will provide data received and assumptions utilized to the city for approval prior to integrating the data into the project's final design.
e. RICK will prepare preliminary water plans (30-percent design) using AutoCAD for approximately 7,200 LF of water line (8-inch to 14-inch) to establish an agreement with the City of Banning on project scope, alignment, easements, parameters, hydraulic requirements, maintenance concerns, constructability and construction phasing, traffic impacts, and general disruption to the area. The preliminary design is to be submitted to the City of Banning for review and approval. The preliminary design shall address the following:
    a. Pipeline alignment/facility locations
    b. Construction schedule and phasing recommendations
    c. Construction Cost Estimate of recommended improvements
    d. Conflicts with other utilities and adjacent facilities in the area
    e. Traffic and pedestrian control
    f. Erosion Control
    g. Preferred materials for construction
    h. Areas where construction work is limited or controlled.
    i. Impacts to City water system.
    j. Impacts to surrounding business and residential areas.
    k. Easements (existing and proposed)
    l. Corrosion protection (if necessary)
f. The preliminary design will be submitted in PDF format through the City's SmartGov platform for the City of Banning's review and concurrence. The design will be at a 30% level of effort. Changes in layout and location of facilities suggested by the city will be investigated. A final layout and location of facilities will then be established.
g. As part of the meetings with the city, discussions and submittals of material will be presented to the city through the preliminary design process to reduce comment time and effort by the city.

It is assumed that the City of Banning will provide the size of the proposed new waterline. A hydraulic analysis is not included with this scope. However, we have provided it as an additional/if needed service.

It is assumed that the majority of the existing waterline will be abandoned in place.

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As part of the 30% design, RICK will prepare a traffic control conceptual staging plan for Phase 1 only identifying the assumed stages for each of the phases as noted in the Request for Proposal. The project Phase 1 proposes to construct approximately 2,600' of a water main along Ramsey Street from Sunset Avenue to 3929 W. Ramsey Street. It is anticipated that the traffic control conceptual staging plan will be prepared at 40 scale and will identify the proposed linear footage per stage and a description of the work that will be completed.

Deliverables – (all via the city's SmartGov platform): PDF of the preliminary design plans and the preliminary opinion of probable costs.

3.2 Preliminary Design Plans (60% design)

Rick will prepare plans based on the 30% design and subsequent review comments by the City. Plans include a one (1) cover sheet, two (2) detail sheet, ten (10) plan and profile sheets, two (2) connection detail sheets for private landowners, and one (1) valve shut down sheet if needed, and will show the existing water services and fire hydrants to the new waterline. Due to the existing waterline being at the back of the effected parcels, water meters, backflow devised and related system components shall be moved to front Ramsey off the new proposed waterline. Detail sheets will detail the on-site design connecting to the new line to provide a water system at minimum equal to the existing condition.

RICK's subconsultant, Dexter Wilson Engineering, will assist in preparation of technical specifications, pipeline material design, pipeline deflection calculations, design of thrust restraining systems, details for phased connections, details for connection to the existing pipeline, peer review of replacement plans, and other pipeline design aspects.

Consultant will incorporate any comments received from the City of Banning on the traffic control conceptual staging plan into the 60% design plans. Consultant will prepare 40-scale traffic control plans for the work associated with the Ramsey Street Water Main for Phase 1 only. The traffic control plans will provide work zones that are staged for construction of the water main, appurtenances, laterals, and any required detours. The one stage of traffic control is assumed as follows:

Phase 1: Sunset Avenue to 3929 W. Ramsey Street. There are assumed 5 stages of traffic control; Stage 1A is to 600' west of Sunset Avenue; Stages 1B, 1C, 1D, and 1E will be up to 500' along Ramsey to 3929 W. Ramsey Street.

The traffic control plans will be prepared following the requirements of the California Manual on Uniform Traffic Control Devices (MUTCD) and the City of Banning. Three (3) submittals are assumed – 60%, 90%, and final. Five (5) sheets

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of traffic control plans are assumed for Phase 1.

A progress meeting will be coordinated with the City of Banning to discuss the 60% design plans. The meeting will discuss the comments and markups and establish a timeline for the project moving forward.

Deliverables - (all via the city's SmartGov platform): PDF of the preliminary design plans and the preliminary opinion of probable costs.

3.3 Detailed Design Plans (90% Design)

Rick will prepare the 90% detailed design waterline plans and traffic control plans based on the 60% review comments received from the City of Banning and other entities. Plans shall follow the City of Banning standards and policies.

RICK will prepare project specifications following the Standard Specifications for Public Works Construction, SSPWC, "Greenbook", latest edition.

RICK will prepare an opinion of probable cost and bid schedule that has construction items of work, unit of measurement, unit cost, and cost based on the detailed design waterline plans.

Deliverables - (all via the city's SmartGov platform): PDF of the preliminary design plans, the preliminary opinion of probable costs, and the Standards and Specifications

Task 4. Final Design Plans

4.1 Final Water Plans

Upon authorization from the City, RICK will finalize the waterline plans and traffic control plans based on the final comments from the City and other entities. Plans will follow the City of Banning standards and policies. Plans will be signed by a licensed Civil Engineer and provided to the City of Banning on Mylar.

RICK will provide the City of Banning a Final set of Project specifications based on final comments from the City of Banning following the SPPWC. RICK will also provide a final opinion of probable cost and bid schedule based on the signed waterline plans.

Deliverables - (all via the city's SmartGov platform): PDF of the preliminary design plans, the preliminary opinion of probable costs, and the Standards and Specifications

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Task 5. Easement Documents

5.1 Easement Documents

RICK will prepare a legal description and plat for each easement for three (3) permanent easements to be granted to the City of Banning and ten (10) temporary construction easements that are required for reconnection of existing private water systems to the new water main. RICK will obtain and review title reports for the thirteen (13) affected properties.

RICK assumes three (3) permanent easements to be granted to the City of Banning and ten (10) Temporary Construction Easements for reconnection of existing private water systems to the new water main.

Assumptions:

- Assumes up to 13 tax parcels owned by 13 unique entities are impacted by temporary construction easements (TCE's) and/or permanent easements.
- Scope does not include any discussions with property owners.
- No appraisal work or negotiations included.
- Consultant is providing legal description and plat for the 13 easements only.

Deliverables - (all via the city's SmartGov platform): Easement documents (legal description and plat) and up to 13 preliminary title reports.

Task 6. Stormwater Pollution Prevention Plan

6.1 Stormwater Pollution Prevention Plan

The Risk Type 1 LUP SWPPP will be prepared in accordance with the requirements of the Appendix E of the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities Order WQ 2022-0057-DWQ NPDES No. CAS000002 (adopted September 8, 2022, effective September 1, 2023).

RICK will prepare a Risk Type 1 LUP SWPPP based on the project's assumed Risk Type.

This task will also include the preparation of a Notice of Intent (NOI) on the Storm Water Multi Application Report Tracking System (SMARTS) database. The Discharger must designate RICK as a Data Entry Person to prepare the NOI. The Discharger/LRP must electronically certify and submit the NOI on SMARTS.

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RICK will act as the initial Qualified SWPPP Developer (QSD) for the preparation of the SWPPP, however the Discharger must hire a QSD and a Qualified SWPPP Practitioner (QSP) for implementation of the SWPPP throughout the life of the project.

Based on the provided bid package this project is assumed to be a Risk Type 1 LUP based on the following assumptions:

1. More than 70% of the soil disturbance will occur on paved surfaces; and
2. Areas that are disturbed will be returned to pre-project conditions at the end of each day.

Deliverables - (all via the city's SmartGov platform): SWPPP (erosion control plan submitted via drawing submittals)

Task 7. Construction Surveying and Staking

7.1 Phase One Water Stakes

RICK will maintain horizontal and vertical control for the duration of the surveying work on this project. RICK will also provide required calculations to field crew for each survey request received.

RICK will provide one set of stakes at all primary points of control; beginning and ends of pipe and at not less than 50' on center along tangent sections and 25' on curves to facilitate the construction of approximately 2,600 LF of water mainline. RICK will also provide not more than two (2) stakes each; to facilitate the location of services, fire hydrants, and points of connection.

*Water stakes to be set in three (3) trips.

Deliverables – Construction Staking Cut Sheets

7.2 Phase Two Water Stakes

RICK will provide one set of stakes at all primary points of control; beginning and ends of pipe and at not less than 50' on center along tangent sections and 25' on curves to facilitate the construction of approximately 2,700 LF of water mainline. RICK will also provide not more than two (2) stakes each; to facilitate the location of services, fire hydrants, and points of connection.

*Water stakes to be set in three (3) trips.

Deliverables – Construction Staking Cut Sheets

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7.3 Phase Three Water Stakes

RICK will provide one set of stakes at all primary points of control; beginning and ends of pipe and at not less than 50' on center along tangent sections and 25' on curves to facilitate the construction of approximately 1,900 LF of water mainline. RICK will also provide not more than two (2) stakes each; to facilitate the location of services, fire hydrants, and points of connection.

*Water stakes to be set in three (2) trips.

Deliverables – Construction Staking Cut Sheets

Task 8. Bidding/Construction Support – Phase 1 Only

8.1 Bidding

RICK will be available during the advertising and bidding of the project to assist the City of Banning in answering questions/RFI's and the preparation of plan addenda, if needed. RICK will attend one (1) pre-bid meeting for the bidding process.

Deliverables – Meeting attendance, responses to Bidder's RFI's

8.2 Construction Administration

RICK will be available during the construction of the project to answer RFI's and prepare plan addenda, if needed. RICK will attend one (1) pre-construction meeting and eight (8) site visits during construction of the project as requested by the city. RICK will review shop drawings and submittals from the contractor for conformance with the contract plans and specifications, and make recommendations for acceptance, denial or resubmittal.

Deliverables – Meeting attendance, response to Contractor's RFI's, design addenda, submittal reviews

8.3 As-Built Plans

RICK will prepare As-Built Plans and process with the City of Banning, as necessary. Scope assumes RICK will receive as-built letters from the contractors and the contractor's as-built plan markup's. Scope assumes no major changes have occurred and does not include any as-built survey time. As-built plans will be submitted to the City within one month of receiving as-built letters and markup's from the contractor.
Deliverables – As-built Plans

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Additional Services (If Needed Services)

Corrosivity Assessment

Rick's subconsultant, RF Yeager will prepare a corrosivity assessment for the proposed waterline, that will include a field resistivity testing, a review of the Geotech/soil chemical analysis data, a review for the potential of stray current interference, and a Corrosivity Assessment Letter Report. This information will be used for the determination of the type of corrosion protection and if any cathodic protection for the pipeline would be required and the corrosion control approach that the City may want to implement.

Deliverable – Corrosivity Assessment Letter Report

Corrosion Control Design

As part of the 90% design plans, RICK's subconsultant, RF Yeager, will provide Corrosion Control Design as part of the plans if Client requires joint bonds, test stations, insulators, and other standard corrosion control facilities. It is recommended the Client to use joint bonds, test stations, and insulators (steel or DIP) such that the pipeline is made electrically continuous and test stations are installed at the side of the road. This allows for monitoring and for adding cathodic protection in the future (should soil conditions/pipeline environment change) and will be much less costly because the pipe is electrically continuous and test stations are already installed. Corrosion control detail sheets, specifications, and cost estimate is included.

Cathodic Protection Design Pipeline

If it is found that Cathodic Protection is required, RICK's subconsultant, RF Yeager, will review the waterline plans, provide comments, and corrosion control design analysis/calculations. Details and specifications will be included. A cathodic protection system cost estimate will be included. RF Yeager will then address the 90% plan comments and provide final 100% design documents. Once approved for final signature, RF Yeager will sign and stamp the final drawings. Cathodic protection detail sheets, specifications, and cost estimates are included.
Deliverables – Corrosion control design analysis/calculations, specifications, and cost estimate.

Hydraulic Analysis

RICK's subconsultant, Dexter Wilson Engineering, will perform hydraulic modeling for the waterline sizing for the project site, if City does not provide the waterline

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sizing. It is assumed City will provide the necessary information to run the modeling.

Caltrans Encroachment Permit

RICK will prepare one (1) Caltrans encroachment permit application for the traffic control devices (i.e. advance signage) that are within the Caltrans right-of-way (ROW) along Sunset Avenue in the vicinity of I-10. For the Caltrans encroachment permit application, the traffic control plans are assumed to be submitted to Caltrans in City of Banning format and will include a Caltrans signature block on the plans.

Plan Processing and Coordination (Caltrans)

RICK will submit and process the traffic control plans with Caltrans District 8. It is assumed that up to two (2) sets of plan check review comments will be received, coordinated, and addressed.

Monument Preservation

Pursuant to Section 8771 of the Business and Professions Code, preconstruction corner records will be prepared and filed identifying recovered survey monuments within the proposed construction limits. Post construction corner records will also be filed reflecting replacement monuments.

Deliverables – Pre and Post construction corner records

Monument Replacement

RICK will replace destroyed survey monuments at the completion of the construction with the project limits.

Record of Survey

Pursuant to 8762 of the Business and Professions Code the filing of a Record of Survey shall be filed if the survey discloses “the establishment of one or more points or lines not shown on any subdivision map, official map, or record of survey, the positions of which are not ascertainable from the inspection of the subdivision map official map or record of survey.

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III. In addition to the requirements of Parts I and II of this Scope of Services, during the performance of the Services, Consultant will keep City appraised through periodic status reports regarding the performance of the Services under this Agreement as set forth below and in Section 5.2, by the following means:

a. In-person meetings and/or teleconferences.

b. Email updates/questions to applicant team and City while reviews are underway.

c. Conference calls.

IV. All work product is subject to review and acceptance by City, and must be revised by Consultant without additional charge to City until found satisfactory and accepted by City.

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EXHIBIT "B"
SPECIAL REQUIREMENTS

TERMS FOR COMPLIANCE WITH CALIFORNIA LABOR LAW REQUIREMENTS

1. This Agreement calls for services that, in whole or in part, constitute "public works" as defined in Division 2, Part 7, Chapter 1 (commencing with Section 1720) of the California Labor Code ("Chapter 1"). Further, Consultant acknowledges that this Agreement is subject to (a) Chapter 1 and (b) the rules and regulations established by the Department of Industrial Relations ("DIR") implementing such statutes. Therefore, as to those Services that are "public works," Consultant shall comply with and be bound by all the terms, rules and regulations described in 1(a) and 1(b) as though set forth in full herein.

2. California law requires the inclusion of specific Labor Code provisions in certain contracts. The inclusion of such specific provisions below, whether or not required by California law, does not alter the meaning or scope of Section 1 above.

3. Consultant shall be registered with the Department of Industrial Relations in accordance with California Labor Code Section 1725.5, and has provided proof of registration to City prior to the Effective Date of this Agreement. Consultant shall not perform work with any subcontractor that is not registered with DIR pursuant to Section 1725.5. Consultant and subcontractors shall maintain their registration with the DIR in effect throughout the duration of this Agreement. If the Consultant or any subcontractor ceases to be registered with DIR at any time during the duration of the project, Consultant shall immediately notify City.

4. Pursuant to Labor Code Section 1771.4, Consultant's Services are subject to compliance monitoring and enforcement by DIR. Consultant shall post job site notices, as prescribed by DIR regulations.

5. Pursuant to Labor Code Section 1773.2, copies of the prevailing rate of per diem wages for each craft, classification, or type of worker needed to perform the Agreement are on file at City Hall and will be made available to any interested party on request. Consultant acknowledges receipt of a copy of the DIR determination of such prevailing rate of per diem wages, and Consultant shall post such rates at each job site covered by this Agreement.

6. Consultant shall comply with and be bound by the provisions of Labor Code Sections 1774 and 1775 concerning the payment of prevailing rates of wages to workers and the penalties for failure to pay prevailing wages. The Consultant shall, as a penalty to City, forfeit $200.00 for each calendar day, or portion thereof, for each worker paid less than the prevailing rates as determined by the DIR for the work or craft in which the worker is employed for any public work done pursuant to this Agreement by Consultant or by any subcontractor.

7. Consultant shall comply with and be bound by the provisions of Labor Code Section 1776, which requires Consultant and each subcontractor to: keep accurate payroll records and verify such records in writing under penalty of perjury, as specified in Section 1776; certify and make such payroll records available for inspection as provided by Section 1776; and inform City of the location of the records.

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8. Consultant shall comply with and be bound by the provisions of Labor Code Sections 1777.5, 1777.6 and 1777.7 and California Administrative Code Title 8, Section 200 et seq. concerning the employment of apprentices on public works projects. Consultant shall be responsible for compliance with these aforementioned Sections for all apprenticeable occupations. Prior to commencing work under this Agreement, Consultant shall provide City with a copy of the information submitted to any applicable apprenticeship program. Within 60 days after concluding work pursuant to this Agreement, Consultant and each of its subcontractors shall submit to City a verified statement of the journeyman and apprentice hours performed under this Agreement.

9. The Consultant shall not perform Work with any Subcontractor that has been debarred or suspended pursuant to California Labor Code Section 1777.1 or any other federal or state law providing for the debarment of contractors from public works. The Consultant and Subcontractors shall not be debarred or suspended throughout the duration of this Agreement pursuant to Labor Code Section 1777.1 or any other federal or state law providing for the debarment of contractors from public works. If the Consultant or any subcontractor becomes debarred or suspended during the duration of the project, the Consultant shall immediately notify City.

10. Consultant acknowledges that eight hours labor constitutes a legal day's work. Consultant shall comply with and be bound by Labor Code Section 1810. Consultant shall comply with and be bound by the provisions of Labor Code Section 1813 concerning penalties for workers who work excess hours. The Consultant shall, as a penalty to City, forfeit $25.00 for each worker employed in the performance of this Agreement by the Consultant or by any subcontractor for each calendar day during which such worker is required or permitted to work more than eight hours in any one calendar day and 40 hours in any one calendar week in violation of the provisions of Division 2, Part 7, Chapter 1, Article 3 of the Labor Code. Pursuant to Labor Code section 1815, work performed by employees of Consultant in excess of eight hours per day, and 40 hours during any one week shall be permitted upon public work upon compensation for all hours worked in excess of eight hours per day at not less than one and one-half times the basic rate of pay.

11. California Labor Code Sections 1860 and 3700 provide that every employer will be required to secure the payment of compensation to its employees. In accordance with the provisions of California Labor Code Section 1861, Consultant hereby certifies as follows:

> "I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract."
>
> **Date**_____ **Signature**_____

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12. For every subcontractor who will perform work on the project, Consultant shall be responsible for such subcontractor's compliance with Chapter 1 and Labor Code Sections 1860 and 3700, and Consultant shall include in the written contract between it and each subcontractor a copy of those statutory provisions and a requirement that each subcontractor shall comply with those statutory provisions. Consultant shall be required to take all actions necessary to enforce such contractual provisions and ensure subcontractor's compliance, including, without limitation, conducting a periodic review of the certified payroll records of the subcontractor and upon becoming aware of the failure of the subcontractor to pay his or her workers the specified prevailing rate of wages. Consultant shall diligently take corrective action to halt or rectify any failure.

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EXHIBIT "C"
SCHEDULE OF COMPENSATION

I. Consultant shall perform the following Scope of Services at the rates stated in Exhibit C-1.

II. Within the budgeted amounts for each Task, and with the approval of the Contract Officer, funds may be shifted from one Task sub-budget to another so long as the Contract Sum is not exceeded per Section 2.1, unless Additional Services are approved per Section 1.8.

III. City will compensate Consultant for the Services performed upon submission of a valid invoice. Each invoice is to include:

A. Line items for all personnel describing the Services performed, the number of hours worked, and the hourly rate.

B. Line items for all materials and equipment properly charged to the Services.

C. Line items for all other approved reimbursable expenses claimed, with supporting documentation.

D. Line items for all approved sub-contractor labor, supplies, equipment, materials, and travel properly charged to the Services.

IV. Consultant's billing rates for all personnel are attached as Exhibit C-1.

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EXHIBIT "C-1"
CONSULTANT'S BILLING RATE AND TASK SCHEDULE

RICK ENGINEERING COMPANY

Principal Consultant (Special Projects)	$300.00
Principal	260.00
Associate Principal	240.00
Associate/Manager	225.00
Expert Witness	450.00
Court Appearance per half day or part	1,800.00
Senior Project Manager	$225.00
Principal Project Engineer/Manager	210.00
Associate Project Engineer/Manager	190.00
Assistant Project Engineer/Manager	175.00
Principal Engineering Designer	155.00
Associate Engineering Designer	140.00
Assistant Engineering Designer	130.00
Principal Engineering Drafter	125.00
Associate Engineering Drafter	115.00
Assistant Engineering Drafter	105.00
Senior Transportation/Traffic Engineer	$215.00
Principal Transportation/Traffic Engineer	210.00
Associate Transportation/Traffic Engineer	190.00
Assistant Transportation/Traffic Engineer	175.00
Principal Transportation/Traffic Designer	155.00
Associate Transportation/Traffic Designer	140.00
Assistant Transportation/Traffic Designer	130.00
Principal Community Planner	$215.00
Principal Project Planner/Manager	200.00
Associate Project Planner/Manager	185.00
Senior Planner	175.00
Associate Planner	140.00
Assistant Planner	120.00
Planning Technician	95.00
Principal Project Landscape Architect/Manager	$190.00
Associate Project Landscape Architect/Manager	170.00
Assistant Project Landscape Architect/Manager	150.00
Principal Landscape/Urban Designer	125.00
Associate Landscape/Urban Designer	120.00
Assistant Landscape/Urban Designer	115.00
Principal Environmental Project Manager	$200.00
Associate Environmental Project Manager	170.00
Assistant Environmental Project Manager	150.00
Principal Environmental Specialist	140.00
Associate Environmental Specialist	130.00
Assistant Environmental Specialist	120.00
Environmental Technician	100.00
Senior Water Quality Manager	$240.00
Principal Water Resources Designer	155.00
Associate Water Resources Designer	140.00
Assistant Water Resources Designer	130.00
GIS Manager	$190.00
Principal GIS Project Manager	180.00
Associate GIS Project Manager	165.00
Assistant GIS Project Manager	150.00
Principal GIS Analyst	145.00
Associate GIS Analyst	130.00
Assistant GIS Analyst	120.00
Principal Graphics Designer	130.00
Associate Graphics Designer	125.00
Assistant Graphics Designer	115.00
CAD Manager	180.00
Field Supervisor	$195.00
One-person Survey Party (Prevailing Wage)	270.00
One-person Survey Party w/ Robotics (Prevailing Wage)	270.00
Two-person Survey Party (Prevailing Wage)	350.00
Three-person Survey Party (Prevailing Wage)	390.00
3D Laser Scanning Crew (One-Person)	$235.00
3D Laser Scanning Crew (Two Person)	280.00
Principal 3D Laser Scanning Project Manager	$190.00
Associate 3D Laser Scanning Project Manager	175.00
Assistant 3D Laser Scanning Project Manager	160.00
Principal 3D Laser Scanning Specialist	140.00
Associate 3D Laser Scanning Specialist	130.00
Assistant 3D Laser Scanning Specialist	120.00
Principal 3D Laser Scanning Technician	115.00
Associate 3D Laser Scanning Technician	100.00
Assistant 3D Laser Scanning Technician	90.00
Photogrammetry Supervisor	$185.00
Principal Photogrammetrist	155.00
Associate Photogrammetrist	120.00
Assistant Photogrammetrist	110.00
Principal Survey Analyst	$185.00
Associate Survey Analyst	150.00
Assistant Survey Analyst	125.00
Associate Project Administrator	$80.00
Assistant Project Administrator	70.00
Administrative Assistant/Manager	75.00

Rates subject to change for prevailing wage contracts.
When authorized, overtime shall be charged at the listed rates times 1.5.
Unless otherwise agreed upon, we shall charge for printing, reproduction, deliveries, transportation, and other expenses.
A fifteen (15) percent fee for administration, coordination and handling will be added to all subcontracted services.

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Structural Engineer
$185.00 Per Hour

SKS Engineering, Inc.

Position	Hourly Rates
Principal	$205-275
Senior Associate	$150-220
Associate	$110-170
Senior Analyst	$105-135
Analyst	$70-105
Assistant Analyst	$60-115
Administrative Support	$65-105

URBAN CROSSROADS

General

(1) Reimbursable direct costs, such as reproduction, supplies, and messenger service will be billed at cost.
(2) Hourly rates apply to work time, travel time, and time spent at public hearings and meetings. For overtime work, the above rates may be increased 50 percent.
(3) Monthly billing statements are due within thirty (30) days of receipt.

TURNING MOVEMENT COUNTS (TMC)
$226.00 – 2-hour Peak Period Counts – Pedestrian & Bicycles Included
$226.00 – 4-hour Peak Period Counts – Pedestrian & Bicycles Included
$339.00 – 6-hour Peak Period Counts – Pedestrian & Bicycles Included

BI-DIRECTIONAL VOLUME (ADT) – TUBE COUNTS
$100.00 – 24 hours (1-day)
$200.00 – 48 hours (2-day)
$300.00 – 72 hours (3-day)
$400.00 – 96 hours (4-day)
$500.00 – 120 hours (5-day)
$600.00 – 144 hours (6-day)
$700.00 – 168 hours (7-day)

BI-DIRECTIONAL SPEED OR CLASSIFICATION – TUBE COUNTS
$198.00 – 24 hours (1-day)
$396.00 – 48 hours (2-day)
$594.00 – 72 hours (3-day)
$792.00 – 96 hours (4-day)
$990.00 – 120 hours (5-day)
$1,188.00 – 144 hours (6-day)
$1,386.00 – 168 hours (7-day)

OTHER STUDIES – QUOTES BASED ON SCOPE
Pedestrian Gap Studies
Parking Duration Studies
Video Turning Movement Counts
Radar Studies – Non Intrusive
Travel Time Studies – GPS
Many more customized studies available

Veracity Traffic Group

Exhibit "C-1"-2

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EXHIBIT "D"
SCHEDULE OF PERFORMANCE

I. Consultant shall perform all Services timely, and deliver the specified tangible work products to City in accordance with the schedule attached as Exhibit D-1.

II. The Contract Officer may approve extensions for performance of the Services in accordance with Sections 1.8 and 3.3.

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EXHIBIT "D-1"
PROPOSED PROJECT SCHEDULE

EXHIBIT B

RAMSEY STREET WATER MAIN PROJECT

TASK DESCRIPTION:	Principal	Associate Principal	Associate	Principal Project Engineer	Associate Project Engineer	Principal Designer	Assistant/Associate Designer/Analyst	Field Supervisor	Two-Person Survey Crew	Principal Survey Analyst	RICK FEE	Subconsultants	Expenses	Task Total($):
Hourly Rate	$275.00	$260.00	$240.00	$220.00	$200.00	$165.00	$135.00	$220.00	$360.00	$195.00				
TASK 1 - PROJECT MANAGEMENT														
1.1 Kick-off Meeting and Project Management		2		24							$ 5,800.00			$ 5,800.00
1.2 Progress Meetings		2		33							$ 7,780.00			$ 7,780.00
1.3 Invoicing				8							$ 1,760.00			$ 1,760.00
SUBTOTAL TASK 1:	**0**	**4**	**0**	**65**	**0**	**0**	**0**	**0**	**0**	**0**	**$ 15,340.00**	**$ -**	**$ -**	**$ 15,340.00**
Task 2 - Project Development														
2.1 Utility Research, Base Mapping & Site Reconnaissance				20		32	40				$ 15,080.00			$ 15,080.00
2.1.1 Property Research			8				8		24	40	$ 19,440.00			$ 19,440.00
2.1.2 Supplemental Field Topography									40	2	$ 14,790.00			$ 14,790.00
2.1.3 Aerial Topography									24	6	$ 9,810.00		$ 15,000.00	$ 24,810.00
2.2 Potholing - C Below											$ -	$ 92,195.00		$ 92,195.00
2.3 Geotechnical Study - Geocon											$ -	$ 12,875.00		$ 12,875.00
SUBTOTAL TASK 2:	**0**	**0**	**8**	**20**	**0**	**32**	**48**	**0**	**88**	**48**	**$ 59,120.00**	**$ 105,070.00**	**$ 15,000.00**	**$ 179,190.00**
Task 3 - Preliminary Engineering Design														
3.1 Preliminary Design Plans (30% design) - Civil	2	4		12		50	80				$ 23,280.00	$ 2,990.00		$ 26,270.00
Conceptual Staging Plan - Traffic					4		16				$ 2,960.00			$ 2,960.00
3.2 Preliminary Design Plans (60% design) - Civil, Dexter Wilson	2	4		20		80	100				$ 32,690.00	$ 2,150.00		$ 34,840.00
Preliminary Design Plans (60% design) - Traffic		1			3		36				$ 5,720.00			$ 5,720.00
3.3 Detailed Design Plans (90% design) - Civil, Dexter Wilson	2	4		16		60	88				$ 26,890.00	$ 1,075.00		$ 27,965.00
Detailed Design Plans (90% design) - Traffic		1			2		23				$ 3,765.00			$ 3,765.00
SUBTOTAL TASK 3:	**6**	**14**	**0**	**48**	**9**	**190**	**343**	**0**	**0**	**0**	**$ 95,305.00**	**$ 6,215.00**	**$ -**	**$ 101,520.00**
Task 4 - Final Design Plans, Specifications and Estimate (100% Design)														
4.1 Final Water Plans - Civil, Dexter Wilson	1	4		12		24	40				$ 13,315.00	$ 645.00		$ 13,960.00
Final Water Plans - Traffic		1			3		12				$ 2,480.00			$ 2,480.00
SUBTOTAL TASK 4:	**1**	**5**	**0**	**12**	**3**	**24**	**52**	**0**	**0**	**0**	**$ 15,795.00**	**$ 645.00**	**$ -**	**$ 16,440.00**

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EXHIBIT B

RAMSEY STREET WATER MAIN PROJECT

TASK DESCRIPTION:	Principal	Associate Principal	Associate	Principal Project Engineer	Associate Project Engineer	Principal Designer	Assistant Designer/Assistant Analyst	Field Supervisor	Two-Person Survey Crew	Principal Survey Analyst	RICK FEE	Subconsultants	Expenses	Task Total($):
Hourly Rate	$275.00	$260.00	$240.00	$220.00	$200.00	$165.00	$135.00	$220.00	$360.00	$195.00				
Task 5 - Easement Documents														
5.1 Easement Documents			26							130	$ 31,590.00		$ 9,750.00	$ 41,340.00
SUBTOTAL TASK 6:	0	0	26	0	0	0	0	0	0	130	$ 31,590.00	$ -	$ 9,750.00	$ 41,340.00
Task 6 - Stormwater Pollution Prevention Plan														
6.1 Stormwater Pollution Prevention Plan				6		32					$ 6,600.00			$ 6,600.00
SUBTOTAL TASK 6:	0	0	0	6	0	32	0	0	0	0	$ 6,600.00	$ -	$ -	$ 6,600.00
Task 7 - Construction Surveying and Staking														
7.1 Phase One Water Stakes							10	2	24		$ 10,430.00			$ 10,430.00
7.2 Phase Two Water Stakes - 3 staking days											$ -			$ -
7.3 Phase Three Water Stakes - 2 staking days											$ -			$ -
SUBTOTAL TASK 5:	0	0	0	0	0	0	10	2	24	0	$ 10,430.00	$ -	$ -	$ 10,430.00
Task 8 - Bidding/Construction Support - Phase 1 only														
8.1 Bidding				1		4					$ 880.00			$ 880.00
8.2 Construction Administration		2		32		12					$ 9,540.00	$ 1,160.00		$ 10,700.00
8.3 As-Built Plans		1		1		1	6				$ 1,455.00			$ 1,455.00
SUBTOTAL TASK 7:	0	3	0	34	0	17	6	0	0	0	$ 11,875.00	$ 1,160.00	$ -	$ 13,035.00
Reimbursables													$ 3,000.00	$ 3,000.00
	0	0	0	0	0	0	0	0	0	0	$ -	$ -	$ 3,000.00	$ 3,000.00
SUBTOTAL TASKS 1-7:	7	26	34	185	12	295	459	2	112	178	$ 246,055.00	$ 113,090.00	$ 27,750.00	$ 386,895.00

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EXHIBIT B

RAMSEY STREET WATER MAIN PROJECT

TASK DESCRIPTION:	Principal	Associate Principal	Associate	Principal Project Engineer	Associate Project Engineer	Principal Designer	Assistant Designer/A ssistant Analyst	Field Supervisor	Two-Person Survey Crew	Principal Survey Analyst	RWCK FEE	Subconsultants	Expenses	Task Total($):
Hourly Rate	$275.00	$260.00	$240.00	$220.00	$200.00	$165.00	$135.00	$220.00	$360.00	$195.00				
Additional Services (if needed)														
Additional Potholing (daily rate) - C Below											$ -	$ 12,725.00		$ 12,725.00
Corrositivity Assessment - YF Yeager											$ -	$ 4,980.00		$ 4,980.00
Corrosion Control Design - YF Yeager											$ -	$ 12,180.00		$ 12,180.00
Cathodic Protection Design Pipeline - YF Yeager											$ -	$ 18,400.00		$ 18,400.00
Hydraulic Analysis - Dexter Wilson											$ -	$ 3,480.00		$ 3,480.00
Caltrans Encroachment Permit Application											$ 1,480.00			$ 1,480.00
Caltrans Processing and Coordination											$ 2,020.00			$ 2,020.00
Phase 1 Monument Preservation											$ 3,120.00			$ 3,120.00
Phase 1 Monument Replacement											$ 5,980.00			$ 5,980.00
Record of Survey											$ 15,000.00			